

LPA Guidelines

Safety Guidelines for the Live Entertainment and Events Industries

Performer Hazard Guide

February 2018

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Disclaimer

In legislative terms, the requirements of the *Work Health and Safety Act 2011* (the WHS Act) and Work Health and Safety Regulations (the WHS Regulations) are mandatory. In contrast, a guide is designed to assist obligation holders to comply with the requirements of an act or regulation. The information contained in the LPA guides is not mandatory, has no legal status and may not apply in all work situations.

Obligation holders still have a duty to assess the risks in each work situation and take all reasonable steps to eliminate or minimise the risks that are specific to each work activity.

Performer Hazard Guide

1. Overview

This guide provides information to assist in managing risks associated with **performer hazards** in live entertainment and events. These are hazards that the performer themselves will face while preparing, rehearsing and performing roles in events and productions. Information in this guide is based on the *Work Health and Safety Act 2011* (WHS Act) and Work Health and Safety Regulations 2011 (WHS Regulations), which are operational in all states except Victoria and WA, where adoption of the legislation is not yet enacted (as at Jan 2018).

It is recommended that this information is referred to during the planning and delivery of events to assist in identifying hazards, assessing risks and determining appropriate control measures to eliminate and or minimise these risks.

This guide does not replace the need to implement risk management strategies, undertake research or seek specialist advice, including a tailored Risk Management Plan for the associated event.

Each worker and person conducting a business or undertaking (PCBU) has a responsibility to understand their obligations under WHS legislation. Codes of practice and Australian and international standards provide approved guidance on how to meet work health and safety obligations.

Performer hazards refers to any situation where a performer (includes musicians) can be exposed to hazards and the attendant risk while entertaining an audience or in rehearsal. There are two main risks areas associated specifically with performer hazards:

- Lack of adequate planning before a performer undertakes hazardous work leading to injury or death
- Lack of preparation by the performer and associates before attempting a hazardous activity again leading to injury or death.

The risk of serious injury or death increases significantly when the performer is untrained or not the correct performer for the event in hand.

This Performer Hazards Safety Guide provides practical information and suggested control measures for:

- Rehearsal
- Theatrical violence
- Stage/location awareness
- Performer flying
- Stunt work
- Working with animals
- Working with children
- Costume work
- Circus arts
- Working with power
- Noise levels
- Hazardous Locations
- Hazardous materials

Part 1 Safety Guidelines for Live Entertainment and Events provides general information on duties, obligations and risk management.

2. Key Considerations – Performer Hazards

Consider the following questions during event design, planning and delivery	Yes	No	Action/Comment
2.1. Pre-rehearsal – audition			
<i>Will there be other PCBUs and workers involved or affected by this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have arrangements been made to consult with and coordinate activities with other PCBUs before and during this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has the skill level of the performer required been identified and have the participants been informed of what will be required throughout the process?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has the scope of work been defined – duration, equipment required, scheduling, location?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there performer-specific safety requirements or procedures that need to be considered at the audition?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has a risk assessment been completed on the use of the audition space?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has crowd management been considered, taking into account the number of attendees expected?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has traffic management been considered if a large number of attendees are coming by car?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have all aspects of the audition room been assessed and the potential risks identified and reduced?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are scenic elements used in the audition process secure and ready to use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have all obvious and potential ‘theatrical violence moments’ been identified during pre-production?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has an audition induction been prepared and delivered to those attending the audition?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Consider the following questions during event design, planning and delivery	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Action/Comment
<i>Are facilities adequate for the number of attendees?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Do any of the staff or attendees require any specific PPE, e.g. footwear or clothing?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is security required to assist the management of the site?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have, when needed, the appropriate weapons permits been obtained from the Firearms Registry? (All items on the Firearms Registry Prohibited Weapons list require specific permits for use in performance/public).</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have appropriate measures been taken for the safe storage of all weapons, including Firearms Registry-approved storage for prohibited weapons?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have appropriate weapons been obtained, or adequate modifications been made to 'found weapons'?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Does the venue need to sign off/approve any special effect prior to use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are procedures in place for potential emergency situations, including self-rescue or site rescue?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there adequate first aid procedures in place?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

2.2. Rehearsal and rehearsal venue			
<i>Has a performer induction been organised and delivered, including an overview of company policies on bullying, harassment and equal opportunity?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have the responsibilities of the PCBU, director, stage/venue management, designer, producer, performers and associated personnel been defined?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have the head of production and the person in charge of the venue exchanged risk assessments?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Consider the following questions during event design, planning and delivery	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Action/Comment
<i>Has a risk assessment been requested of and provided by the designer regarding the hazards in the design?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has a risk assessment been undertaken on the use of rehearsal furniture and either actual or substitute set pieces?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has performer access to the rehearsal room been considered, specifically transport links and the safety of the surrounding area?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there any aspects of the rehearsal process that may be considered hazardous? Items such as stunt work, smoking, violence.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is there specialist movement required of the performer?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If yes, has a specialist movement/dance choreographer or violence/fight director been engaged?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are there specialist vocal requirements for the performer?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If yes, has a vocal coach been engaged?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If children are involved in the process, is a 'Working With Children Check' required?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are understudies required for the performer roles?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If yes, are the understudies being trained and inducted to the same level as the performers they will be covering?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are first aid facilities commensurate with the number of performers and crew in the rehearsal?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are all electrical items being used in rehearsal tested and tagged as required?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have sound levels been agreed for amplified audio being used in rehearsal?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Consider the following questions during event design, planning and delivery	Yes	No	Action/Comment
2.3. Performance and performance venue			
<i>Has a risk assessment been prepared for the performance venue and the transfer between the rehearsal venue and the performance venue</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Do the performers have adequate facilities at the venue?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Have all changes to the work environment from rehearsal to performance venues been evaluated? This will include, atmospherics, lighting, audio levels etc..</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is the work in an established venue?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If yes, have the venue and the production shared risk assessments?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Does the production pose extraordinary conditions on the venue and how the performers will be using the venue</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is the venue outdoors or in any area that may pose special hazards for the performers?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has a separate assessment been made as to how the location will impact on the performers?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has the set and the interaction with the performers been assessed for hazards?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Are appropriate audience warnings in place?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has the possibility of additional hazards from the introduction of special effects, flying harnesses, trapdoors, complex or intricate sets, restrictive or trip-hazard costumes, lighting effects such as strobes, or fatigue of performers been considered?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Has ongoing specialist movement training been allowed for? This may include engaging dance captains, assistant directors, choreographers and violence directors.</i>	<input type="checkbox"/>	<input type="checkbox"/>	

3. General Guide – Performer Hazards

3.1. Responsibilities

PCBUs have specific obligations under WHS regulations to provide and manage a safe workplace for all employees. The regulations require that where reasonably practicable, the PCBU must meet the obligations set out in the WHS Act and Regulations.

Set and costume designers in particular have an important role in eliminating or minimising the hazards that may impact on performers in the design of wearable items, sets and structures and how they are used. This includes lighting and sound designers. PCBUs must ask designers for the risk assessment on the design and designers are required to supply one.

Performers must also take reasonable care of their own safety and the safety of others by ensuring they are confident and capable to undertake the work they have been employed for.

3.2. Training and competence

All persons undertaking work must be trained and competent in the specific activity.

It is recommended that performers who are required to dance, climb or work at height on the set, undertake relevant training in performance-specific safe work methods.

Where appropriate, trained professionals in specific areas of performance should be employed to ensure the particular activity is undertaken safely for both the individual performer and the company that is working with that performer

3.3. Consultation, Cooperation and Coordination

The WHS Act makes consultation with workers a legal requirement. Consultation, cooperation and coordination between PCBUs is a requirement where they share a duty for the safety of a worker or for work to be done.

PCBUs should use the information in this guide to consult with workers including the performers and associated event staff to determine the hazards and risks associated with the event and how to best eliminate or minimise these risks using the hierarchy of controls.

Consultation should start as early as possible, before auditions are called, and continue for the duration of the event. Consider the other parties who will need to be involved in the consultation process when planning the event and determine what information needs to be shared and discussed.

During an event, PCBUs are required to work closely and collaboratively with other PCBUs such as the venue or site management, unions, production companies, designers, event organisers or promoters, catering providers, security, subject matter experts such as structural engineers or safety officers, local authorities or governments, rigging companies, suppliers of plant or equipment. PCBUS are also required to manage the relationship between all these individuals/companies and the performers. If performers are represented by health and safety representatives, the consultation must involve those representatives.

Areas to address during consultation may include induction, schedules, floor plans, set, lighting and sound designs, site specific requirements, risk assessments, SWMS, hazards and control measures, legislative requirements, key contacts, emergency procedures, specialist training, rehearsal supervision and performance requirements.

Opportunities for consultation include rehearsal briefings, tea breaks, event briefings, production meetings, stakeholder meetings, specific safety meetings or forums. Records should be kept for future reference.

3.4. Design and planning

As soon as reasonably practicable, a performer must be included in the consultation process. All aspects of the performer's work should be evaluated with a view to minimise safety hazards. The following should be considered at this stage:

- Legislative requirements
- Consultation with relevant PCBUs and performers
- Appropriate scheduling and allocation of resources to minimise impact on performers and crews
- Development of risk assessments and SWMS including controls agreed to during consultation
- Emergency procedures
- Communication methods

3.5. Event delivery – rehearsal and performances

In the delivery stages of an event (bump-in, rehearsal, show, bump-out) the following criteria should be addressed:

- Consultation with relevant PCBUs and performers
- Site-specific inductions
- Equipment inspections and/or maintenance
- Implementation and monitoring of controls identified in risk assessments or SWMS
- Incident reporting and management
- Sign-off and handover procedures

3.6. Review

After an event, the following criteria should be reviewed in consultation with relevant parties:

- Incident reports and outcomes including near-misses.
- Effectiveness of the risk control measures
- Scheduling
- Areas for improvement
- Incidents of non-compliance
- Any new hazards or risks identified

3.7. Documentation and records

The following documents and records should be created, maintained and kept on site when undertaking performer based productions:

- Risk assessments and SWMS
- Training records, certificates of competency and licences
- Induction records
- Safety consultation meetings and attendance
- Evidence of consultation
- Incident reports, including near-misses

Any of the above documents could be requested to be sighted by other PCBUs for verification or clarification and should be available at all times.

Various WHS documents and records need to be retained for differing periods of time according to the relevant WHS legislation.

4. Suggested Control Measures

4.1. General performer hazards

4.1.1. Auditions

It is important to ensure adequate numbers of suitably trained and competent personnel are on hand to implement and monitor risk control measures when performers are attending auditions. This is particularly important during open auditions where the number of attendees can only be estimated and large numbers of performers may attend.

Consider having a registration system to estimate how many will attend beforehand and ensure security is capable of controlling attendees. Ensure the following is addressed:

- Risk assessment on the event shared with other PCBUs
- Control of the numbers of attendees
- First aid commensurate with the number of attendees
- Traffic control
- Security
- Male/female facilities available and appropriate for the number of potential attendees

4.1.2. Rehearsals

The principles that apply to any general workplace apply to the rehearsal venue. Stage management needs to ensure that normal consultative measures are in place and that appropriate warning signs and administrative controls, including training and toolbox talks, are applied.

A rehearsal room can be classified as a high risk work environment as a large part of the rehearsal can be improvised. Items that need to be considered include the following:

- Risk assessments for the event, shared with other PCBUs
- Induction for all workers who will be attending rehearsals
- The need to keep visitor numbers to a minimum
- Slip and trip hazards
- Employee access
- First aid
- Adequate heating and cooling
- Breaks and access to refreshments and water
- Appropriate rehearsal furniture and props to allow the performer enough time to 'train' for the work ahead
- Professional vocal, movement and choreography staff to minimise risks to the performers
- Thorough rehearsal of all aspects of the performance, especially theatrical violence
- Daily revisions of the risk assessment and continued consultation with performers and other staff

4.1.3. Performances

The rehearsal space is where the majority of risks that will confront a performer will have been identified and control measures will have been put in place. It is important to also extend these to the performance venue.

The new and additional measures that should be considered include:

- New venue inductions
- Familiarisation with new heavy scenery and effects not present in rehearsal
- Specific stage lighting and dark areas on and off stage
- Interactions between performers and the public
- Final stage effects such as smoke, strobe lighting, stage traps and other physical effects
- Evening and night work and the performer access to transport from the workplace

4.1.4 General movement

When portraying a character, the performer may have to perform movements with which he or she is unfamiliar.

Where movement is required during rehearsal and performance, warm up is an important part of a performer's preparation.

In a musical the dance captain will instigate exercise and warm ups before rehearsal or performance. In a drama or small cast production it is the responsibility of the individual performer to ensure that they are able to undertake the action without risk of physical harm. This should be confirmed by stage management.

In any production where theatrical violence moments occur, a member of the cast should be selected and appointed as the fight captain. Their duties should include leading appropriate warm ups, and the running of a fight call before every performance. The fight captain should be given specific instruction by the fight director (where one has been appointed) as to their role. They are to be a conduit between the production and the fight director on all issues relating to the required theatrical violence moments.

4.1.5 Vocal health and safety

While trained singers are aware of the limitations of their voice, some performers may not have had the training or experience to know what might cause harm in both short and long term vocal extremes.

Performers should be made aware of the effects of both constant use at exaggerated levels or discrete moments called for in a production. The level of care will vary depending on the performer's training and experience.

The nature and extent of the vocal risk undertaken is dependent upon the length of vocalisation, the duration of the run and whether amplification is used. Any vocal work needs to be identified and the risks assessed like any other aspect of the performer's work. Control measures have to be introduced to minimise or eliminate these risks.

Suggested control measures include:

- Engaging a qualified voice coach to assist with the safe development of any extreme vocal use
- Devoting enough time to warm ups, both physical and vocal, in the rehearsal process as well as before live performance
- Continuing to risk assess as the scene/s evolve through the rehearsal process
- Utilising radio mics, soundscapes and sound design as early as possible (and at volume) in the rehearsal process
- Promoting vocal hygiene (including systemic and topical hydration) and resilience

4.1.6 Theatrical violence moments – stage combat and associated work

The potential risk in any enacted violence situation, whether or not contact is intended, is high and has to be managed accordingly. Where violent movement is being proposed, do not assume a director is qualified to choreograph this action. Assess the risks and act appropriately.

All theatrical violence moments should be choreographed by a trained/certified fight director or, if there is a large number of violent scenes, a stage combat instructor working under the direct supervision of a fight director.

Instances where this is applicable include:

- Any time an actor places hands on another actor in a heightened/aggressively emotional state
- Any time an actor is required to commit an action of heightened physical risk they are not trained or highly proficient in, such as falls, rolls, lifting or carrying other actors, traversing complex sets
- Any time a conventional weapon, such as a knife, sword, spear or firearm, is brandished or drawn
- Any time an ordinary item is used as a 'found weapon' as part of an angry interaction between performers
- Any time a performer is at risk of falling in what appears to be a violent moment

It is important to rehearse using props as early as possible. If this is not possible, a close approximation should be used until the prop arrives.

All theatrical violence moments need to be identified and the risks assessed like any other aspect of the performer's work. Control measures have to be introduced to minimise or eliminate these risks.

Suggested control measures include:

- Ensure a risk assessment is completed for the theatrical violence moments being undertaken
- Engage a qualified fight director
- Where relevant, provide performers with specific physical strength and condition training
- Devote enough time to adequately warm up for the rehearsal process as well as the live performance
- Develop a fight call to be undertaken by all cast involved in any theatrical violence moments prior to every performance (except an evening show if there has been a matinee that day)
- Ensure fight calls are included in the cast call times and monitored by the stage manager
- Continue to risk assess as the scene/s evolve throughout the rehearsal process

4.1.7 Action sequences

Most action sequences or physically dangerous movements required in live performance can be supervised by a trained/certified fight director and undertaken by the performers themselves. These movements may include:

- Slips, trips and basic falls
- Fight scenes
- Basic weapons use
- Carrying of others
- Basic prop manipulation

Certain action sequences involve a higher degree of risk and will require additional expertise and supervision by appropriately qualified and licensed personnel, including:

- Acrobatics
- Gymnastics
- Puppetry and character suit work
- Actor flying and wire work
- High falls
- Firearms use (in this case, a licensed theatrical armorer is legally required)

While action sequences are commonly referred to as 'stunts', this is an inaccurate term. Stunts are action sequences involving extreme risk that should only be undertaken by trained stunt professionals. Action sequences or stunts should always be preceded by a thorough risk assessment.

Understudies and action sequences

Whilst understudies have a very important role in theatrical productions, rehearsal time is often limited. Therefore, where understudies are required to perform action sequences, the fight director and any other relevant personnel such as stage combat instructors must take extra care to ensure all understudies can perform action sequences safely.

4.1.8 Performer flying

Performer flying has a particularly high element of risk and as such should only be undertaken by people with the required experience and training. At no stage should a flying rig be designed, installed or operated by untrained or unqualified person.

The system design needs to be undertaken by experts in the field who must liaise at the earliest opportunity with the proposed venues, the performer using the equipment and the engineers who certify the rigging points that the system will be attached to. Risk assessments need to be prepared at the design stage and at every other stage in the production timeline.

The system's operational restrictions (distance travelled, heights, speeds etc.) need to be identified and detailed early. It is imperative that the designers, directors and choreographers be acutely aware of these restrictions.

At every stage, from initial design to each individual performance, a rigorous system of procedures, checks and cross checks should be implemented. Every use of the system should be overseen by trained

rescuers working to a written and available rescue plan. This plan should cover all potential system failures, including power failure and performer health eventualities, so every conceivable potential rescue situation is planned for. This rescue plan should aim for a rescue to occur within 5 mins of an incident occurring.

Rescue equipment needs to be kept adjacent to the performance area and would include equipment such as elevated work platforms (boom lift, scissor lift, vertical lift), and if deemed necessary, harness rescue kits.

When performer flying is proposed, the following factors should be considered:

- Set design
- Set construction
- Performer induction
- Rehearsal with flying equipment – even cut down temporary equipment
- Interaction between flying and non-flying performers
- Tech rehearsals and stage work
- Performances
- Understudy induction and onstage rehearsals
- Touring inductions to new venues, potentially with new cast

It is imperative to have a procedure in place that stops the performer from moving should either the performer, the performer's rigging assistant (the dresser or whoever clips the performer into the system) or any other party notices a potential hazard. This may include a loud call of 'stop' to a particular signal visible by the operator.

4.1.9 Working with animals

Hazards the animals present to the performers come in many guises, such as the size and weight of an animal, its aggressive nature or the diseases that it may possess.

PCBUs need to ensure that risk assessments are produced and shared between the producers of the event and the managers of the venue, as the animal will interact with many of the staff, not just the performer. The staff that will need to be involved with the animals to varying degrees include:

- The performer who is handling/interacting with the animal
- Performers in proximity to the animal
- The animal handler who will be looking after the animal backstage and after hours including transport to and from the venue and accommodation
- Stage management
- Stage crew
- Security
- The audience – warnings re allergies should be posted and addressed through the risk assessment

The risk assessment process will need to commence from the initial concept meeting and should continue through all the subsequent stages.

Special care must be taken at the audition stage to identify performers that have either a fear or an allergy to a particular species or breed so that the performer is not exposed to them.

Also note that special care must be taken to ensure that the person allocated the work of cleaning up after the animal is not allergic to the animal being used at the event.

4.1.10 Working with children

There are many areas that need to be considered when children are required for a production. The content of the show, the working conditions and environment of productions and events, hours of work and other factors can present a risk to the children themselves and other performers.

The suitability of content, working conditions and environment should be assessed in consultation with the parents of the child and the relevant state authorities. The laws regulating child employment vary from state to state, which should be taken into account well in advance when planning national tours. It is also important to note that many states do not distinguish between situations when children are involved are part of a professional (paid) arrangement and those in which the child's involvement is voluntary or part of an educational project. In such states, any instance in which a child is given direction and expected to perform tasks can be deemed employment.

The temperament of the children also plays a major part in the risk assessment process. Children may perform the same role differently, even when they are the same physical age. This has to be taken into consideration where there are multiple casts of underage performers.

The role of a cast chaperone is also to be considered as part of the risk assessment. The benefits of having a responsible adult on staff to protect the welfare of young company members should be considered, and in some jurisdictions it may be a requirement. It may be possible for member of cast or crew to take in this role, but the responsibilities should not be underestimated and at no time should the child performer be unsupervised when backstage in a production.

4.1.11 Costume work

The designer has a great responsibility in ensuring the performer is not exposed to hazards that can be eliminated or minimised. This is particularly relevant in the design and manufacture of costumes.

In order to minimise the risk to the performers the following criteria need to be addressed:

- Correct fit
- Material – allergies, finish etc.
- Quick change requirements
- Flammability of the material if a flame risk exists in the production
- How the costume is to interact with the set, special effects, other performers and any backstage restrictions – e.g. large loose sleeves where there are hooks onstage for supporting props or fluffy material where there is Velcro around the set

4.1.12 Performing in a character suit or exaggerated costume

Full character costumes present additional hazards. The length of time the performer has to wear the costume will play a large part as to how the risks from these hazards are eliminated or minimised. These considerations include the points noted above as well as:

- Air flow
- Temperature and general comfort of the performer
- Sight lines out of the costume
- Food and drink access for the performer
- Ease of removal
- Audience reaction to the costume (especially children)
- Repetitive strain injuries due to increased resistance and limited range of motion
- Sound and general proprioception
- Stability and control

Performing choreographed sequences (also referred to as hazardous routines) in a character suit or exaggerated costumes introduces additional risks. These will not be confined to the performer, as crew and or audience may contribute other elements of risk associated with the hazardous routine.

An appropriate amount of rehearsal time must be allocated, this must be in proportion to the level of risk created by the suit or costume. The nature and extent of these risks can vary, dependent upon the action required. The staging of a hazardous routine should be risk assessed on a case-by-case basis.

Suggested control measures include:

- Ensuring a qualified person is employed to develop and choreograph the routine and a costume designer is involved to monitor the build and fit
- Ensuring a risk assessment is completed for the activities being undertaken on the stage
- Continuing to risk assess as the routine evolves through the rehearsal process
- Testing the costume /suit element in the performance as early as possible, or using a close approximation until the costume arrives
- Devoting enough time to warm up and warm down for the rehearsal process as well as the performance

4.1.13 Performing as a puppeteer

Working as a puppeteer, including large-scale exposed puppetry and prop manipulation should also be considered as a hazardous routine.

An appropriate amount of time must be dedicated to rehearsals and be in proportion to the level of risk involved with the use of puppets or large-scale props. The nature and extent of these risks can vary, dependent upon the action required, therefore, the staging of a hazardous routine should be risk assessed on a case-by-case basis.

Stresses and hazards relating to puppets and large prop manipulation may include the following:

- Sight lines around the puppet or prop
- Audience reactions to the puppet (especially children)
- Repetitive strain injuries due to increased resistance and limited range of motion

- Sound and general proprioception
- Lack of stability and control
- Injury from impact and contact with puppet/large scale prop

Suggested control measures include:

- Ensuring a qualified person is employed to develop and choreograph the routine and a puppet maker/designer monitors the build and fit
- Ensuring there are dedicated personnel monitoring the performance and handling of the puppet /prop element in rehearsal, especially if the visibility of the performer is limited
- Ensuring a risk assessment is completed for the activities being undertaken on the stage
- Continuing to risk assess as the routine evolves through the rehearsal process
- Testing the puppet /prop element in rehearsal as early as possible, or using a close approximation until it arrives
- Devoting enough time to warm up and warm down for the rehearsal process as well as the live performance

4.1.14 Circus arts

Circus performing is inherently high-risk work and all circus performers possess different levels of training and experience. Therefore, PCBU's should thoroughly consult with performers to ensure they are able to competently and safely perform all elements of a required routine, or whether adjustments may have to be made.

Incorporating circus arts into a production requires the preparation of a complex risk assessment. The methods used to eliminate or minimise risks could be extensive and difficult to implement. It is imperative that PCBU's in charge of a production seeking to incorporate circus arts ensure that all members of the cast are:

- Appropriately trained
- Choreographed by qualified experts in the field
- Inducted into the rehearsal and performance venues

The PCBU must also ensure:

- Appropriate risk assessments have been prepared and shared with others as necessary
- Adequate first aid is available in the rehearsal and performance venues
- Policies and procedures are prepared for the safety of the individuals and the company in general
- Safety mats, barriers, harness and rescue plans commensurate with the risk
- Engineering and other professional advice on the infrastructure needed for the system hardware being utilised by the performers

Aerial circus performance has a particularly high element of risk and as such should only be undertaken by performers with the required experience and training. At no stage should circus equipment be designed, installed or operated by an untrained or unqualified person.

The processes and procedures for aerial circus performances align with those for any kind of performer flying. Please refer to section 4.1.8 of this guide for additional information.

4.1.15 Working with electrical power

Electrical power is used in almost all areas of the theatre from the musicians in, on, or under the stage, the increasingly complex lighting rig, the audio systems, and powered effects within the set.

All the individual departments within a production need to prepare and compare risk assessments and ensure that all potential risks have been minimised. The hazards presented by specialist electrical effects need to be designed and manufactured by licenced professionals and executed by trained and experienced operators.

Hired electrical equipment must have a valid test and tag certificate and must be visually inspected for damage by the operators every time it is unplugged and moved.

Venue managers can also ensure that all power supplies are protected where possible by RCD safety switches and that all power supplies are managed as part of the general building WHS system.

4.1.16 Noise levels

Performers are exposed to various noise levels throughout their careers and cumulative effect can be just as hazardous as the instant effect of excessive noise.

From the design stage of any production where amplified sound or live music is planned, the sound levels need to be controlled and overall exposure to the sound calculated.

This is a risk that has to be managed professionally by a trained audiologist and not necessarily by the audio company or sound designer working on the production as part of the creative process.

It is strongly advised that where loud noise is being planned for a production, a trained and professional audiologist be engaged early in the process to assist with the risk assessment and the methods needed to be employed to mitigate the risks.

If performers and crew are being exposed to loud noises at work it is recommended that the PCBU ensure that all staff members have an accurate hearing test and report before commencing a production. In this way, should a staff member report loss of hearing later in life, the PCBU will be able to distinguish any pre-existing injuries.

4.1.17 Hazardous locations

Performers can be asked to work in many varied and unusual locations. This can include performance buildings outside of normal theatre venues, sets and scenery requiring working at height and public areas such as parks, swimming pools, zoos or beaches. Small spaces may also be considered as hazardous.

All locations need to be risk assessed individually and must be viewed from the individual's point of view, taking into account all potential hazards.

4.1.18 Hazardous materials

Courtesy of Worksafe Australia – *‘What are hazardous substances?’*

‘Hazardous substances are those that, following worker exposure, can have an adverse effect on health. Examples of hazardous substances include poisons, substances that cause burns or skin and eye irritation, and substances that may cause cancer. Many hazardous substances are also classified as dangerous goods.’

PCBUs should ensure they appropriately identify hazardous substances and notify those who may come into contact with them. First aid should always be available.

Items that may be encountered by the performers and elicit a reaction may include the following:

- Smoke generated from various liquids such as oil or glycol. Note also the density of the smoke
- Haze in various densities generated by heat or cracking
- Paints
- Cleaning products
- Laundry cleaners
- Shoe polish
- Fake blood
- Make up
- Stage prop food and drink

Performers will react differently to different substances and PCBUs need to assess the risks ensuring they do not expose the performer to something that will have a dangerous reaction. Safety Data Sheets need to be consulted and kept on site for reference.

5. Legislation, Standards and Guidance

Safe Work Australia 2015 [Managing the risk of falls at workplaces Code of Practice 2011](http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/managing-risk-falls-cop)
<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/managing-risk-falls-cop>

Safe Work Australia 2012 [Falling Objects Fact Sheet](https://www.safeworkaustralia.gov.au/system/files/documents/1702/falling_objects_fact_sheet.pdf) provides general guidance on managing risks posed by falling objects
https://www.safeworkaustralia.gov.au/system/files/documents/1702/falling_objects_fact_sheet.pdf

Safe Work Australia – NATIONAL STANDARD FOR OCCUPATIONAL NOISE
https://www.safeworkaustralia.gov.au/system/files/documents/1702/nationalstandardforoccupationalnoise_nohsc1007-2000_pdf.pdf

Safe Work Australia – Noise Management
https://www.safeworkaustralia.gov.au/system/files/documents/1702/managing_noise_preventing_hearing_loss_work.pdf

PLASA Technical standards – ANSI E1.34 – 2009 (R2014): Entertainment Technology – Measuring and Specifying the Slipperiness of Floors Used in Live Performance Venues –
http://tsp.esta.org/tsp/documents/published_docs.php

PLASA Technical standards – ANSI E1.23 – 2010 (R2015): Entertainment Technology – Design and Execution of Theatrical Fog Effects –
http://tsp.esta.org/tsp/documents/published_docs.php

PLASA Technical standards – ANSI E1.40 – 2016 : Recommendations For the Planning of Theatrical Dust Effects – http://tsp.esta.org/tsp/documents/published_docs.php

PLASA Technical standards – Introduction to Modern Atmospheric Effects, 5th edition –
http://tsp.esta.org/tsp/documents/published_docs.php

Australian and New Zealand Standards

AS/NZS 1657 *Fixed platforms, walkways, stairways and ladders—Design, construction and installation*

AS/NZS 1891.1 *Industrial fall-arrest systems and devices—Harnesses and ancillary equipment*

AS/NZS 1891.2 supp:1-2001 *Industrial fall-arrest systems and devices—Horizontal lifeline and rail systems—Prescribed configurations for horizontal lifelines (Supplement to AS/NZS 1891.2)*

AS/NZS 1892 *Portable ladders series*

AS/NZS 4389 *Safety mesh*