

## Monash University Procedure

<b>Procedure Title</b>	Noise Exposure and Control Procedures (Australia only)
<b>Parent Policy</b>	<a href="#">Noise Exposure and Control Policy (Australia only)</a>
<b>Date Effective</b>	16-July-2014
<b>Review Date</b>	16-July-2017
<b>Procedure Owner</b>	Executive Director, Buildings and Property Division
<b>Category</b>	Operational
<b>Version Number</b>	1.1
<b>Content Enquiries</b>	<a href="#">David Williams</a>
<b>Scope</b>	<p>This policy applies to all staff, students, contractors, tenants and visitors of:</p> <ul style="list-style-type: none"> <li>• Monash University on the university's Australian campuses, residences and offcampus facilities; and</li> <li>• Monash College Pty Ltd business units on the university's Australian campuses.</li> </ul>
<b>Purpose</b>	This policy sets out a framework for the management of occupational and environmental noise exposure in compliance with the Occupational Health and Safety Act 2004, Environment Protection Act 1970 and the Residential Tenancies Act 1997.
<b>PROCEDURE STATEMENT</b>	

### 1. Occupational noise

#### 1.1. Acceptable levels of occupational noise exposure

Under the Occupational Health and Safety Regulations 2007 Monash University must ensure that its employees are not exposed to noise greater than the noise exposure standard, which is an average of 85 dB(A) for 8 hours, or to any instantaneous noise in excess of 140 dB(C).

The dB(A) sound level measurement has become universally accepted in the assessment of the overall noise hazard since this level provides a rating of industrial broadband frequencies that reflects their association with noise induced hearing loss.

Sound level meters also contain a C-weighting filter, which influences only the highest and lowest frequencies and provides an almost flat response. Peak noise levels are measured using the C-weighting filter and expressed as dB(C).

Note that noise exposure approximately doubles with every 3 dB.

<u>Area or equipment</u>	<u>Typical noise levels dB(A)</u>
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Library	38-48
Typical office	50-60
Typical lab	55-65
Photocopier	59-71
Vacuum cleaner	68-74
Typical factory	76-82
Noisy lawn mower	87-94
Belt sander	90-97
Hand drill	95-101
High pressure spray painting	98-103
Angle grinder	95-107
Chainsaw	106-115

For example, the noise exposure standard is exceeded after 4 hours at 88 dB(A) or 15 minutes at 100 dB(A).

### Responsibility

Any Monash University staff member who supervises other staff in the workplace or who is lecturing, tutoring or supervising students.

#### 1.2. Reporting hazards and incidents relating to noise exposure

All hazards and injuries relating to noise exposure must be reported **immediately** via the [Hazard and Incident Report Form](#). Information on the reporting process is available from the Occupational Health and Safety (OHS) [website](#). Alternatively the hazard/injury should be reported directly to the supervisor or local safety officer.

#### 1.3. Noise assessment

A noise assessment must be conducted when there is uncertainty about whether or not employees are being exposed to excessive occupational noise. A noise assessment involves measuring noise levels generated by machinery and processes, as well as the levels received by the worker's ears. Additionally, noise assessments can provide valuable information for controlling noise.

##### 1.3.1. Who can conduct a noise assessment?

To arrange a noise assessment contact Occupational Health and Safety on extension 51016.

##### 1.3.2. Frequency of noise assessments

Noise assessments are conducted at least every 5 years or upon request by contacting OHS. Further information is available in the document [OHS Monitoring, Measurement and Registration at Monash University](#).

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## Responsibility

Any Monash University staff member who supervises other staff in the workplace or who is lecturing, tutoring or supervising students, in conjunction with the university's OHS Unit.

### 1.4. Risk management

Legislation requires that noise exposure must be controlled in a systematic way, and must start with an effort to remove the source of noise from the work environment or to reduce the amount of noise that is generated.

A risk assessment must be completed using the University's Risk Management Program and appropriate controls implemented.

1.4.1. **Controlling the noise at the source** should be considered as the first step in managing unacceptable levels of occupational noise. This is done through a process of elimination or engineering measures and is often easier in the long term than a personal protective equipment program. Often rethinking how a task can be done can greatly reduce the amount of noise. For example, bending a strip of metal using a hammer generates a great deal of noise; changing techniques and bending it with a pair of pliers is a much better alternative.

1.4.2. **Effective and practical methods for reducing the amount of noise employees are exposed to** include purchasing quieter equipment, installing springs and rubber strips to reduce the amount of vibration and resonance of the equipment, enclosing noisy equipment with noise absorbing/reflecting material and moving the source of noise away from where people work.

1.4.3. **Well-serviced equipment** is often quieter, so ensure equipment is in good working order.

1.4.4. **Administration controls** such as training, signage, limiting duration of exposure via work rotations and having 'no-go' areas, while not as good as eliminating noise at the source, are also effective ways of reducing noise exposure.

#### 1.4.5. **Personal protective equipment (PPE)**

Personal protective equipment can be used if all other controls do not reduce the noise levels to an acceptable level. However, it should be stressed that hearing protection is the last resort and should not be sought as a quick and easy solution.

To ensure the highest level of protection, the university recommends Class 5 earmuffs. These will provide at least 26 dB(A) of attenuation for 80% of people when in good condition and worn correctly. However, over time hearing protection degrades as the headband stretches, seals become hard and foam wears out, therefore a maintenance program must be developed to ensure that hearing protection is working effectively.

Earplugs are often used as an alternative to ear muffs. These can often be more convenient, but generally do not offer the same level of protection. The most common reason for the reduction in protection is due to improper fitting of the plug. Those using earplugs must receive training on how to fit them correctly and must follow these instructions or else the risk of permanent hearing loss may be increased. As a rule of thumb, earplugs should be far enough in the ear so that they are not visible or are just visible when the person is viewed standing front on.

## Responsibility

Any Monash University staff member who supervises other staff in the workplace or who is lecturing, tutoring or supervising students, in conjunction with the university's OHS Unit.

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### 1.5. "Buy quiet" policy

With a proactive purchasing policy, a number of noise hazards may be eliminated before they enter the workplace. The purpose of a "Buy Quiet" policy is to look at controlling noise at the earliest stages of planning and design, which aims to encourage the minimisation of noise generation by purchasing inherently quieter equipment. Most suppliers and manufacturers of noisy equipment are required by law to provide information on the amount of noise generated by their products, so you can make an informed decision on which piece of equipment to purchase.

Quieter equipment can be more expensive in terms of its upfront cost, but this is usually offset by a higher quality product lasting longer and performing better. Additionally no noise reducing retrofitting will be required and it will decrease the reliance on PPE programs. All university departments should adopt a "Buy Quiet" policy where staff and students have the potential to be exposed to excessive levels of noise or off-site noise impacts to residential areas could be reasonably expected.

#### Responsibility

Any Monash University staff member who supervises other staff in the workplace, in conjunction with the university's OHS Unit.

Any staff with responsibility for purchasing or overseeing the design and/or installation of noise-emitting products, plant or equipment.

### 1.6. Audiometry

Any employee who is required to wear hearing protection must have an audiometric test every two years. The Occupational Health and Safety branch co-ordinates this testing as part of its health surveillance program. Additionally, audiometric testing may be conducted pre-employment for at risk groups to establish base line hearing levels.

#### Responsibility

The supervisor of any staff required to wear hearing protection, in conjunction with the University's OHS Unit

## 2. Environmental noise

Some areas within the university have developed local guidelines regarding noise exposure and control (eg: Monash Residential Services, Monash Sport) - those guidelines should be complied with in addition to these procedures.

### 2.1. Crowd noise

Gatherings of large crowds may occur during various university functions and events.

It should be recognised that the university's core functions of teaching and research must be able to continue during normal teaching periods. Normal teaching hours are defined as 8:00am to 6:00pm for daytime offerings with evening unit offerings scheduled between 6:00pm and 10:00pm.

During the day/evening period crowd noise should be limited so that activities such as talking, reading and watching television can occur without undue interference.

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## Responsibility

Any Monash University staff member, student, student association, visitor or contractor organising an event where a crowd is anticipated on university campuses.

### 2.2. Music noise

Loud music from entertainment venues can be a problem, particularly late at night, during teaching times and when the venue is located in proximity to noise sensitive teaching, research or residential accommodation located on campus and off campus.

The [State Environment Protection Policy \(Control of Music Noise from Public Premises\)](#) has been developed for the control of music from non-residential premises. Noise requirements based on this policy are usually included in a venue's liquor licence (where one is required).

#### 2.2.1. Outdoor music

- The university's core functions of teaching and research must be able to continue unaffected during normal teaching periods. Normal teaching hours are defined as 8:00am to 6:00pm for daytime offerings with evening unit offerings scheduled between 6:00pm and 10:00pm.
- The [State Environment Protection Policy \(Control of Music Noise from Public Premises\)](#) prohibits the operation of outdoor venues beyond 11 pm. Following a complaint, the police have power under legislation and this policy to instruct a venue to cease entertainment noise.
- Any event held on campus, whether it involves music or not, must be booked through Monash University Venues. Bookings are to be made online via the [Student Clubs Online Booking Request](#). To enable approval of the booking, the [Monash University Venues Standard Conditions of Hire](#) must be read and endorsed by the person submitting the application. Once completed, the form is then forwarded online to Monash University Venues for processing.
- Outdoor music may be played during the times outlined in the [Monash University Venues Standard Conditions of Hire](#), providing normal conversation can be conducted in any nearby teaching or meeting rooms or offices, and there is no impact on residential areas or teaching / research activities.
- If there are any complaints regarding outdoor music these can be directed to the Campus Manager and / or OHS. Security should only be contacted for noise complaints outside of normal hours, or where conflict in resolving the issue may reasonably be likely.

## Responsibility

Any Monash University staff member, student, student association, visitor or contractor who wishes to play or have played indoor music on university premises.

### 2.3. Vehicle emission noise

It is an offence to own or use a vehicle that exceeds noise limits in the [Environment Protection \(Vehicle Emissions\) Regulations 2013](#). The EPA can require a vehicle to be presented at one of its approved motor vehicle noise testers to determine compliance with the limits. A member of the public can report a noisy vehicle to the Traffic Management Unit at their local police station.

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### Responsibility

Any Monash University staff member, student, student association, visitor or contractor in charge of a vehicle on university or property or who becomes aware of excessively noisy vehicles on university property.

#### 2.4. Construction and demolition noise

The EPA has published guidelines in relation to construction and demolition site noise in its [Noise Control Guidelines Publication No 1254](#).

In order to comply with these guidelines, the university must minimise construction and demolition noise that might:

- Prove unreasonable to any nearby residential premises
- Disrupt university core teaching and research functions

It should be noted that whilst the EPA does have noise regulations, the Monash City Council also has regulations for weekend noise restrictions. [Local Law No. 3, Clause 83](#) is the relevant section pertaining to weekend building work. If any weekend construction work is performed near a residential area and is likely to create a noise disturbance, the relevant FSD Project Manager must ensure the builder is aware of this Clause.

##### 2.4.1. Disruption to residential premises - on campus and off campus

Where there are residential premises located within 200 metres of construction and/or demolition works on university premises the following requirements apply:

- Inform in writing, potential noise-affected neighbours about the nature of construction stages and noise reduction measures;
- Give notice as early as possible for periods of noisier works such as excavation - describe the activities, how long they are expected to take and keep affected neighbours informed of progress;
- Appoint a principal contact person for community queries;
- Provide 24 hour contact details through letters and site signage
- Record complaints and ensure they are resolved/actioned promptly and within an appropriate timeframe;
- Where it is reasonable to do so:
  - Schedule noisy activities for less sensitive times
  - Provide periods of respite from noisier works;
- Weekend/evening hours (Saturday afternoon and Sunday) are more sensitive times and have noise requirements consistent with quieter work. Noise sensitive times for residential areas are before 9.00am and after 6.00pm. It should be noted that exam times should be avoided altogether as students are studying at all times throughout the day in Monash Residential Services (MRS) residences.

*(Dot points quoted, with minor omissions, from section 2, page 3, of the above cited Noise Control Guidelines Publication No 1254.)*

### Responsibility

Relevant Monash University Buildings and Property Division Project Manager

##### 2.4.2. Disruption to teaching and research

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The university's core business is learning, teaching and research and wherever possible these activities should be given priority over noisy construction works. In order to minimize the possibility of teaching and research being interrupted or otherwise affected by construction noise:

- Noisy works should be scheduled wherever possible outside normal teaching hours of between 8:00am and 6:00pm for daytime offerings with evening unit offerings scheduled between 6:00pm and 10:00pm;
- The relevant teaching and research requirements of any particular building or area should be assessed and taken into account in the scheduling of noisy works;
- If noisy works cannot be undertaken outside normal teaching hours, the relevant Project Officer should consult with building occupants and agree with them on a time and duration for the noisy works to be undertaken;
- Appoint a principal contact person for staff and student queries/ complaints;
- Record complaints and follow a complaint response procedure suitable to the scale of the works.

### Responsibility

Relevant Monash University Buildings and Property Division Project Manager

#### 2.4.3. Noise reduction measures

Noise reduction measures should be developed through initial project planning, tenders for equipment and subcontracts. Larger projects should develop a noise management plan (potentially part of a broader environmental management plan) and may require advice from an acoustic specialist. The following noise reduction measures should be employed:

- Where work is conducted near residential, teaching or research areas, use the lowest-noise work practices and equipment that meet the requirements of the job.
- Site buildings, access roads and plant should be positioned such that the minimum disturbance occurs to the locality. The site should be planned to minimise the need for reversing of vehicles.
- All mechanical plant is to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices, should be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair.
- Fit all pneumatic tools operated near a residential, teaching or research area with an effective silencer on their air exhaust port.
- Install less noisy movement/reversing warning systems for equipment and vehicles that will operate for extended periods, during sensitive times or in close proximity to sensitive sites. Occupational Health and Safety requirements for use of warning systems must be followed.
- Turn off plant when not being used.
- Where possible, no truck associated with the work should be left standing with its engine operating in a street adjacent to a residential, teaching or research area.
- Special assessment of vibration risks may be needed, such as for pile-driving or works structurally connected to sensitive premises.

### Responsibility

Relevant Monash University Buildings and Property Division Project Manager

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### 2.5. Refuse and waste collection

In order to reduce any annoyance created by industrial waste collections to residential, teaching or research areas:

- Refuse bins should be located at sites that provide minimal annoyance to sensitive areas.
- Routes which service predominantly sensitive areas should be altered regularly to reduce disturbances.
- On-campus residential area waste collection should be only between 8.00am and 6.00pm.

#### Responsibility

Manager Cleaning at each campus

### 2.6. Gardening noise

In order to limit the amount of noise created by lopping or removal of trees, cutting of grass and so forth:

- All internal combustion engines must be fitted with a suitable muffler in good repair.
- Work carried out in proximity to an external residential area should be restricted to the hours of 7 am to 6 pm Monday to Saturday and 9 am to 6 pm Sundays.
- Work carried out in proximity to on-campus residential areas (ie: MRS) should be restricted to the hours of 9 am to 6 pm Monday to Friday with no gardening work on weekends.

#### Responsibility

Grounds Curator

### 2.7. Public address systems

Public address systems may be divided into two categories:

- Low power systems for event control - units needed for control of persons engaged in activities or events, not for giving commentaries, advertising or playing music; and
- High-power systems used for making commentaries and announcements - much larger systems used, for example, to give a running commentary during a sporting event, to keep spectators entertained or for carnival-type advertising.

Noise intrusion from public address systems should not be more than 5dB(A) above background at any affected residential, teaching or research area. Amplifier level settings must be minimised whilst ensuring conveyance of information to audience or participants is adequate.

#### Responsibility

Any Monash University staff member, student, student association, visitor or contractor wishing to use a public address system on university property

<b>Responsibility for implementation</b>	Director, OHS & Environment, Buildings and Property Division
<b>Status</b>	New

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<b>Approval Body</b>	
<b>Definitions</b>	<p><b>dB:</b> decibel, a logarithmic unit of measurement for the loudness of sound.</p> <p><b>dB(A):</b> “A” weighted decibel, which approximates how the human ear responds to noise at moderate levels.</p> <p><b>dB(C):</b> “C”-weighting filter, which influences only the highest and lowest frequencies and measures peak noise levels.</p> <p><b>Environmental Noise:</b> the sum of outdoor sound resulting from transport, industrial and recreational activities.</p> <p><b>Noise:</b> all sound, whether wanted or unwanted.</p> <p><b>Noise Sensitive Areas:</b> areas where people sleep or carry out normal domestic activities, including residential buildings, hospital wards, hotels and motels.</p> <p><b>Nuisance Noise:</b> noise that does not cause hearing loss but may have a negative psychological effect.</p> <p><b>Occupational Noise:</b> the sum of sound occurring in the workplace.</p> <p><b>Operation:</b> music noise emissions from premises occurring in a 24 hour period.</p> <p><b>University Premises:</b> buildings, land and property owned, leased and or occupied by the university.</p>
<b>Legislation Mandating Compliance</b>	
<b>Related Policies</b>	
<b>Related Documents</b>	