

Procedure: Noise Management

1. Purpose

To safeguard workers from exposure to excessive noise emissions and vibration from plant and equipment that could cause occupational deafness.

2. Actions Required

- Assess and control risks to workers from plant, equipment and other noise emissions and exposure
- Provide workers appropriate information, instruction and training in noise management including appropriate use of personnel protection equipment (PPE)
- Ensure workers participate in regular audiometric testing.

3. Scope

This procedure applies to all GSCC operations where there is a potential for exposure to noise levels which may cause harm to health.

4. Definitions

AUDIOMETRIC TESTING - Hearing tests conducted by an approved provider

GSCC- Greater Shepparton City Council

GSCC RO - GSCC Responsible Officer, a Greater Shepparton City Council employee, who in their area of responsibility has a managerial or supervisory role over employees, contractors or volunteers

PPE – Personal Protective Equipment

WORKERS - Employees, Contractors, Volunteers and any person performing duties.

5. Responsibility and Authority

Directors

- Delegate OHS responsibilities and accountabilities to all levels for effective noise management
- Ensure adequate consultation with employees regarding health and safety issues.

Human Resources

- Ensure GSCC workers identified as exposed to excessive noise or vibration, attend audiometric testing within three months of initial employment
- Maintain appropriate personnel files.

People Performance

Conduct audiometric testing for workers identified as exposed to excessive noise or vibration Bi-Annually.

Plant Coordinator

- Obtain appropriate noise emission information from suppliers of plant and equipment
- Undertake regular noise risk assessments on plant and equipment
- Maintain noise emission records of plant and equipment

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Managers/Supervisors

- Identify areas where workers could be exposed to excessive noise or vibration
- Provide OHS Advisor with workers names for inclusion on Bi-Annual hearing testing register.
- Provide workers with appropriate control methods to eliminate or reduce exposure to excessive noise or vibration levels.
- Provide suitable training in the use and maintenance of PPE items in accordance with manufacturer’s instructions.

Workers

Comply with all measures put in place to limit exposure to identified excessive noise and vibration levels, including appropriate use of PPE.

Contractors

- Identify areas where workers could be exposed to excessive noise or vibration
- Provide workers with appropriate control methods to eliminate or reduce exposure to excessive noise or vibration levels.
- Provide suitable training in the use and maintenance of PPE items in accordance with manufacturer’s instructions.

6. Procedure

All practicable action must be taken to eliminate or reduce worker exposure to excessive noise emissions in the workplace.

Noise Assessment

GSCC RO’s are required to identifying noise and vibration exposure by workers and where possible eliminate or minimise.

A noise assessment of plant and machinery must be initially requested or performed, and documented:

- Prior to initial use by a worker (or evaluation of a provided risk assessment from a manufacturer)
- To identify sources of noise that may cause or contribute to hearing loss both from long and short term exposure
- To ensure workers exposed to excessive noise or vibration are included on the audiometric testing schedule
- To assist with the review of risk control measures such as PPE, sound barriers or worker segregation from noise generating items.
- Bi Annually on items of plant that require GSCC workers to wear sound reducing PPE when operating.

Refer: M11/20517 Noise Hazard Identification Checklist

Risk Control

Control measures put in place should ensure that the noise a worker is exposed to at the workplace does not exceed the exposure standard. Appropriate controls must be developed to eliminate or reduce the risk of excessive noise exposure to workers.

Methods of noise control are prioritised below according to the hierarchy of risk control options.

- Elimination - removing the hazard or its source from the workplace
- Substitution - swapping to a hazard or source with a lower risk level

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- Isolation -removing the hazard from the employee or the employee from the hazard
- Engineering - physically altering the work environment
- Work practices - designing jobs to reduce employee exposures
- Personal protection - using devices to protect the hearing

Areas, plant and equipment where hearing protection is required must be clearly signposted.

The GSCC RO should ensure workers are responsible for:

- Verifying that the hearing protector fits closely with no leakage paths for noise and is adequate for the level of exposure to noise
- Examining PPE carefully to ensure it is not worn or damaged.

The GSCC RO is also responsible for:

- Conducting audits to ensure control measures in place are being both used and used correctly whilst performing work
- Workers are trained in the care, use and storage of PPE.

Measurement

Determining noise exposure from plant and equipment in the workplace can be measured using:

- A Noise hazard identification checklist, which is a guide only. A detailed noise assessment may be required from an Occupational Hygienist in accordance with AS/NZS 1269
- Information supplied from manufacturers and suppliers who have a legal responsibility to provide appropriate information regarding the noise output of plant and equipment
- Direct observation, inspections and records. Workplace inspections, audits, walkthrough surveys and direct observation of work tasks being performed will assist in the identification of potential noise hazards
- Specialist engineering consultants.

Essentially, a worker who is exposed to 85 dB(A) for 8 hours receives the same noise energy as someone exposed to 88 dB(A) for 4 hours, with the balance of the day in a very quiet environment. In both cases the exposure standard is not being exceeded. However, being exposed to 88 dB(A) for more than 4 hours would mean that the standard is exceeded. Similarly, if a worker is using a machine that generates 121 dB(A) then the exposure standard would be exceeded after only 7.2 seconds.

Permanent hearing loss can also occur suddenly if a person is exposed to loud impact or explosive sounds. This type of damage is known as acoustic trauma. The degree of hearing loss that occurs is dependent on how loud the noise is, how long someone is exposed to it, and to some extent individual susceptibility. The frequency or pitch can also have some effect on hearing loss, since high-pitched sounds are more damaging than low-pitched ones.

Noise at levels that do not damage hearing can have other adverse health effects. This can arise when noise chronically interferes with concentration and communication. Persistent noise stress can increase the risk of fatigue and cardiovascular disorders including high blood pressure and heart disease.

Table 1: Equivalent Noise Exposures LAeq,8h = 85 db(A)

Noise Level dB(A)	Exposure Time
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80	16 hours
82	12hours
85	8 hours
88	4 hours
91	2 hours
94	1 hour
97	30 minutes
100	15 minutes
103	7.5 minutes
106	3.8 minutes
109	1.9 minutes
112	57 seconds
115	28.8 seconds
118	14.4 seconds
121	7.2 seconds
124	3.6 seconds
127	1.8 seconds
130	0.9 seconds

Vibration

Some studies have indicated that there is a link between exposure to hand-arm vibration and hearing loss. Workers who use equipment such as chainsaws are subject to both hand-arm vibrations and to noise and may be more likely to suffer from hearing loss.

Tools that may expose workers to both noise and hand-arm vibration include:

- Pneumatic and electrical rotary tools such as concrete breakers, grinders, sanders and drills
- Percussive tools such as chippers and riveters
- Petrol-powered tools such as lawn-mowers, brush-cutters and chainsaws.

Audiometric Testing

Audiometric testing will be conducted for workers likely to be exposed to excessive noise levels whilst performing work.

The following workers are to be included on regular audiometric testing.

- Workers exposed to outdoor environment for the majority of the day.
- Workers exposed to excessive noise exposure from plant or equipment.
- Workers considered at risk of noise induced hearing loss

Workers in the above circumstances are required to have audiometric testing within three months of initial employment and then Bi-Annually.

GSCC RO's are to ensure workers details are provided to OHS Advisor through the M12/57744 Employee Medical Management or course requirements Form which is included in new employees start kit.

7. References

- *Occupational Health and Safety Act 2004*

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- *Occupational Health and Safety (Noise) Regulations 2004*
- Australian Standard AS 1270-1988 Acoustics – Hearing protectors
- Australian Standard AS 3781 – 1990 Acoustics – Noise labelling on machinery and equipment
- Australian Standard AS/NZS 1269-2005 Occupational Noise Management
- Code of practice-Managing Noise and Preventing Hearing Loss at Work.

8. Related Procedures And Documents

Supporting Documents Refer Trim Reference:

- M11/20517 Noise Hazard Identification Checklist (Attachment 1)
- M12/57744 Employee Medical Management or course requirements

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Noise Hazard Identification Checklist

Date:		
Work location:		
Person completing noise assessment :		
Yes to any of the following may indicate the need for a detailed noise assessment from an Occupational hygienist in accordance with procedures in AS/NZS 1269 <i>Occupational Noise Management</i>		
1. Is a raised voice needed to communicate with someone about one meter away?	Yes	No
2. Do workers complain that there is too much noise?	Yes	No
3. Do workers say that they can't hear each other or hear instructions or warning signals?	Yes	No
4. Do people working in the area notice a reduction in hearing over the course of the day?	Yes	No
5. Do employees experience any of the following:		
(a) ringing in the ears (tinnitus);	Yes	No
(b) the same sound having a different tone in each ear;	Yes	No
(c) Blurred hearing?	Yes	No
6. Are any long-term employees hard of hearing?	Yes	No
7. Are personal hearing protectors provided?	Yes	No
8. Are signs, indicating that personal hearing protectors should be worn, posted at the entrance or in the work area?	Yes	No
9. Have there been any workers' compensation claims for noise-induced hearing loss?	Yes	No
10. Does any equipment have manufacturer's noise information that indicates noise levels equal or greater than any of the following:		
(a) 85dB(A) $L_{Aeq,T}$	Yes	No
(b) 130dB peak noise level,	Yes	No
(c) 88dB(A) sound power level?	Yes	No
All completed Noise risk assessments are to be saved to		
Trim 46/544/0007 Human Resources - Occupational Health & Safety (OH&S) – Work risk assessments		
Within the appropriate Department sub folder.		

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(Attachment 1)

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