



# SAFETY GUIDELINES FOR THE ENTERTAINMENT INDUSTRY

Developed by the Australian Entertainment Industry Association and the Media Entertainment and Arts Alliance

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These Guidelines have been developed to provide practical guidance in the safe execution of productions and events across the entertainment industry. The Guidelines are part of a broad Occupational Health and Safety (OH&S) framework for the industry which will lead to the development of a National Code of Practice. Not all parts of these Guidelines will be relevant to what may be required in any particular production, event or venue.

It is important that the information in these Guidelines is available to use as may be relevant in order to prevent and resolve health and safety issues in the interests of all parties and to ensure safe systems of work are used on every production and event and in every venue and workplace.

These Guidelines are designed to minimise risk in the workplace. The safe work procedures outlined in these Guidelines are not exhaustive. Risk assessments on any particular production or event or for any individual venue may identify alternative work practices that deliver similar or safer outcomes.

These Guidelines have been developed by the Australian Entertainment Industry Association (AEIA) and the Media Entertainment and Arts Alliance (MEAA) after extensive consultation. The AEIA, the MEAA and the Musicians' Union of Australia (MUA) endorse these Guidelines and agree that their implementation will bring about acceptable safety standards in the industry. Endorsement of these Guidelines is being sought from relevant workers' compensation authorities.

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## DEFINITIONS

**Action Level** means a noise level above which the employer should take action to reduce the noise exposure of employees. The assessment of “action level” should not take into account the attenuation of any personal hearing protection.

The levels are:

- (a) a peak noise level ( $L_{peak}$ ) of 140dB(lin); or
- (b) an 8-hour exposure level ( $L_{Aeq, 8h}$ ) of 85dB(A).

**Bump in/Bump out** means the process of unloading a set, scenery or structure from trucks or transferring a set, scenery or structure from a storage area; the installation of the set, scenery or structure on a stage or staged location and the dismantling and reloading after the run of a production. The process can include the installation of a stage itself, a sound shell or a staged area in either an internal or external venue and includes the general set up of the venue.

**Contractor** – for the purposes of this document, contractor includes subcontractors.

**Designer** means a person who designs a set or structure or who is responsible for the design of a set or structure.

**Emergency** – any event which arises internally or from external sources which may adversely affect the safety of persons in a workplace or the community generally and calls for immediate response by the occupants.

**Entertainment activities** include staging operations of any kind whether at an internal or external venue.

**Entertainment Industry** – for the purposes of this document, entertainment industry means all of the people, contractors, companies and other entities involved in any live entertainment activities or events that are open to the general public, including any activity that relates to the pre-production and/or post-production phases of those entertainment activities.

**Entertainment venue** – any place where a performance is conducted for the enjoyment of members of the public.

**Event Leq** – The average A weighted sound pressure level measured over the period of a performance expressed in decibels.

**Fogs and Smokes** – Smoke and fog are both used to describe atmospheric effects in theatre. Smoke is comprised of solid particles suspended in the air and is more often than not the effect of incomplete combustion. Fog comprises liquid droplets suspended in the air and is not the product of combustion. For the purposes of this document, the terms are used according to these definitions.

**Hazard** – anything that has the potential to cause damage to life, health or property and applies to substances, work methods or machines and other factors in the work environment.

**Hierarchy of controls** – a process to assist in choosing the most effective control measures to minimise a risk. Consideration is given in turn to each of the following with measures higher on the list being preferred over those lower on the list:

- Eliminate the hazard – avoid the hazard entirely by consideration of moving to another location, or eliminating a hazardous activity from the programme, activity, item, plant or material.
- Substitute the hazard with a less hazardous alternative – use a less hazardous process, for example, replacing a hazardous substance with a less hazardous one or substituting a difficult routine with a less onerous one.
- Apply engineering controls including isolation or modifications to design – redesign of sets to minimise trapping spaces or fall risks; guard all unprotected openings or edges; utilise lifting equipment to move heavy props or redesign props so that they are not so heavy.
- Implement administrative controls including safe working practices – alter the routine to reduce exposure, for example, rotate staff or develop standard operating procedures for traps which incorporate control of health and safety risks.
- Provide personal protective equipment (the last and least preferred option or to be used only to supplement other measures) – provide fall arrest devices for work at heights; provide hearing protection for work with high sound pressure levels.

**Incident** – an unplanned event that results in damage to property or could have resulted in an injury to workers or members of the public. It includes dangerous occurrences and “near hits”.

**MSDS (Material Safety Data Sheet)** – a document prepared by the manufacturer or importer of a hazardous substance. It prescribes the properties and uses of a particular hazardous substance and provides information on the substance’s identity, chemical and physical properties, health hazard information, precautions for use and safe handling information.

**PPE (Personal Protective Equipment)** includes safety glasses, safety shoes, hard hats, fall protection equipment such as safety harnesses and fall arrest devices, gloves and hearing protection.

**Pendulum effect** means a circumstance where a person in a harness is suspended from a fixed point so as to move to and fro by the action of gravity and acquired kinetic energy.

**Producing Company** – for the purposes of this document, “producing company” includes the event manager.

**Reference Position** means a nominated sound pressure level measurement position within the venue sufficiently close to the stage area that the sound level is dominated by the music.

**Risk** – the probability and consequences of occurrence of injury or illness. Risk depends on such factors as the nature of the hazard, the degree of exposure, the potential consequences and individual characteristics such as susceptibility to hazardous substances.

**Risk Assessment** means the process of evaluating the probability and consequences of injury or illness arising from exposure to an identified hazard and for the purposes of this document includes Hazard Identification and Risk Control initiatives.

**Risk Register** – a document that lists identified hazards with an assigned priority; the measures of control of identified hazards and any action that is planned to either minimise the risk in the short term or eliminate the risk in the long term. It is a useful planning tool as well as a control mechanism.

**Self-employed person** – for the purposes of this document, self-employed persons are treated as employers.

**Set** – any scenery and associated technical equipment used in an entertainment production.

**Structure** – also means any part of a structure.

**Workers** – for the purposes of this document, workers also include volunteers and artists.

**Workplace** is defined in most Australian state and territory legislation as any area where work is conducted.

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# SECTION ONE: GENERAL PRINCIPLES

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## 1. Introduction

The Australian Entertainment Industry Association (AEIA), the Media Entertainment and Arts Alliance (MEAA) and the Musicians' Union of Australia (MUA) are serious about health, safety and environmental issues, and these Guidelines are designed to ensure you are aware of the requirements for working in the entertainment industry.

Good management and risk planning will reduce incidents in the workplace.

Ensuring the health and safety of persons at work is a shared responsibility between the producing company, the venue and all their workers and contractors.

These Guidelines have been prepared to give you important information about occupational health and safety in the entertainment industry. It is imperative that these Guidelines are read in conjunction with all relevant legislation.

## 2. Legislation

In all states and territories of Australia, there is health and safety legislation that applies to all workplace practices. All productions, events and venues must comply with relevant legislation and any person working outside these requirements may be subject to fines and/or prosecution. This legislation, in particular, requires all organisations involved in the entertainment industry to:

- have policies and procedures that aim to protect the health and safety of all;
- ensure such policies and procedures are documented and available to all;
- undertake risk assessments to identify hazards and implement appropriate control measures;
- consult with all involved in the workplace.

Further information on occupational health and safety (OH&S) workplace policies and risk assessments can be found later in this document.

In addition to health and safety legislation, there is other legislation that will impact on safety in the workplace, eg. the Disability Discrimination Act (1992).

## 3. Roles and Responsibilities

The health and safety legislation places responsibility on everyone to ensure that standards are maintained. These responsibilities extend beyond the producing company and its employees to venues, contractors and labour hire agencies to comply with requirements to assist in ensuring all visitors, including presenters, comply with the legislation.

### 3.1 Workers

Workers have a key role to play in the implementation of health and safety strategies on all productions and events. In their own interests, and as a legal obligation, all workers therefore have a responsibility to ensure that nothing is done to make health and safety provisions less effective.

All who are involved in providing services and/or working on entertainment industry productions or events must ensure that, as far as is reasonably practicable, at all times their work activities and equipment are not likely to result in damage to themselves, to others, or their working environment. In particular, workers must:

- work in a healthy and safe manner;

- ensure they do not endanger any other person through any act or omission at work;
- obey all instructions, such as policies and procedures issued to protect their own personal health and safety, the health and safety of others and adhere to standard work procedures;
- encourage others to work in a healthy and safe manner;
- cooperate, consult on and promote occupational health, safety and welfare matters in the workplace;
- report and work to rectify (where possible) any hazards within the workplace;
- report any injuries and incidents to their supervisor as soon as possible after the incident;
- ensure that correct use is made of all equipment provided for health and safety purposes;
- ensure that they are not, by the consumption of alcohol or any other drug, in such a state as to endanger their own safety at work or the safety of any other person in the workplace environment; and
- cooperate with investigating authorities.

Each workplace must have in place a consultative process that everyone follows. Such a process may resemble the following:

**Step 1:**

Speak to your supervisor, manager or the stage manager as may be relevant.

**Step 2:**

If unresolved, speak to your designated Health and Safety Representative (HSR) or delegate.

**Step 3:**

If unresolved, the HSR or delegate will speak to the person who has direct responsibility for health and safety.

**Step 4:**

If unresolved, the HSR or delegate will report to the Health and Safety Committee.

**Step 5:**

If unresolved, or in the absence of a Health and Safety Committee, the HSR or delegate will, where applicable, refer to your union or association.

**Step 6:**

If unresolved, the HSR or delegate or your union or association will report to the relevant local, state or territory authority.

The employer must establish an effective response procedure for issues raised by employees and that response procedure will be made known to employees, the HSR and/or delegates and the Health and Safety Committee.

These steps are designed to ensure there is a strict and efficient line of communication about health and safety issues.

### **3.2 Employers and Contractors**

The producing company and the venue owner/manager have specific responsibilities for making such decisions and implementing such actions as may be necessary to provide for the health and safety of their own employees, contractors and other people in the working environment.

Whereas an employer may contract out certain OH&S tasks, the employer's legal obligations in respect of OH&S remain at all times the responsibility of the employer.

All workers, contractors and volunteers must be made aware of all hazards that may impact upon themselves, their staff or others and what risk control measures are in place for their protection.

The producing company and the venue owner/manager must ensure that all individuals are involved in developing a safe and healthy working environment through appropriate mutually agreed consultation processes.

The producing company and the venue owner/manager shall ensure that suitably qualified and competent personnel are engaged to undertake all aspects of the production or event, and that they are aware of their responsibilities and comply with all relevant legislation.

The producing company and venue owner/manager must ensure an emergency and evacuation plan is developed and communicated to all.

The individual responsible for health and safety during a production or event may vary depending on the activity undertaken and/or the phase of the production or event. The producing company and the venue owner/manager must ensure that all persons are advised of the identity of the person/s with principal health and safety responsibility in the particular workplace/s. That person may be the:

- Venue Owner/Manager
- Producer
- Production Manager
- Head of Department
- Supervisor
- Stage Manager
- Company Manager

The production or event on which you are working may have different titles for these roles but what is relevant is their allocated responsibilities.

## **4. Risk Assessment**

A risk assessment must be undertaken which considers every aspect of every phase of every production or event, including every aspect of pre- and post-production. Consideration must be given to all work practices undertaken in the working environment. The working environment encompasses all activities related to the production or event, including those undertaken on stage, backstage, front and back of house, auditorium, workshops, dressing rooms and facilities, the location of the audience and interface with the general public, for instance, where an outdoor performance might involve audiences camping at the working site.

The risk assessment process can and should involve persons who will be undertaking the work.

Where a hazard exists and a risk identified, it is always good practice to document the hazard/s, the risk/s and the agreed control measures.

Risk assessment must have regard to design, planning, construction, pre-performance, performance, bump in and bump out. Risk assessment must be undertaken for each venue/work site. It is the responsibility of the producing company and the venue manager to ensure this happens and to provide adequate time for it to be undertaken and control measures implemented. It is the right of any employee to view any risk assessment/s associated with the work they are performing. (Refer to Clause 2 Legislation.)

Risk assessments must identify hazards and detail procedures to eliminate or reduce the risk associated with the hazard/s, by (in order):

- trying to eliminate the risk.

In the event the risk cannot be eliminated, then:

- firstly, by substituting a less hazardous activity/substance;
- secondly, by mitigating the hazards through re-design or isolation of the hazard;
- thirdly, by rearranging work organisation and training to reduce exposure, and
- as a last resort, using personal protective equipment.

This process will be documented in any incident/hazard report.

Further information on risk management can be obtained from the AEIA.

## **5. Safety Induction**

All those working on a production or at an event should be given sufficient information to enable them to perform their job safely. Irrespective of the duration of their engagement period, all those working on a production or event must be given an induction at each work site at which they will perform duties. It must include an orientation and

information relevant to the event or production. Time will be put aside on the first day of employment at each venue or site for this induction. Key issues likely to be covered include:

- relevant site layout including location of:
  - safe access and egress points,
  - facilities and amenities,
  - OH&S equipment including personal protective equipment,
  - first aid and emergency equipment,
  - material safety data sheets for any relevant hazardous substances;
- emergency and evacuation procedures and relevant personnel (including recognition/use of fire extinguishers);
- crucial workplace-specific procedures, including relevant manual handling issues.

If you require more information on any of the above, or any other matter, consult your supervisor. If this information is unavailable for any reason, raise the matter with your supervisor for rectification.

## **6. Emergency Contacts and Procedures**

The venue management and producing company must provide a list of emergency contact numbers. That list must include the emergency contact numbers for the Venue Manager or their delegate together with numbers for emergency services. The venue owner and producing company must have appropriate emergency plans and procedures in place for every event and production at every venue.

When communicating an emergency, state the following:

- that it is an emergency;
  - your name and the exact location of the emergency;
  - details of the emergency; and
- ensure that the information has been received and is acted upon.

## **7. Workplace Communication and Consultation**

Effective workplace communication and consultation will reduce the risk of damage to the working environment and/or those involved.

Communication is paramount. It must be clear, concise and appropriate to the person. If unsure about any task to be undertaken, or any communication given, verify the task or communication. If you are concerned, utilise the consultation process outlined in Clause 3.1.

## **8. Key Safety Issues**

General guidelines include the need for you to:

- Know the safety aspects of your workplace, and
  - only go where you are authorised to go;
  - observe all warning signs and instructions;
  - observe restrictions on smoking, alcohol and other drugs.
- Know the safety aspects of your job, and
  - ensure you have read and understood the safety induction information you have been given;
  - follow instructions – if in doubt, ask;
  - only use plant and equipment you are authorised and competent to use;
  - wear and use appropriate clothing, footwear and safety equipment (including personal protective equipment).
- Carry out your work in a safe way, and
  - use the right equipment for the job;
  - use plant and equipment in accordance with the manufacturer's specifications – if it is modified, a full risk assessment must be undertaken and safe work practices for its continued use developed and implemented;

- use, transport, store and dispose of plant, equipment, hazardous substances and waste in accordance with relevant state and territory legislation and regulations;
  - follow all procedures associated with the use of naked flame, pyrotechnics and other special effects;
  - ascend and descend safely, eg. by way of ladders or stairways.
- Take appropriate measures in emergencies, and
  - ensure first aid is provided promptly;
  - report all hazards, incidents, injuries and/or other emergencies.
- Make sure your supervisor is aware of any disability or any other factor that may affect your capacity to perform your duties safely and any modifications that may be required to your workplace.
- Observe strictly the producing company/venue's workplace policies in respect of:
  - children in the workplace, including when they are part of a performance;
  - animals, including pets (but excluding companion animals) in the workplace, including when they are integral to the production.
- If asked to perform a task that is not within your ability or is unsafe, refer back to the consultation process (see Clause 3.1).

**Wilful** damage/destruction to plant/equipment or disobeying health and safety instructions or standards could result in grounds for dismissal.

## 9. Incident and Hazard Reporting

The main purpose of incident and hazard reporting is to identify and eliminate as far as is reasonably practicable the risks associated with identified hazards and to prevent re-occurrence. The producing company and the venue manager will discuss any occurrences and implement preventative strategies as necessary.

- All hazards and incidents must be reported immediately to your supervisor.
- All incident/hazard reports must be completed and forwarded to your supervisor as soon as possible after the occurrence. Your supervisor will forward reports to other relevant persons.
- If you suffer an injury or illness, no matter how slight, as the result of an incident at work, you must report the incident to your supervisor and ensure the details are recorded.
- If you suffer an injury or illness as the result of an incident at work leading to medical expenses and/or time off work, it is your responsibility to obtain and complete the relevant workers' compensation documentation.
- All incidents and hazards will be investigated by the relevant personnel.
- Do not disturb the scene of an incident unless not doing so will jeopardise the safety of the people in the area.
- Persons unable to complete reports without assistance may seek the assistance of an advocate to complete or make any/all reports.
- An injuries register must be provided on site and available for all employees to use. The register must be completed in the event anyone is injured.

For incidents involving members of the public, an incident form will be completed by your supervisor. If you are witness to such an incident, inform your supervisor of the occurrence.

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## SECTION TWO: SPECIFIC HAZARD MANAGEMENT

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Below are a number of general guidelines for safe operations. This is not an exhaustive list, and not all aspects of this information will apply to your role.

### 1 Work Involving Heights

#### 1.1 All Work involving Heights

A risk assessment must be done for all situations where work is done at a height. It must include consideration of those working below. Key issues (**see also the specific guidelines under 1.2 to 1.8 below**) include:

- Where there is potential for a person to be injured by a fall from a height, appropriate precautions must be taken, including:
  - wear a fall arrest device when one is specified;
  - do not undertake work requiring the use of fall arrest or restraint devices until you have been given appropriate training in their use and maintenance – including how to avoid pendulum effect injuries;
  - check that all harnesses, lanyards, fall arrest and fall restraint devices are manufactured and maintained to Australian Standards;
  - have an effective communications system between those at a height and those on the ground.
- Height rescue procedures must be developed for every workplace where work at a height is undertaken.
- Safe access must be provided for all work at heights where there is potential for a person to fall more than 1.8 metres, including:
  - where possible, use mobile platforms rather than ladders;
  - ensure mobile access equipment has its wheels locked prior to use;
  - do not enter scaffolding until the appropriately qualified person has completed its erection;
  - only ascend/descend facing towards the ladder and hold on while doing so.
- Safe working practices must be implemented while working at a height, including:
  - ensure vision is not obstructed;
  - where there are no guardrails, use an approved safety harness connected to a secure anchor point;
  - do not work beyond the side of ladders or over guardrails;
  - do not place ladders on other structures to extend their reach;
  - wear appropriate footwear to minimise slipping, clothing to minimise risk of snagging and tie back hair at all times.
- Appropriate precautions must be taken against injury to people below those working at a height, including:
  - take aloft only essential tools and equipment;
  - prior to ascending, secure all tools and equipment with lanyards to prevent them falling on those below, and empty pockets of any unsecured items;
  - implement appropriate control measures to prevent scenery, props, etc from creating a risk by falling.
- Signs must be clear, unobstructed and in conspicuous places.

#### 1.2 Elevated work platforms (EWPs)

“Elevated work platforms” include self-elevating work platforms (SEWPs) such as Cougars, Genie Lifts, Maxi-lifts, Scissor Lifts, as well as Tallescopes, lighting and sound bridges, balconies, etc.

- Equipment must be appropriate to the job and used in accordance with specifications and Australian Standards, in particular:
  - use the most appropriate EWP for the job;
  - only operators competent in the use of the particular equipment may use it;
  - use equipment in accordance with the manufacturer’s specifications;
  - if equipment is modified, appropriate risk assessment must be undertaken and an engineer’s certificate obtained.
- Safe work practices must be used with all EWPs including:

- never exceed the safe working load for the EWP;
- maintain each EWP in good working order and inspect it daily;
- be aware of clearances when operating or travelling with an EWP;
- do not lean over the safety barrier of an EWP, nor suspend or balance anything so that its centre of gravity is outside the safety barrier.
- If it is necessary to move a SEWP with the boom raised and a person on the platform, ensure the outriggers are no more than 10mm from the floor and the person on the platform is not protruding from the confines of the platform.

### 1.3 Scaffolding

Scaffolding is a common means of providing a safe work platform, and is sometimes used as a performance area or as part of a set.

If the potential fall distance is greater than 4m, scaffolding must be erected or dismantled only by a holder of a certificate of competency for that class of scaffolding, or a person trained under the direct supervision of such a certificated person.

If the potential fall distance from a scaffold is less than 4m, it may be erected or dismantled only by a competent person who has been trained in respect of the type of scaffolding being used. **Unauthorised changes to scaffold structures are illegal.**

- The scaffolder must ensure all persons are protected, in particular, by:
  - installing appropriate, clear, unobstructed signage during construction;
  - ensuring appropriate barricading against unauthorised entry;
  - when completed, certifying scaffolds are safe before anyone uses them.
- Safe construction methods must be used for scaffolds, including:
  - ensure only correct materials for the load are used, in accordance with AS 1576;
  - inspect all equipment and materials before use, and repair or dispose of any rejects;
  - tie scaffold effectively to a building or structure, or erect on firm foundations;
  - brace scaffolding effectively, both longitudinally and transversely, with safe means of access and egress;
  - fully plank out scaffolding more than 1.8m high, with properly supported planks of the correct size, toe boards and continuous handrails to ensure a safe work platform.
- Mobile/wheeled scaffolding must not be moved whilst supporting people, and all wheels must be locked before anyone works on it.

### 1.4 Powered and non-powered lifting devices

The operation and maintenance of load-shifting devices, including powered and non-powered lifting devices, must comply with state and territory legislation. All drivers, operators and riggers, including anyone who slings or directs the movement of goods handled by a crane or power winch, must be competent to undertake the work they are involved with, and hold the necessary certification.

All load-shifting equipment must be maintained in good working order. Cranes should be parked when unattended and at the end of the work period in accordance with the manufacturer's recommendations.

### 1.5 Theatrical flying and rigging operations

- Any person undertaking flying operations must hold the appropriate certificate of competency, and be competent to operate the relevant equipment to the satisfaction of his or her employer, the producing company and the venue owner/manager. In particular, he or she must:
  - only ever rig loads appropriate to his or her level of training – if in doubt, ask;
  - ensure that all persons are protected from injury by means of appropriate barriers;
  - check braking systems of flying systems prior to use;
  - test that cabling and winches of flying systems are in line with manufacturer's recommendations;
  - maintain a lifting register for all cables and ropes.
- Particular considerations in respect of movement of people include:

- no-one must ever ride on hooks, slings or loads;
- use a safety factor of 10:1 when suspending people;
- use safety lines with ratings in accordance with Australian Standards;
- plan aerial performance sequences with appropriate rigging for the size of the performer(s) and the task to be completed – include consideration of the need for crash mats, safety netting, appropriate emergency and contingency procedures – lighting, set or sound changes must be communicated to both riggers and aerial performers.
- Safe working practices for flying and rigging include:
  - never exceed safe working loads;
  - ensure items being flown have been designed and constructed in a manner appropriate for flying;
  - ensure flown items are safely and appropriately attached to scenery bars;
  - when moving down scenery, warn those below (during a performance this will be via appropriate communications systems);
  - use steel slings as a secondary for fibre slings if there is a risk of fire;
  - use packing between slings and sharp edges;
  - lower loads onto timber to avoid sling crushing.

## 1.6 Ladders

- Only ladders designed in accordance with Australian Standards AS1892 and AS1657 should be used, and they should:
  - be designed and constructed with a load rating appropriate to the work to be performed;
  - be maintained in good condition and free from oil or grease when used;
  - have non-skid safety feet installed prior to use (if straight ladders).
- Particular points when using ladders include:
  - position ladders at a ratio of 1 out to 4 up, and ensure they extend more than 1m beyond the work level or step off point;
  - tie off or otherwise secure all straight ladders before use;
  - position ladders only on non-slip, flat surfaces;
  - do not position ladders in access areas or within the arc of a swinging door, without taking additional measures to safeguard a person on the ladder – eg locking off the door, displaying appropriate signs, erecting barriers to prevent access to the area where the ladder is being used.
- Portable metal ladders must not be used for electrical work – metal ladders should be labelled “Caution: do not use around electrical equipment”.

## 1.7 Personal fall protection equipment

- Personal fall protection equipment is designed to stop a person falling. Protection equipment should be used when there is a risk of a person falling and it is not reasonably practical to change the design of the job to eliminate the risk of a fall. The equipment should be used to:
  - minimise the risk of a person falling from a height (travel restriction devices); or
  - minimise the risk of injury to a person who has fallen from a height (fall arrest devices).
- A risk assessment must be undertaken to determine the most appropriate form of personal fall protection equipment for the situation – refer AS 1891 – including:
  - travel restriction devices are to be preferred to fall arrest devices;
  - anchorage points must be capable of sustaining the load of the person falling;
  - all persons who need to use fall protection equipment must be trained in its use and maintenance;
  - adequate supervision must be provided to people using fall protection equipment.

## 1.8 Falling objects

A falling object includes any object or material falling from a height, and also anything propelled upwards or sideways, that could injure a person who is struck by it. A risk assessment must be undertaken for all falling object hazards.

- Objects must be prevented from being accidentally knocked or dropped down from heights, including:
  - secure all tools and equipment when working at heights or climbing ladders;
  - do not store anything on platforms or near unprotected edges or openings;

- adequately secure luminaires with properly maintained safety chains;
- secure props and scenery, especially during bump ins and bump outs;
- maintain housekeeping at a high standard.
- Particular issues concerning flying include:
  - ensure that the systems, ropes, slings, barrels, safety chains, etc are in good order;
  - provide proper warning to all relevant persons prior to flying scenery;
  - inspection by a competent person, prior to its use, of any system used for suspending objects;
  - ensuring adequate mechanisms for securing chains on chain motors.
- Other risk control measures include:
  - choreograph performers appropriately to minimise the potential for them to drop or propel objects hazardously (including themselves);
  - training performers and props staff in the correct methods of carrying weapons;
  - tape down cables in areas where people may walk;
  - install toe or kick boards on elevated walkways and platforms;
  - wear hard hats when working below where other people are working, where this protection is identified by the risk assessment.
- Adequate measures must be taken to prevent objects and/or persons falling into the orchestra pit.

## **2 Working in Awkward Environments**

### **2.1 Working in confined spaces**

A confined space is one which has restricted means for entry and exit and has inadequate ventilation, is oxygen-deficient or contaminated. Confined spaces include:

- spray and fibreglass-manufacturing booths,
- air conditioning ducts,
- any compartment with only one person-hole access for entry,
- open-top spaces more than 1.5m deep that do not have good natural ventilation.

Work may only be carried out in a confined space by a competent person, and under strict procedures where a work plan is submitted by the relevant supervisor to the production manager for approval. The plan must cover:

- air quality, including:
  - atmosphere testing;
  - ventilation;
  - cleaning and purging of the air in the confined space;
  - appropriate respiratory protection equipment.
- emergency and rescue procedures, including:
  - safety harness and lifelines;
  - isolation/lockout of all mechanical and electrical equipment;
  - constant communications system with someone outside the space.
- appropriate signage and barricades.
- establishment of a buddy system – persons must never work alone in a confined space.

### **2.2 Working below ground (including excavations)**

- Before any work below ground begins, appropriate plans must be approved by the production manager and venue owner/manager, including ensuring that:
  - there are not likely to be problems with electrical, water, gas or telephone pipes/lines in the area;
  - air quality in any trench is satisfactory;
  - emergency and rescue procedures and equipment are in place;
  - appropriate access and exits are established.
- Planning must also ensure that:
  - all trenches, pits and traps are barricaded and/or appropriately signed;
  - spoil heaps are kept well away from evacuations;
  - consideration is given to what could fall into or otherwise affect what is being done below ground;
  - appropriate methods are in place for removing loose material;

- shoring (where necessary) is adequate and in line with requirements, eg. for nearby traffic.

### **2.3 Working below Stage**

The following must be considered in the risk assessment:

- All below stage pits and traps must be barricaded and/or appropriately signed.
- Consideration must be given to what could fall from above and how what is happening above could affect below stage activities.
- Loose materials need to be removed.
- Access and exits must be adequate to accommodate costumed performers.
- Emergency and rescue requirements must be adequate.

## **3. Working on the Stage/Performance Space**

The risk assessment process (see Section 1, Clause 4) must include all aspects of what takes place during rehearsals, performances, bump ins and bump outs. Appropriate control measures must be identified and implemented.

For any sequences involving stunts, fights, aerial, acrobatic work, pyrotechnics, special effects or any work identified in the Risk Assessment as requiring specialist supervision, an appropriately qualified and experienced Safety Supervisor shall be engaged to supervise the bump in of such sequences and, if necessary, to supervise their ongoing operation.

Hazards associated with performance may arise as the result of set interaction, interaction between members of cast, crew, musicians and audience or from specific characteristics of the performance.

### **3.1 Costumes, Wigs, Makeup**

- Costume, wig and makeup design.
- Maintenance in safe hygienic working order.
- Difficulty associated with costume changes arising from their design and/or venue layout.
- Potential exposure of costumes, including underwear, to naked flame or to heat that could result in combustion.
- Makeup including allergy sensitivity.
- Design and application of prosthetic makeup.

### **3.2 Stage, Set, Backstage Areas, Orchestra Pit, etc.**

- Stage lifts, holes, openings, pits, revolves, traps and elevated areas.
- Inappropriate performance surfaces including inadequately supported floors.
- Inappropriate performance surfaces for dancers and/or physical performers.
- Raked and/or moving stages and/or moving sets.
- Inadequate access and egress points on multi-level sets, orchestra pits, etc.
- Step heights and unequal risers.
- Trip hazards.
- Electrical hazards.
- Exposure of sets/props/curtains/plant/equipment/any item to naked flame or to heat that could result in combustion.

### **3.3 Performance Activities**

- Crew or performers being in the wrong place on stage at the wrong time (including performers missing their marks).
- Design and operation of swings, harnesses, etc.
- Incorrect or unsafe flying of performers, scenery or props.
- Inadequate fall protection systems.
- Scene changes.
- Moving through different light levels, eg. from very bright stage lighting to dim backstage lighting.

- Placement of props near unprotected edges.
- Vocal/hearing strain/fatigue.

### **3.4 Specific Performance Interaction Requirements**

- Choreographed dance scenes.
- Choreographed fighting scenes.
- Scenes utilising firearms and/or weapons.
- Acrobatic, aerial, stunt, pyrotechnics and special effects sequences.
- Use of performance devices such as roller blades, stilts, cycles, etc.
- Involvement of children in the performance.
- Involvement of animals in the performance.

### **3.5 Staging Hazards**

- Exposure to substances, lasers and other physical hazards including special effects such as explosives, dry ice, smoke, fog machines and pyrotechnics.
- Nudity (eg. ambient temperature, access to appropriate facilities, etc.).
- Vehicles of any kind on stage.
- Water on stage.
- Climate and environmental considerations including temperature and humidity (both indoor and outdoor), rain, hail, sleet, snow, fog, lightning, sun, wind, tides, current and water conditions.
- Noise and light levels.
- Inadequate, dangerous or faulty communication systems.
- Inadequate maintenance of venue/plant/equipment (eg. currency of drapery flame retardant treatment).

### **3.6 Physical Impact of the Production/Event**

- Inadequate warm up time and inadequate performance preparation.
- Inadequate access to appropriate medical/physio or other therapy support.
- Overuse injury associated with performance activity.
- General fatigue or specific fatigue associated with high levels of physical exertion or unusual or awkward physical postures or activities.
- Insufficient rest and food breaks.
- Inadequate crewing and/or supervision levels.

### **3.7 Aggression and Stress**

- Aggression from crowds or affection from over-exuberant fans.
- Insufficient rest and food breaks.

### **3.8 General Hazards**

- Machinery and equipment failure.
- Non-compliant and/or non-recorded modification/s to performance areas/plant/equipment, etc.
- Inappropriate crew clothing and/or footwear.
- Tripping on uneven surfaces, slipping on wet or greasy surfaces.
- Inadequate housekeeping.

## **4. Electrical and Lighting Operations**

Electrical operations must be undertaken by competent persons accredited under relevant state and territory legislation and, in particular:

- appropriate fire extinguishers must be available;
- all portable generators must comply with current AS 2790 and be fitted with an earth leakage device;
- all electrical installations, materials and fittings must conform with the current AS 3000 series;
- all temporary electrical installations must comply with AS 4249;

- inspection and testing of electrical operations must comply with AS 3760;
- danger tags shall only be removed by authorised personnel;
- earth leakage and residual current devices must be used.

If there is any concern relating to procedure, the relevant authority must be contacted for clarification *prior* to work beginning.

#### **4.1 Electrical Equipment**

Electrical equipment must be inspected, tagged (in accordance with state or territory legislation), comply with AS 3100, and

- before working on any electrical equipment, it must be properly isolated, tagged (in accordance with AS 3760) and checked;
- portable electrical tools/appliances must:
  - be protected by residual current devices (RCDs) unless the use of RCDs is incompatible with a particular electrical tool/appliance (eg. dry ice machines), in which case, protection must be provided by current protection on the distribution board, and
  - be tested for function by a qualified electrician or competent person in accordance with requirements outlined in AS 3190 and AS 3760.

When working with electrical equipment:

- all electrical equipment must be well maintained and must not be used if it appears faulty;
- subject to a risk assessment/s, all electrical equipment must be tested and tagged; good practice is that it should occur not less frequently than:
  - annually in the case of house lanterns and electrical equipment;
  - six monthly in the case of extension cables;
  - before and after every hire in the case of hired equipment;
  - five yearly in the case of non-moveable fixed electrical equipment;
  - after repair and before use in the case of electrical equipment under repair.
- all outlets must be considered live unless proved dead;
- conducting materials such as earth, concrete, wet/damp timber, flames, all metal objects such as rulers, tapes, rings and belts and including yourself must, as far as possible, be removed from contact with any electrical work;
- only wooden or fibreglass ladders shall be used for work around live electrical equipment;
- double adaptors or re-usable three pin piggyback plugs must not be used; the use of moulded or clear, riveted (not user accessible) piggyback plugs is acceptable only when wired by competent, appropriately trained, certificated and authorised personnel;
- portable outlet devices must incorporate overlaid and earth leakage protection and comply with AS 3105.

#### **4.2 Lighting Equipment**

- Lighting equipment likely to reach high temperature shall be suitably guarded with a clearance maintained from flexible cords to prevent overheating.
- Maximum loads of lighting dimmers shall not be exceeded to avoid overloading and a consequent fire hazard.

#### **4.3 Switchboards**

All switchboards must be of robust weatherproof construction and have a locking device, protective doors that will not damage flexible extension cords, securely fixed to a structure, have an isolating switch, and be locked after work each day/shift.

#### **4.4 Leads and Cables**

- All leads must:
  - be industrial quality;
  - not be frayed or have wiring exposed;
  - be protected from the weather;
  - be off the ground where possible;

- not be twisted, crushed or kinked;
- be secured and clearly identified;
- not create a tripping hazard;
- not be in contact with cranes or overhead mobile equipment; and
- ends must have plastic protective covers.
- In the event it is not possible to keep leads off the ground, appropriate controls must be implemented with consideration being given to the use of covers.
- Cables must be protected against contact with sharp edges or heavy loads.

## 5. Set Construction Operations

Risk assessment for sets and prop manufacture must be undertaken at the design stage and progressively as required through the construction, installation and bump out phases of production.

### 5.1 Carpentry and Related Operations

- Particular carpentry, set and prop manufacture and/or repair hazards include:
  - materials used in construction and associated dusts and fumes;
  - chemicals, flammable materials and hazardous substances used in construction, manufacture and repair processes;
  - the plant and equipment used.
- Appropriate information must be available, including:
  - maintenance of a hazardous substance register;
  - provision of MSDSs to those involved in manufacture, maintenance, repair and storage of constructed items.
- Control measures include:
  - plant, equipment, tools and associated items, including guard,s used, maintained and stored in accordance with manufacturer's specifications.
  - appropriate dust management procedures;
  - adequate ventilation;
  - adequate storage facilities;
  - fire management and control procedures;
  - good housekeeping;
  - use of appropriate personal protection equipment.
- Fumes arising from set construction (including those created in on-stage finishing) must be fully dispersed prior to rehearsals and/or performances.
- Minimise the use of medium density fibreboard (MDF) wherever possible. If use of MDF is unavoidable, work must be undertaken in an isolated or separate area and mechanical extraction, appropriate personal protective equipment (PPE) and good housekeeping must be utilised.
- Also refer to Section 2, 1.1 All Work involving Heights, 1.8 Falling Objects, 4 Electrical and Lighting Operations and 6 Manual Handling Operations.

### 5.2 Welding Operations

Only certificated persons are permitted to conduct welding operations.

#### 5.2.1 Workplace

- Welding area/s must be barricaded and screened from other nearby personnel.
- Welding must not be done in a hazardous area unless precautions have been taken.
- Fume extraction systems must be incorporated into job plans.
- Air quality must be ensured if working in a confined space (see Section 2, 2.1).
- Suitable protection must be worn at all times.
- All loose, combustible materials must be removed from the welding area.
- Electrical cables in immediate area must be covered.
- An appropriate fire extinguisher must always be available.

## 5.2.2 Welding Equipment

- Welding equipment must be inspected for damage prior to operation.
- Prior to welding any container, an inert gas purge and test must be conducted especially where containers previously held flammable matter.
- Equipment must never be left live and the on/off button must be clearly marked.
- All acetylene cylinders must be kept vertical and restrained at all times.
- Electrode stubs must be deposited in a container.

## 6. Manual Handling Operations

The risk assessment for the production or event must incorporate all manual handling activities including set transportation, storage, installation and removal.

No person shall be required to lift more than they are capable of lifting on the day.

There are 18 risk identifiers in the National Code of Practice on Manual Handling and weight is only one. Other considerations include movements and posture required, layout of the workplace, actual handling task, exposure to the task, task requirements and object characteristics (weight, dimensions, grip, what the load is), the work environment and individual work factors.

Where possible, mechanical lifting devices must be used to move anything heavy or awkward. Appropriate aids to reduce the risk of manual handling injuries must be provided such as trolleys, adequate storage, etc. Always ensure the pathway is clear prior to moving anything.

For loads that can be carried by the individual:

- stand as close to the load as possible with feet apart for good balance, bending your knees and straddling the load;
- always try to lift when standing or at least half-squatting rather than kneeling or not using your legs;
- keep your back as straight as possible and chin tucked in whilst lifting and carrying;
- always keep the load as close as possible to your body, with elbows close to your sides making sure you can see where you are going;
- do not twist your body to change direction, use your feet.

Team lifts:

- ensure one person is in charge during a team lift;
- designate the route of movement prior to the lift and remove any obstacles or obstructions;
- where possible, ensure members of a team lift are of similar height;
- position people for the lift having regard to the size, shape and balance of the load.

Use of mechanical lifting devices: See Section 2, 1.4.

The risk assessment for the production or event shall incorporate all manual handling activities including set transportation, storage, installation and removal.

## 7. Hazards Potentially Created by the Working Environment

### 7.1 Ergonomic Hazards

Ergonomic hazards are present where workers are required to adopt awkward or sustained postures or undertake repetitive actions. These may occur because of limited space available to conduct work activities or the need to wear costumes or devices that demand awkward postures. Risk assessments shall be conducted and strategies implemented to control exposure to identified risks.

Working in small, restricted areas requires special attention to ergonomic principles and where working in such areas cannot be avoided, regular short rest breaks are recommended.

Ergonomic hazards can occur in any occupation, for instance, dancing, operation of computers, control boards, the playing of musical instruments and the use of tools or machinery.

## **7.2 Changes in the Work Environment and Changes of the Work Environment**

Changes in the working environment can cause a number of hazards. All workers must be aware of potential hazards and be responsible for their own housekeeping to ensure that the placement of equipment is not likely to create hazards, such as tripping.

This is particularly relevant for performances conducted at multi-hire and outdoor venues and where the location of the work environment changes between performances.

Access to fire equipment, first aid equipment and power boards must not be obstructed. All access and egress ways must be kept clear.

## **7.3 Housekeeping**

Good housekeeping is essential. All work places must be hygienically maintained and regard given to any adverse impact on adjacent work places. All passageways must be kept clear and unobstructed at all times.

## **7.4 Working in Darkness or Diminished Lighting Conditions**

Working in darkness or diminished lighting conditions is a hazard that cannot be avoided in some productions. Risk assessments must identify procedures to reduce the associated risks.

Consideration must be given to the use of blues and other work lights, use of fluorescent tape markings on floors, steps and edges, etc.

Consideration must be given to those who need to move from areas of bright lighting to low lighting. Appropriate access and egress must be maintained from the stage through the wings.

Appropriate warnings must be provided prior to light levels being reduced.

Consideration should be given to the fact that darkened environments can inhibit communication, especially for those with hearing impairments.

Exit and safety lighting must be maintained and visible at all times.

## **7.5 Temperature**

Risk assessments shall analyse appropriate working environment temperatures for all aspects of the production or event to ensure potential exposure to extremes of heat and cold are avoided. Where sites are not air conditioned, other means of heating/cooling should be provided and may require monitoring on a daily basis. Acceptable performance temperatures will vary according to the activity undertaken.

Some working environments involve working in heat. Precautions need to be taken to reduce the risk of exposure, especially in relation to design of costumes, choice of fabrics and the likely activity to be performed during the performance to avoid overheating. In any event, it is essential that there is appropriate water available and any clothing does not create problems in overheating. For outdoor performances, adequate shade must be provided. Risk assessments shall take account of any necessary temperature controls that may be required.

## **7.6 Layout and Surface of Set**

Risk assessments must include analysis of the layout and surface of the set and performance areas, including the rake of the stage, revolves and the relationship of the stage and pit and/or audience. Appropriate controls must be

implemented in respect of any identified hazard including the use of anti-slip substances such as resin, coke and water, etc. as appropriate to the circumstances.

### **7.7 Rehearsals**

Final dress rehearsals must, as far as possible, incorporate all conditions that will apply during performances, including all special effects, full lighting, audio and air conditioning. Special consideration must be given to outdoor performances where the final dress rehearsal needs to be undertaken in daylight hours for a night-time performance.

### **7.8 Smoking**

Smoking can only occur in designated areas as set out in the Risk Assessment.

Where performers are required to smoke as part of their performance, risk assessment shall take account of costumes, props and sets and ensure appropriate controls are implemented to eliminate the risk of fire. Suitable means of extinguishing cigarettes/cigars must be provided (for instance, ashtrays and sandboxes) and positioned in a manner accessible to the performer.

### **7.9 Aggression**

Aggression is a real hazard that may be present in any working environment. It can develop as the result of pressure, meeting of deadlines, fatigue, lack of adequate rest/meal breaks or unrealistic production schedules.

The risk assessment shall analyse the adequacy of the planning and scheduling of all stages of the production or event.

Other causes for aggression can relate to interface with the general public.

Procedures are to be implemented for dealing with harassment that include reporting, conciliation and counselling.

### **7.10 Fatigue**

Everyone has a responsibility to ensure exposure to fatigue is minimised. Attention must be paid to good diet, adequate exercise, adequate sleep, meal and rest breaks during working hours and adequate breaks between shifts.

### **7.11 Alcohol and Other Drugs**

At no time shall any illegal drug/s be brought into or consumed in the working environment.

No alcohol shall be consumed in the working environment during working hours without the express permission of the producing company and/or the venue owner.

If the producing company or the venue owner/manager considers any person to be intoxicated or under the influence of any drug to the extent that the producing company and/or the venue owner/manager considers the person's performance is affected or the person presents a risk to themselves or to others, they may enforce that person's removal from the work environment.

If unexpected circumstances arise and an off-duty/off-roster employee is requested to work and is under the influence of medication, alcohol or drugs, it is that person's right and responsibility to refuse the request.

If any person is taking medication that may affect their work performance, the producing company and the venue owner/manager must be notified and due consideration given to the ability to perform work tasks.

All personnel will be requested to advise their employer of any medical condition/s that may impact on their ability to perform their work duties. A suggested form for recording this information is set out at Schedule B. The provision of this information shall be treated confidentially and cannot be used to discriminate against any person in any way. Access to, storage and archiving of such information shall be in accordance with relevant legislative requirements.

## **7.12 Medical Conditions**

At the conclusion of the Safety Induction, all personnel will be requested to advise their employer of any medical condition/s that may impact on their ability to perform their work duties. A suggested form for recording this information is set out at Schedule B. The Medical Questionnaire is designed to ensure appropriate regard is given to the health and well-being of every person working on a production or event. The provision of this information shall be treated confidentially and cannot be used to discriminate against any person in any way. Access to, storage and archiving of such information shall be in accordance with relevant legislative requirements. Full-time employees shall complete updated questionnaires annually and/or as their medical circumstances change.

## **7.13 Security and transport to and from work**

The producing company and the venue owner shall ensure the security of persons working on a production or event, including ensuring safe entry and egress from the working environment.

Having regard to the time of day/night, the presence or otherwise of crowds and other relevant matters, the producing company and/or venue owner/manager shall take all reasonable measures so that all persons have safe access between the working environment and transport to and from work.

Any person having concerns regarding safe access to transport to and from the work environment should raise such concerns with the producing company and/or the venue owner/manager.

# **8. Sound Levels**

## **8.1 General**

Noise or sound energy is created when air is mechanically disturbed leading to small changes in atmospheric pressure which radiate in the form of waves. Repeated exposure or continued exposure to excessively high sound levels can result in irreversible damage. Specialist equipment may be required to measure sound levels in the workplace.

- To preserve hearing, sound level exposure must not exceed 85 dB(A) on average per 8 hour day and, where possible, should be kept below an average of 85 dB(A) per 8 hour day. Where shifts longer than 8 hours are worked, the exposure level must be appropriately reduced.
- Peak sound pressure levels must not exceed 140 dB(lin).
- Nuisance noise such as high pitch, unexpected or distracting noises must be minimised.

To do this, the following strategies may be employed:

- identify sources of noise and measure resultant sound levels to identify hazards;
- in workshops, use quiet machines and make sure they are well maintained;
- enclose or isolate noisy equipment where possible;
- separate noisy and quiet work;
- use sound absorbing materials in the workplace (eg. insulated ceilings, use of screens and baffles) where possible;
- use of personal hearing protectors.

Personal hearing protectors are the least desirable method of controlling damaging noise. People have difficulty wearing them in certain environments and where communication is important. Sometimes, however, personal hearing protectors are the only reasonable option. Hearing protection should only be used as part of a noise conservation program where the following occurs:

- environmental monitoring of noise levels;
- attempts to reduce noise levels from their sources including the possibility of engineering changes such as redesign and isolation and improved maintenance;
- medical monitoring of personnel from a baseline level to continued readings on a regular basis;
- training on fit, selection, use and maintenance in relation to any hearing protection used in line with AS 1269.3.

When choosing hearing protectors, the pitch (frequency) of the noise must be taken into account. Different types of protective equipment have maximum dampening effects in certain frequency ranges. Data on the characteristics of

hearing protectors can be obtained from the suppliers. In order to encourage the use of hearing protectors, personal preferences in comfort must be taken into account. Different types of ear protectors should therefore be made available.

It is important that those operating high-risk noise devices such as firearms and weapons are made aware of the potential to create instantaneous deafness with inappropriate handling and use.

## **8.2      Orchestral and other musicians**

- The producing company and/or venue owner/manager shall make available to all musicians all information relevant to sound levels in the workplace for the production/event.
- Consideration must be given to glare and/or heat emanating from the performance/stage or other adjacent areas to where musicians are working.
- Adequate lighting must be provided.
- Set-up of chairs must ensure adequate sight lines.

Where possible:

- the hearing of all musicians should be monitored and annual testing is recommended;
- a designated separate room should be allocated for brass musicians to warm-up;
- practising and/or warm-ups should not be permitted in band rooms ; and
- chair design must be ergonomically appropriate to the musician and the instrument being played.

### **8.2.1    Pit areas**

Sound levels in pit areas must be the subject of risk assessment. Where sound levels exceed 85dB(A), noise control measures, in order of priority, should include:

- opening up the pit to improve acoustics;
- planning schedules and venues suited to the works to be rehearsed or performed to minimise the risk of players being exposed to excessive sound levels;
- optimising separation of players by set-up and/or use of risers and/or screens;
- showing consideration for colleagues within the needs of performance;
- rostering and seating rotation;
- using personal hearing protectors (eg. earplugs).

### **8.2.2    Exposure levels**

- Weekly and seasonal exposure of players to high sound levels will be limited by monitoring and rostering with respect to predicted daily and weekly average sound levels.
- If relevant, the orchestra manager/conductor/band leader will inform musicians when predicted exposure exceeds acceptable limits and will re-roster and/or ensure hearing protectors are provided and/or arrange seating rotation of players subject to high sound levels.
- Some people may be susceptible to hearing damage at or below 85dB(A) and special consideration should be given to their circumstances, eg. regular hearing tests, use of hearing protection.

### **8.2.3    Mitigation Measures during Rehearsals and Performances**

- In situations where sound levels have the potential to be a problem, the conductor/band leader will be informed prior to the rehearsal period and asked to give consideration to moderating sound levels whenever possible.
- Where a player finds the sound level uncomfortable they should seek assistance and the following measures should be considered:
  - rearranging seating;
  - providing sound screens;
  - providing earplugs.

## **8.3      Headsets**

Headsets must be appropriate and compatible, otherwise damage can result from feedback.

As part of the Risk Assessment, appropriate protocol and procedures for the use of headsets and other communication systems must be developed and implemented for each production or event. Such protocols shall include requiring personnel using headsets to switch them off prior to removal.

#### **8.4 Sound Checks**

Initial sound checks and audio tuning must be scheduled so that other cast and crew members are not exposed to noise hazard.

### **9. Vocal Strain/Fatigue**

Many employees rely on their voices for their living, including actors and singers. Damage to their voices can lead to loss of living and the end of their career.

Mitigating against vocal strain and/or damage is the responsibility of employee and employer.

Employees shall ensure they are prepared and trained to the best of their knowledge and ability and undertake appropriate warm-ups prior to rehearsal and/or performance.

The employer must reduce or minimise as far as possible all external factors that may lead to strain/damage including:

- poor acoustics, eg outside performances without amplification;
- high levels of ambient noise, eg music or sound effects that are part of the production and other background noise;
- excessive rehearsal and/or repetition.

### **10. Lighting**

Lighting, including Ultra Violet Light (UV light), has the potential to adversely affect the health and safety of those in the workplace.

#### **10.1 Strobe Lighting**

Strobe lighting has been known to induce epileptic seizures. Epileptics who are flicker-sensitive are likely to experience a full seizure if triggered.

Flicker rates of 4 flashes/second or less are recommended and all strobes should be synchronised when more than one is used.

#### **10.2 Ultra Violet Light (UV light)**

UV light is part of the light spectrum with wavelengths between 100 and 400 nm. Exposure to UV light affects the eyes and the skin. These effects can be magnified if people are taking certain drugs such as tetracyclines, sulphonamides or oral contraceptives.

UV light can be used in the following situations:

- fluorescent effects;
- working near luminaires and pyrotechnics;
- welding, and
- outdoor production work.

UV lights should be eliminated or substituted wherever possible. Where the use of UV lights is unavoidable, to control adverse affects of UV light, identify potential sources and:

- limit access distance to the source where possible;
- ensure sources are well maintained to prevent leakage;
- enclose or shield the source wherever possible;
- ensure replacement of component parts on sources will not increase potential UV;
- eliminate reflection where possible, and

- train employees on effects and control measures.

### 10.3 Lasers

Lasers used for effect can create a severe hazard to people in a short space of time. Lasers (Light Amplification by Stimulated Emission of Radiation) produce narrow beams of ordered light rays. They are beams of coherent, monochromatic, high-intensity beams of electromagnetic radiation with a frequency near that of visible light. They have three basic components:

- the active medium, the substance from which the laser light issues;
- the pump system providing the energy to cause the discharge; and
- the optical cavity which produces the collimated mono-chromatic, or coherent, beam.

Lasers use wavelengths in the infrared, visible light and ultra violet range. The eyes and skin are particularly susceptible to damage. There are five classes of lasers. Class 1 products only are considered intrinsically safe whilst Class 2 emit visible radiation but are considered safe when you assume a normal blink reflex and do not stare at the beam. Special precautions are required for Class 3A, 3B and Class 4. These classes of laser should not be used for display purposes except under carefully controlled conditions by a competent trained operator. These conditions are outlined in AS 2211. No person should be exposed to radiation in excess of maximum permissible limits.

Risk assessment must be undertaken detailing:

- intended scope of use, display in both plan and elevation, positions of laser sources, mirrors and target areas with relevant distances and dimensions;
- the need or otherwise to engage a laser safety officer;
- control measures in the event of power failure or knocking of the laser device that might result in freezing or displacement of the laser beam;
- for outdoor performances, control measures to ensure no interference occurs with the installation and control of reflection for surrounding structures.

## 11 Outdoor Performances and Events

### 11.1 General

For each production or event, there is a point at which the safety of those involved in the production or event can be jeopardised by the weather.

The decision to continue/postpone or cancel the production or event needs to be made by the Production Manager in consultation with the venue owner/manager and relevant authorities.

If awards or enterprise agreements specify requirements in relation to weather conditions, such requirements must be strictly observed.

### 11.2 Extremes Of Temperature

Where activities are undertaken outdoors on a **hot day**, the risk of heat stroke must be considered. The problem can be compounded for performers wearing costumes with little ability to breathe. Conversely, a performance may require little clothing to be worn or be conducted in cold conditions and the **cold** hazard must therefore be managed with the provision of appropriate facilities.

The Risk Assessment shall address control measures that may include rescheduling the performance or event to a different time of day, access to water, shade, fans, heaters, air conditioning, rest facilities.

### 11.3 High Or Gusting Winds

**High or gusting winds** can create stress on portable or overhead structures such as lighting towers and other temporary structures. The Risk Assessment shall take into account potential hazards prior to commencement of construction and set out on-going risk assessment monitoring procedures that shall continue until such structures

are dismantled. If forecast information indicates the likelihood of high or gusting wind, the production manager in consultation with the venue owner/manager shall assess whether the production needs to be postponed or cancelled and whether temporary structures need to be dismantled. Control measures must also be implemented in respect of securing any objects including seating, fencing and stacked materials that may potentially be blown over or otherwise moved by wind.

#### **11.4 Lightning**

In conditions of **lightning or if lightning is forecast**, special precautions must be made in relation to communication and lighting systems. Such precautions shall be set out in the Risk Assessment including the need for ongoing monitoring of weather conditions, the point at which lighting and communication systems should be disconnected and/or dismantled and/or the production/event postponed/cancelled.

#### **11.5 Wet Weather**

Slipping hazards are greatly increased in **wet weather** due to damp surfaces and reduced visibility. Electrical equipment and lighting established in areas exposed to weather present potential hazards. They must be protected to ensure electrical current does not come in contact with water. Residual current devices must be used at all times.

Wet weather gear should be provided for work in rain. In heavy rain, consideration needs to be given to abandonment and/or the provision of sheltered space.

#### **11.6 Tides and Floods**

If a production or event is sited near water, the risk assessment shall take account of the possible impact of tidal activity and/or flooding.

#### **11.7 Exposure To Sun**

Consideration of **sun exposure** hazards shall have regard to the type of work undertaken, available shade, reflection, time of day/year, geographical location, access to fluids, altitude and PPE.

Where sun/heat protection is required, appropriate clothing that covers the body and limbs, hats and sunscreen (Factor 15) and sunglasses shall be worn and fluids must be easily accessible. Appropriate PPE must be provided by the producing company.

Particular attention shall be paid to sun protection between 11 am and 3 pm.

## **12 Biological Hazards**

Individual make-up kits must be provided for each performer to guard against potential disease transmission. Each performer must be provided with **dedicated costumes including shoes and wigs** to reduce the likelihood of infection. It is the producing company's responsibility to maintain and launder costumes and wigs.

All props must be maintained in a clean and hygienic condition during rehearsals and production. Particular care must be taken with props used for eating and/or drinking.

Any catering operations must adhere to strict hygiene principles in relation to both food preparation and presentation and comply with relevant state and territory Public Health and Food Acts in each state and territory.

In any situation where medical assistance or first aid is rendered, universal precautions must be practiced to guard against infection transmission.

Waste disposal is a crucial issue on site. How this is conducted during the production must be identified in the Risk Assessment and made clear by the production manager to ensure the likelihood of infection transmission prior to, during and post the production is minimised. Procedures must be clearly understood by contractors.

All facilities, including dressing rooms, back stage, stage, wings, auditorium and all workshops, shall be kept in a clean and hygienic condition. Male and female toilet facilities must be provided for before, during and after any production or event for both personnel and the audience in accordance with state and local government requirements. Cleaning of toilet facilities and food areas must be conducted regularly to ensure the possibility of infection transmission is reduced as far as reasonably practicable.

Toilets and shower facilities, appropriate to the needs of the performance or event, must be provided and easily accessible.

Where production sites involve the use of portable or permanent air conditioners, they shall be kept maintained in good clean working order.

All drinking water, whether sourced on site or brought onto the site, must be safe for human consumption.

If productions or events are to be conducted on or around water, or if water is to be used during a production or event, the risk assessment must include consideration of the safety of exposure to the water.

## **13 Hazards Potentially Created by Plant, Equipment and Substances**

### **13.1 General Guidelines**

- For all plant, equipment and substances, the producing company and the venue owner/manager must ensure that the relevant Supervisor has:
  - operating instructions for all plant, equipment and substances;
  - recorded maintenance schedules for all plant and equipment including documented daily operational checks such as interlocking and isolating mechanisms on sets;
  - where required, copies of all certificates for those using any plant or equipment.
- Any defective equipment must be tagged by the user and repaired prior to further use.
- Materials chosen for any and all sets, costumes, wigs and props must be appropriate for the activities that will occur on stage such as the use of special effects, firearms and weapons and the level of activity required. Any specific precautions relating to the use of the material/s must be implemented and all props, sets, costumes, wigs and drapes must be fire-proofed relative to their proximity to ignition sources in the production.
- A hazardous substances register must be developed for all hazardous substances brought on to the site, and:
  - plans provided for storage and transportation of any hazardous substances or dangerous goods;
  - proof provided that any specific first aid or emergency requirements for substances brought onto the production site have been catered for.
- If use of certain substances/plant/equipment requires certification, relevant certificates must be available, eg. a driver transporting dangerous goods must be able to produce their dangerous goods licence.

### **13.2 Working with Fixed or Mobile Plant and Vehicles**

- Care must be taken by all who are working in or near mobile equipment.
- When using any mechanical plant or vehicle:
  - attention must be paid to any overhead objects, especially in windy conditions and especially if it is used to lift either people or equipment;
  - it should not be left unattended whilst the engine is running but, if this is unavoidable, braking systems must be applied;
  - care must be taken when alighting and dismounting from plant/vehicles, including checking the ground before getting off. No-one should jump from plant/vehicles.
- Vehicles:
  - that are to be driven on public roads must have current state road registration and be maintained in good working order and any defects must be reported immediately;
  - must only be operated by drivers with the appropriate and current class of licence;
  - must not be ridden in unless a seat has been specifically provided for that purpose, adjusted by each user for their body size and seat belts worn;
    - must be capable of being restrained, including customised vehicles used as action props.
- Trucks being loaded/unloaded:

- must be loaded in accordance with the Federal Office of Transport Load Restraint Guidelines outlining the requirements for positioning and securing loads during loading, transport and unloading;
- should be parked on even ground;
- must have all loads properly secured on the truck and packed in a manner to reduce manual handling risks;
- must have the manifest for the load completed before truck departure and checked off on arrival at site. Manifest and packing diagram shall accompany the delivery of sets prior to bump in. If possible, this information shall be forwarded to the responsible person on the production and the responsible person at the venue prior to pick up.
- Forklifts, front end loaders and similar equipment:
  - must be fitted with an amber revolving light or flashing rear lights with audible reversing beepers;
  - must not be driven with tines or bucket elevated;
  - must, in the case of forklifts, primarily be used on flat ground. When that is not possible and forklifts are to be used on sloping ground, they must travel forward with the load up the slope and travel in reverse with the load down the slope.
- Equipment must only be used to lift people if it is designed to do so.
- Maintenance logs must be kept for all vehicles/plant.

### **13.3 Portable Tools**

- All tools must be appropriate to the job and properly maintained and:
  - tools must not be used beyond their design capacity;
  - cutting discs must not be used for grinding or vice versa;
  - any defective or unsafe equipment must be tagged as such, reported to the Supervisor, and not used until repaired;
  - cutting tools must be maintained in a sharp condition and protected when not in use;
  - tools must be appropriately stored when not in use.
- Tools must be used with care and:
  - loose materials such as rags, clothing and hair must be kept away from all moving parts;
  - greasy, wet, slippery or dirty tools must be cleaned before use;
  - hands must be kept free of oil and grease while using tools;
  - tools or electrical leads must not be left where they can create tripping hazards;
  - people must not be distracted when they are working with machinery.
- Appropriate safety precautions must be observed:
  - all power tools and machinery with moving parts must be fitted with the guards with which they were manufactured and must be functioning properly;
  - power tools must be switched off when unattended;
  - work pieces must be secured with clamp/s or similar devices when there is a possibility of them moving (eg. pieces of wood during drilling);
  - safety glasses and fully enclosed shoes must be worn when using power tools;
  - appropriate respiratory protection must be worn – refer to the tools' operating manuals for advice.
- Where portable plant has specific emissions, it is essential that the hazards associated with those emissions are monitored:
  - plant emitting substance/s such as smoke machine/s must be monitored to ensure hazardous products are not being produced; monitoring must ensure that all maintenance is in line with manufacturers' recommendations; and maintenance logs kept.
  - spray painting must be conducted in appropriate well-ventilated conditions (eg. spray booths with extraction facilities).
- All power equipment must be tagged and tested appropriately.

### **13.4 Explosive Powered and Compressed Air Tools**

Employees must not use explosive powered or compressed air tools unless certificated to do so.

- For Explosive Powered Tools (EPTs):
  - a log book must be kept for each EPT and all inspection, maintenance services, repairs and incidents involving the tool recorded;

- appropriate PPE (eg. eye/ear protection), in accordance with manufacturer's recommendations, must be provided and utilised;
- the area where EPTs are being used must be identified with appropriate barricades and/or signs;
- EPT storage containers must be marked "Warning – Explosive Charges", colour coded in accordance with AS/NZS 1873:1994 and different strength charges must be stored separately.
- When using compressed air:
  - discharge of compressed air must be directed away from people;
  - only certificated personnel shall adjust safety/reducing valves;
  - the pressure in any hose must be released before uncoupling;
  - hoses must be protected from traffic by suitable covers/ramps;
  - hoses must never be kinked.

### 13.5 Firearms, Replicas and Weapons

- Only those certified and licensed shall be responsible for storage and lock-up requirements and the supervision of firearms and weapons, and:
  - firearms, replicas and weapons must only be used in accordance with relevant state and territory legislation and regulations;
  - live ammunition must never be used;
  - only qualified gunsmiths shall be involved in deactivation, modification and repair on approval from manufacturer;
  - all swords, knives and blades must be blunt.
- Appropriate warnings must be provided to cast and crew in relation to the use of blank ammunition prior to the cue for firing.
- The risk assessment shall have regard to the possibility of a weapon/firearm falling into the orchestra pit and, as appropriate, the area of perceived risk shall be protected by a net or by other means or the action choreographed.

### 13.6 Hazardous Substances (including their use in Pyrotechnics and Special Effects)

Hazardous substances may be utilised in most aspects of most productions/events including in set construction, props making, costumes, makeup, wigs, pyrotechnics and special effects.

A risk assessment should be completed for each hazardous substance indicating that it is being used in accordance with requirements set out in MSDSs.

- The producing company is responsible for supplying a register of hazardous substances (including chemicals) to the venue owner/manager and is responsible for providing the MSDSs to all those using such substances.
  - All MSDSs provided must comply with National Occupational Health and Safety Commission Guidelines.
  - Products should only be purchased from a reliable supplier who can provide the information referred to above.
  - Products where MSDSs are not available must not be used.
  - The venue owner/manager can reserve the right to refuse the use of any particular hazardous substance in their venue.
- Anyone working with any hazardous substance must consult the MSDS prior to use, taking special note of:
  - required safe work practices;
  - first aid and emergency procedures; and
  - safe storage, transportation and disposal procedures.
- Where hazardous substances are being mixed with other substances, hazardous or otherwise:
  - they must only be mixed in accordance with MSDS and having regard to the compatibility of the individual substances;
  - special brews or concoctions must not be accepted or used on the basis that the ingredients are a "trade" secret, even if assurances are given that they are not toxic.
- Each producing company and venue must have specific procedures relating to how hazardous substances are to be utilised. These should generally involve:
  - documentation regarding training, certification and licences necessary for the transportation, use, storage and disposal of the substance as required for the jurisdiction in which the production is being undertaken;

- appropriate procedures and approvals for the isolation of fire detection equipment;
  - a demonstration in a controlled environment prior to use on stage;
  - agreement that there will be no change to the effect or its staging after the demonstration without approval from the venue owner or their delegate and in which event a further demonstration shall be conducted.
- Particular attention must be paid to ensuring there are no adverse health effects, including:
  - providing adequate ventilation and exhausting;
  - providing appropriate atmospheric/health monitoring;
  - ensuring that all performers required to work in environments affected by hazardous substances are fully informed about the substance/s to be used, manner of use and any known side effects, both short and long term.

## **14. Productions Utilising the Engagement of Children**

Special requirements associated with children include:

- age appropriate recreational materials, food, rest facilities and, where necessary, accommodation facilities;
- trained and adequate supervision;
- appropriate rest breaks;
- appropriate adult accompaniment to and from work;
- appropriate privacy;
- no exposure to distressing scenes;
- children shall not be required to perform naked or with a naked person;
- compliance with relevant state and territory legislation and regulations.

## **15. Productions Utilising Animals**

Special considerations in relation to animal use include:

- engagement of suitably qualified and experienced animal wrangler/s and, where necessary, veterinarian/s;
- animal contact and possible disease transmission;
- distance between and potential contact between animals, performers, crew, audience and general public;
- well-being of the animals;
- potential problems with the animal/s' performance;
- appropriate facilities to house, feed and transport the animals in hygienic conditions without affecting the hygiene of nearby areas;
- disposal of animal waste;
- contingency plans developed in consultation with animal handlers in relation to emergencies.

## **16. Audience and Crowd**

- The venue owner/manager and producing company must ensure that appropriate signs/warnings are provided to the audience in respect of:
  - access;
  - special effects, eg. strobe lighting, smoke;
  - exits.

All personnel interacting with audience members must be made aware of such signs/warnings, etc.

- Stadium and seating arrangements must comply with relevant standards, legislation and building codes at all venues including non-dedicated performance venues.
- Seating, aisles, passageways, steps and stairs must be kept clean and clear of obstructions.
- Personnel required to interact with the general public shall be adequately trained in conflict resolution.
- Emergency and evacuation plans must consider the possibility of entrapment, structural collapse and the need for crowd control measures including the engagement of security personnel.
- First aid facilities, appropriate to the event, the site and the audience, must be provided.
- The venue owner/manager and the producing company must ensure that adequate crowd management and safety policies and practices are implemented.

## **EXAMPLE**

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### **SCHEDULE A: Site Specific Safety Induction Questionnaire for all Personnel Involved in a Production or Event (Excluding the Audience)**

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This questionnaire is to ensure your safety and the safety of those around you will be adequately protected whilst working at this production.

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Name: \_\_\_\_\_

PC Employee

Contract Employee

Volunteer

Production: \_\_\_\_\_

Date on Site: \_\_\_\_\_

Contracting/Volunteer Company/Group: \_\_\_\_\_

Head of Department(Supervisor): \_\_\_\_\_

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I have received instruction in the following:

1. emergency procedures for the workplace and for the production/event;
2. all known risks associated with the workplace and the production/event;
3. how to communicate any occupational health and safety problems;
4. accident procedures.

**The producing company/venue agrees to abide by the Safety Guidelines for the Entertainment Industry and all relevant legislation, regulations, Australian Standards and Codes of Practice relating to the entertainment industry.**

I \_\_\_\_\_ understand the safety requirements of working on this PC managed production and agree to abide by them.

**SIGNED:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

(the worker)

**SIGNED:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

(for the producing company)

