

Safety Guidelines for the Live Entertainment and Events Industries

Part 3. Hazard Guide 09 – Temporary Structures

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Disclaimer

In legislative terms, the requirements of the **Australian WHS/OHS Framework** are mandatory. In contrast, a guide is designed to assist obligation holders to comply with the requirements of an act or regulation.

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, so far as reasonably practicable. These obligations are described in the *Occupational Health & Safety Act 2004 (Vic)* (**Victorian OHS Act**) at section 21 and in the Work Health Safety Acts in all other states and territories at section 19.

The information contained in the LPA Safety Guidelines for the Live Entertainment and Events Industries (**LPA Safety Guidelines**) is of a general nature and may not apply in all work situations. It is not mandatory and should not be regarded as legal advice. In any important matter, you should seek appropriate independent professional advice in relation to your own circumstances. Live Performance Australia (**LPA**) accepts no responsibility or liability for any damage, loss or expense incurred as a result of the reliance of information contained in this guide.

Definitions and terms used

Australian WHS/OHS Framework means Model WHS Legislation and Victorian Legislation

Employer means a person who employs one or more other persons under contracts of employment or contracts of training (Victorian OHS Act)

Model WHS Act means *Work Health and Safety Act 2011* (Cth)

Model WHS Regulations means *Work Health and Safety Regulations 2011* (Cth)

WHS Legislation *Work Health and Safety Act 2020* (WA); *Work Health and Safety Regulations 2022* (WA); *Work Health and Safety Act 2012* (Tas); *Work Health and Safety Regulations 2022* (Tas); *Work Health and Safety Act 2012* (SA); *Work Health and Safety Regulations 2012* (SA); *Work Health and Safety Act 2011* (NSW); *Work Health and Safety Regulations 2017* (NSW); *Work Health and Safety Act 2011* (ACT); *Work Health and Safety Regulations 2011* (ACT) *Work Health and Safety Act 2011* (QLD); *Work Health and Safety Regulations 2011* (QLD); *Work Health and Safety Act 2011* (NT); *Work Health and Safety Regulations 2011* (NT)

WHS Acts means *Work Health and Safety Act 2020* (WA); *Work Health and Safety Act 2012* (Tas); *Work Health and Safety Act 2012* (SA); *Work Health and Safety Act 2011* (NSW); *Work Health and Safety Act 2011* (ACT); *Work Health and Safety Act 2011* (QLD); *Work Health and Safety Act 2011* (NT).

WHS Regulations means *Work Health and Safety Regulations 2022* (WA); *Work Health and Safety Regulations 2022* (Tas); *Work Health and Safety Regulations 2012* (SA); *Work Health and Safety Regulations 2017* (NSW); *Work Health and Safety Regulations 2011* (ACT); *Work Health and Safety Regulations 2011* (QLD); *Work Health and Safety Regulations 2011* (NT).

PCBU means person conducting a business or undertaking (Model WHS Legislation)

SWMS means safe work method statement

Victorian OHS Act means *Occupational Health & Safety Act 2004* (Vic)

Victorian OHS Regulations means *Occupational Health & Safety Regulations 2017* (Vic)

Victorian Legislation means *Occupational Health & Safety Act 2004* (Vic); *Occupational Health & Safety Regulations 2017* (Vic)

Temporary Structures Hazard Guide

1. Overview

This guide provides information to assist in managing risks associated with **temporary structures** used in live entertainment and events. Information in this guide is based on the Australian WHS/OHS framework. See also, part 5 of this guide– Legislation Standards and Guidance

It is recommended that this information is referenced 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, so far as reasonably practicable.

This guide does not replace the need to implement risk management strategies, undertake research or seek specialist advice.

Each person conducting a business or undertaking (PCBU), or Employer who manages or controls a workplace has a responsibility to understand their obligations under Work Health and Safety legislation. Workers and employees also have a responsibility to ensure they don't endanger themselves or others. Australian and International Standards provide approved guidance on how to meet work health and safety obligations. Codes of Practice and Compliance codes are available from the state regulator eg: SafeWork NSW, or the WHS regulator in your state or territory.

A Code of Practice, or Compliance Code is a refined version of a Standard, which also refers to Australian WHS/OHS Framework. They can be easily read and understood, with information on specific work tasks and procedures, to assist you to achieve compliance required under the WHS/OHS Acts and Regulations in each state or territory.

1.1 Definition

1.1.1 Temporary structures

For the purposes of this guide a temporary structure is any structure that is not permanent and has a defined life, typically less than 28 days but up to one year, and most likely is designed to be demountable. Temporary structures are often custom designed for events, are generally erected manually and made from lightweight materials that are used repeatedly in multiple configurations.

The main risks associated specifically with temporary structures are collapse or structural failure due to:

- Poor design and inadequate engineering
- Overloading or poor supervision
- High winds or other adverse weather conditions
- Unsuitable ground conditions
- Crowd movement or behaviour
- Unintended use

This Hazard Guide provides practical information and suggested control measures for:

- Sets and scenery
- Temporary seating, grandstands
- Ground support structures
- Exhibition stands
- Marquees and inflatables
- Outdoor rigging
- Stages and risers
- Scaffold*
- Fire safety

*See part 4.3 – Scaffold as a temporary structure

1.1.2 Further information for reference

- LPA Safety Guidelines for Live Entertainment and Events Part 3. Hazard Guide 11 – Working at Height
- LPA Safety Guidelines for Live Entertainment and Events, Part 1 WHS Commitment and Responsibilities provides general information on duties, obligations and risk management.
- **Australian Building Code Board – Temporary Structures**
[Temporary structures | ABCB](#)
- Safe Work Australia Code of Practice 2018, Safe design of structures
[Model Code of Practice: Safe design of structures \(safeworkaustralia.gov.au\)](#)

2. Key Considerations – Temporary Structures

The following questions must be considered during event design, planning and delivery. Use them to identify hazards and plan how risks will be managed.	Yes	No		Comment/Action
2.1 Design and planning				
<i>Which other PCBUs (employers and contractors) and workers will be involved or affected by this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Has the design been signed off by an engineer?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Have arrangements been made to consult, cooperate and coordinate activities with other PCBUs (employers and contractors) before and during undertaking this activity?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What is the duration the structure will be erected?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are there any maintenance requirements for the operational period the structure is erected?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are competent or licensed persons required to erect structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Is there any high risk plant required for erection?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Is there sufficient emergency egress?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Is there an emergency evacuation plan for the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What is the weight and/or audience capacity of the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What type of activity will be carried out on or around the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Does the floor loading of the structure meet the intended use?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What is the ground loading capability of the site where the structure will be erected?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What weather conditions will the structure endure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What are the location and environmental conditions the structure will be erected in?</i>	<input type="checkbox"/>	<input type="checkbox"/>		

The following questions must be considered during event design, planning and delivery. Use them to identify hazards and plan how risks will be managed.	Yes	No		Comment/Action
<i>Does the structure require any fire suppression or fire retarding?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Will the structure prevent or obstruct fire systems?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are exclusion zones required during the erection, operational or dismantle periods?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are there any restrictions on access or capacity required during operational period?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Does the structure require any temporary lighting or fire systems?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Does the temporary lighting system need to be backed up by an emergency lighting system?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are there any venue or local jurisdiction permissions, approvals or restrictions that apply to the erection of the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Does the design of temporary structure require building certification or other approval?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are any services such as water, electricity required to be installed?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Are there any moving or mechanical parts to the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Will there be any potential overcrowding periods or peak audience volume?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Has the demographic of the audience been specifically considered in the design of the structure?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What type of audience will be occupying the structure, i.e. ticketed, free, ambulant, moving or static?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Who is monitoring the structure and how?</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>What is the evacuation or emergency management plan and who has the power to enact it</i>	<input type="checkbox"/>	<input type="checkbox"/>		

3. General Guide – Temporary Structures

3.1 Responsibilities

Designers

Under the WHS Acts, sections 22 (1)(c) and 22(2)(d) PCBUs who design a structure that is to be used, or could reasonably be expected to be used, as, or at a workplace have defined responsibilities. The designer must ensure, so far as is reasonably practicable, that the structure is designed to be without risks to the health and safety of persons who construct the structure at a workplace.

The Victorian OHS Act section 26, 27, 28, 29 and 30 lists similar processes for designers to follow and duties of persons who manage or control workplaces.

Other Duty Holders

Consultation between duty holders starts at the design stage of any temporary structure. Key information about identified hazards and action taken, or required to control risks, should be recorded and transferred from the design phase to those involved in later stages of the lifecycle, which would include those who commission the structure and those who build the structure.

An example of this transfer would be a structural designer passing on a safety report which lists hazards that have been controlled, to the principal contractor, who may enlist a sub-contractor to build the structure.

Designers must give adequate information to each person who is provided with the design to give effect to it. This includes:

- the purpose for which the structure was designed
- the results of any calculations, testing, analysis or examination
- any conditions necessary to ensure that the structure is without risks when used for a purpose for which it was designed or when carrying out any activity related to the structure such as construction, maintenance and demolition.
- features which create access problems
- heavy or awkward prefabricated elements likely to create handling risks
- methods of access where platforms or other work at height controls are required

This information may be an engineering report, safety manual or safe operating procedures document. The detail in information would depend on the size and type of structure and the degree of controls needed to construct it safely.

This consultation process helps to minimise the likelihood of safety features incorporated into the design being altered or removed by those engaged in subsequent work on or around the building or structure.

The designer must also, so far as is reasonably practicable, provide this information to any person who carries out activities in relation to the structure if requested.

Work health and safety file

The development of a work health and safety (WHS) file for a structure could assist the designer to meet the duty to provide information to others. It may include copies of all relevant health and safety information the designer prepared and used in the design process, such as standards, engineering principles, the safety report, risk register, safety data sheets, manuals and procedures for safe maintenance, dismantling or eventual demolition.

3.1.1 Training and competence

PCBUs/Employers and contractors must assess the risks and ensure all staff have the required skills and training to minimise the risks and meet legislative requirements. All staff competencies such as experience, training and licenses should be recorded in the files or information shared with interested parties,

Additional training and induction to site-specific and job-specific safe work methods may be required.

Licenses are required for activities deemed as high risk work – see relevant WHS legislation for details and ensure that all staff undertaking tasks requiring licenses, are indeed holding the appropriate training documentation.

Additional regulations may be imposed by the local authorities and/or the event insurer, such as being required to use a registered builder of temporary structures.

The City of Sydney and the City of Melbourne requirements at the following website are a good example of what *may* be required:

- [City of Sydney – Hoardings & temporary structure approvals](#)
- [City of Melbourne – Building and Development](#)
- [City of Melbourne – Install hoardings, gantries or scaffolds on public land](#)

3.2 Consultation, cooperation and coordination

The Model WHS Acts in all states and territories except Victoria, and the Victorian OHS Act, makes consultation with workers a legal requirement. Consultation, cooperation and coordination between PCBUs or Employers, is a requirement where they share a duty for the safety of a worker or for work to be done.

PCBUs and Employers should use the information in this guide to consult with workers including event staff to determine the hazards and risks specific to temporary structures planned for your event and how to best eliminate or minimise these risks using the hierarchy of controls.

Consultation should start as early as possible, before decisions are made, and continue through the duration of the event through both the dismantling of the structure and any rehabilitation of the site.

Consider the other parties who will need to be involved in the consultation process in the early planning stages of the event and determine what information needs to be shared and discussed and who need to be consulted in the development of the risk assessment and SWMS.

During an event, PCBUs and employers are required to consult, cooperate and coordinate with other PCBUs or duty holders such as the venue or site management, production companies, event organisers or promoters, catering providers, security, subject matter experts such as structural engineers or safety officers, local authorities or governments, rigging companies, performers, suppliers of plant or equipment, designers, workers, unions etc. Evidence of this consultation may be required in the event of an incident or investigation so records do need to be kept.

If employees/workers are represented by health and safety representatives, the consultation must involve those representatives.

Areas to address during consultation may include items such as inductions, schedules, floor plans, set designs, site specific requirements, staff training levels, risk assessments, SWMS, hazards and control measures, legislative requirements, licences, plant movement, traffic management, exclusion zones, key contacts, emergency procedures, permits to work.

Opportunities for consultation may include toolbox talks, event briefings, site inspections, stakeholder meetings, post event reviews, working groups or forums.

Scheduling safety as both the first and last items on a meeting agenda ensures the best coverage of issues. Items from previous discussions are covered first and any new items raised at the meeting are then discussed at the end.

3.3 Design and planning

Early stages of planning should address the following issues:

- Consultation with relevant designers, engineers, PCBUs, Employers, workers and employees
- The site conditions aspects where the proposed temporary structures will be erected
- The specific compliance and requirements for the temporary structure/s
- Selection of the competencies, plant and equipment required to complete the task
- Appropriate scheduling and allocation of resources to minimise impact on others, including the public and other users of the site
- Risk assessments and SWMS including controls agreed to during consultation
- Access to site and logistics for the erection of structure/s
- Maintenance programs during the erected life of the structure/s
- Emergency procedures.

There are 2 stages to the design and installation of a temporary structure, both of which require specific sign offs.

At the **design stage**, all the aspects of the design need to be brought together and all the parties need to be in agreement as to both the engineering and operational aspects of the design. The risk assessments on the use of the design as well as the engineering aspects of the materials used and the actual physical design will need to be signed off as suitable by all parties ensuring no surprises at the time of installation and use.

Installation of the structure will need certification each time the structure is erected. This might be a one-off event but may also require certifications for each town on a tour (i.e. circus set ups) from relevant engineers and/or local authorities.

3.3.3 Engineering

The structural adequacy of every temporary structure needs to be considered. This could be assessing the manufacturer's specifications or engaging an engineer to assess the structural adequacy of a custom temporary structure.

Designers of structures are often not engineers, but designers, contractors, PCBUs and employers should determine during the design phase when an engineer and/or appropriate expert should be engaged.

Engineering certification for temporary structures will define the duration for which the structure is permitted to be erected. Engineering for a one-week structure in summer will certainly be different than for a structure designed for 12 months of use through all 4 seasons.

Adverse weather, especially wind, plays a large part in the design capability and structural adequacy of a temporary structure. A full range of procedures and policies will need to be in place to cope with the structure's ability to cope with various weather conditions. These need to be in place should a freak weather event threaten the structure with conditions that exceed the designed parameters.

Any temporary structure that covers a ground area of more than 50m² and any stage, tent or marquee that has an unsupported span greater than 8m should be regarded as a large structure. It is best practice to have such a structure's design engineered. Structures that are hired or have already been built previously should have an engineering certificate available when it is supplied and any new design should be engineered from concept through design to construction. It is best practice to have the design and completed temporary structure engineered where:

- There is legislation requiring design certification
- The structure is likely to be used other than for its intended purpose
- The structure will be supporting the weight of person including members of the public
- The structure will be erected in an environment that could affect the structural adequacy such as a wind tunnel, potentially soggy ground etc.

3.4 Event delivery

In the delivery stages of an event (bump-in, rehearsal, show, bump-out) the following criteria should be addressed when erecting, occupying or dismantling temporary structures:

- Consultation with relevant PCBUs, employers and workers as well as any public around the site;
- Site-specific inductions;
- Equipment inspections and/or maintenance;
- Work permits, High Risk Work Licences or engineering certificate requirements;
- Implementation and monitoring controls identified in risk assessments or SWMS;
- Compliance to legislative requirements;
- Review, consultation and adjustment of control measures as required on site;
- Incident reporting and management; and
- Sign off and handover procedures.

3.5 Review

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

- Incident reports and outcomes
- Effectiveness of the control measures
- Scheduling
- Areas for improvement
- Incidents of non-compliance
- Any new hazards or risks identified
- Cost benefit risk analysis – what could have been done more efficiently/efficiently?

3.6 Documentation and records

The following documents and records should be created, maintained and kept on site when utilising temporary structures during an event:

- Permits granted by local authorities
- Structure design specifications, build diagrams and plans
- Engineering certification, work permits and sign off records
- Risk assessments and SWMS
- Training records, certificates of competency and licences
- Induction records
- Toolbox talk topics and attendance
- Evidence of consultation
- Incident reports

Any of the above documents could be requested to be sighted by another PCBU/Employer or the regulator for verification or clarification and should be available at all times. Site safety folders are recommended with originals in a secondary location.

4. Suggested Control Measures

4.1 Sets and scenery

Stage sets and scenery elements can be large props, freestanding flats, flown scenic cloths and solid scenery items, drapes and items such as automated staging. The effect of installation, operation and dismantling of these elements must be assessed as part of the structural analysis of the temporary structure.

Where adverse weather or other environmental elements potentially require the full or partial dismantling of the structure, the effect of additional scenic elements on the dismantling must be considered. While the overall structure may have been assessed at the design stage, the internal structure must also be included in the risk assessment. This is especially relevant where the internal structure is designed/operated by a secondary PCBU/Employer or contractor from the external structure supplier; both must work together to ensure all risks are eliminated or reduced to a practicable minimum.

4.2 Temporary stages/mobile stage/ temporary seating and spectator stands

A temporary stage can be as simple as an indoor rostra for speeches, a platform for a display or performance, or an outdoor stage. As a general rule any stage or platform designed for general, unspecified use should have a 7.5kPa capacity (approximately 750kg/m²). This is generally used for rental and venue owned multi-purpose units where the actual usage is not specified from project to project. This figure is used by the majority of the European manufacturers of temporary/portable stage units where specific standards exist for these items. A temporary stage designed and built for a specific purpose will be subject to a design risk assessment to ensure it is adequate for the event and truly 'fit for purpose'.

A mobile stage is a stage that is attached to or is moved by a vehicle or truck. Often the stage is detached from the vehicle once in place. Mobile stages can also be a 'float' or form part of a street parade. A mobile stage will often have a fixed roof, which is erected once the stage is in place. A mobile stage should be erected following manufacturers design specification and signed off by a competent person **each** time it is erected.

Temporary seating needs to comply with National Construction Code/BCA regulations for Open Spectator stands (grandstands), which requires a minimum carrying capacity. See, [ABCB Standard - Temporary Structures](#).

Temporary seating is often erected on uneven and unstable ground that is subject to movement during the installation of the seating. A competent person should assess the ground loading capability and the whole structure needs to be engineered around what support is available. This may require a geo-tech assessment as to the suitability of the terrain.

4.3 Ground support structures/scaffolding – a high risk work license activity

According to Safe Work Australia:

'The Work Health and Safety (WHS) Regulations (Schedule 3 & 4) and Occupational Health & Safety (OHS, in Victoria) Regulations (Schedule 3 & 4) list the work that requires a high risk work licence. High risk work includes scaffolding, dogging and rigging work. It also involves using cranes, forklifts, reach stackers, boilers and boom-type elevating work platforms. In most

instances if you carry out high risk work you will need a licence to undertake that type of work.'

See: [High risk work licenses - High risk work licence classes | Safe Work Australia](#)

Ground support structures range from items such as spectator stands, stage platforms, LED screen and speaker and lighting supports through to grand stages with associated roof and internal theatrical rigging.

All the many variations and additions to a design need to be carefully considered as they will affect the manufacturer's design specification. If these elements were not allowed for in the initial design, new engineering calculations will need to be made.

Scaffold as Temporary Structure

Scaffolding built in accordance with AS/NZS 1576 does not necessarily need to be engineered if signed off by the scaffolding company, however scaffolding used for events is widely used for many purposes outside of manufacturer's design specification and these modifications, no matter how small, should be engineered.

Mandatory scaffold requirements are listed under Section 225 of the WHS Regulations, and under section 118 of the Victorian OHS Regulations.

See: [Safework Australia - Safe Design of Structures Code of Practice 2018](#)

Outdoor staging and temporary structures are often built using a combination of different manufacturers' propriety products; therefore the custom nature of the structure needs to be assessed.

As a general rule any ground support structure or scaffolding where the risk of fall is over 4m in height and/or covers a floor area of more than 50m² should be engineered. It is also important to note that the Code of Practice for Managing the Risk of Falls at the Workplace states that: *'the scaffold and its supporting structure is inspected by a competent person before use, after any incident that could affect its stability (such as a severe storm), after any repairs, and at least every 30 days'*.

Scaffold inspections on structures where there is a risk of fall over 4m, should include a handover certificate from the scaffold contractor to the Principal contractor, PCBU or Employer. An example of a handover certificate is included in the Safework Australia 'Guide to Scaffold Inspection & Maintenance'.

Scaffolds with a fall risk of less than 4 metres should also be inspected before use and after any incident, repair, alteration or addition. Note: Constructing a scaffold 4m or under does not require a High Risk Work Licence, but it must be performed by a competent trained person. See:

- [General Guide for Scaffolds and Scaffolding Work \(safeworkaustralia.gov.au\)](#).
- [Guide to Scaffold Inspection and Maintenance \(safeworkaustralia.gov.au\)](#)

4.4 Exhibition stands/concession stands/'pop ups'/smaller structures

In most cases the venue will have specific restrictions to height and size of exhibition stands. This is nominally due the fact that these temporary structures are sold on a per square metre basis and are therefore strongly regulated.

The PCBU, Employer, contractors and floor setup staff must ensure the layout of exhibition stands remains consistent with the planned layout and that safe access and egress are maintained at all times, especially at setup and take down time where the venue can be very busy.

Special consideration needs to be taken when planning a stand that has any type of overhead cover as it will catch heat from below and block fire services from above. Access and egress to a stand and positioning of emergency equipment needs to be considered at the planning stage to ensure compliance with local regulations.

4.5 Marquees/inflatables

Generally marquees or tents over 100m² and seating stands for more than 20 persons are recognised as temporary structures and may require building certification or occupancy permit for each erection. Local legislation must be investigated and complied with.

All inflatables require engineering certification that specifies ballast requirements, weather monitoring, evacuation requirements and 'firestop' certification.

NOTE:

- Inflatable jumping castles, rides or similar amusement structures are regulated under State Work Health and Safety Acts and must comply with the Australian Standard AS 3533 *Amusement rides and devices Part Two – Operation and Maintenance*.
- Inflatable ballast and wind ratings should be in accordance with the manufacturer's safety manual.

4.6 Rigging at outdoor events

Rigging at outdoor events should only be undertaken by persons experienced in the planning, installation, monitoring and emergency management planning of such events. These events present different risks and challenges to indoor events, such as there may not be any access to roof entry or elevated work platforms. Experience in outdoor rigging is required to adequately assess and address all the risks specific to the outdoor environment.

This includes a rescue at height plan and inspection of all rigging equipment. There may be circumstances, particularly where outdoor stages are in use for several events over a period of time, where inspections of equipment such as catenary lines is essential to ensure no wear and tear has occurred from previous events.

Contingency plans should be developed for weather considerations and rescheduling or cancellation as required. This may include anemometers for wind speed readings, monitoring of weather apps, rapid dismantling techniques, emergency evacuation plans, site lockout requirements and emergency services access.

The senior production manager and rigger on such an event must both have the authority and the resolve to halt works, evacuate structures and ensure design parameters are strictly adhered to. Communications between the senior rigger, the production manager and the safety team must ensure the above requirements are met and are able to be enacted.

4.7 Fire safety and Emergency Lighting & Exit Signs

Temporary structures have a range of potential issues with fire that need to be addressed as part of the risk assessment.

Construction of the structure, materials used for both construction and scenery, access to firefighting tools including permanently installed features such as sprinkler heads and fire hoses that are blocked by a structure, are all items that should be flagged and the risks eliminated. Other items such as distance egress, exit widths, distance to exits are all covered in the Construction Code and need to be included from the early design stage.

4.7.1 Emergency lighting

Emergency Lighting must be installed in enclosed temporary structures that meet the following criteria:

1. The temporary structure has a floor area greater than 500 m².
2. The structure is intended for use outside daylight hours or in the absence of natural daylight.
3. The minimum illumination level of 0.2 lux is not achieved at floor level.

Additionally, when calculating the floor area to determine emergency lighting requirements, any area primarily used for storage is excluded.

4.7.2 Exit Signs

Exit signs are required for enclosed temporary structures.

4.7.3 Direction Signs

Directional signage must be installed in corridors, lobbies, aisles, crossovers, or similar locations if the point of exit from a stage or seating structure is not clearly visible to occupants.

4.7.4 Design and Operation of Exit Signs

An exit sign, as required:

- Must be clearly visible at all times when the structure is occupied.
- Can be either photoluminescent (complying with Specification E4.8 of NCC Volume One) or electrically illuminated (complying with AS/NZS 2293.1).
- Should be positioned over any door, flap, or opening leading to an exit.
- Should be mounted between 2 m and 2.5 m above the floor.
- Must be illuminated whenever the public is present within the structure, even if the main lighting is dimmed or turned off.

The above information can be found at:

- [ABCB Standard - Temporary Structures](#)
- [National Construction Code | NCC \(abcb.gov.au\)](#)

4.8 Accessibility needs

Under section 23 of the *Disability Discrimination Act 1992 (DDA)* it is unlawful to discriminate against a person with a disability in relation to access to, or use of premises.

While section 23 of the DDA states it is unlawful to discriminate, it does not provide information to PCBU/Employers responsible for buildings to assist them to design, construct or manage buildings in ways that do not discriminate.

The Disability (Access to Premises – Buildings) Standards 2010, [Premises Standards | Department of Industry Science and Resources](#) applies to public buildings which are classified under the Building Code of Australia. In situations where building or construction approval is not required for a temporary structure, the Premises Standards would not apply.

However, the temporary structure would still be subject to the general DDA provisions [Microsoft Word - 5dda.doc \(humanrights.gov.au\)](#) that make it unlawful to discriminate against a person with a disability.

For accessibility requirements within temporary structures such as marquees, bar areas, viewing platforms, access amenities and pathways between these, guidance can be taken from the following documents:

- The Australian standards for wheelchair access are provided within AS 1428.1, also known as Design for access and mobility, Part 1: General requirements for access - New building work.
- Accessible Events - Guide for Meeting and Event Organiser [accessible_events_guide.pdf \(meetingsevents.com.au\)](#)
- Australian Human Rights Commission - Advisory notes [Frequently asked questions: Access to premises | Australian Human Rights Commission \(humanrights.gov.au\)](#)

5. Legislation and Further Guidance

Australian WHS/OHS legislative framework

Duty of care

WHS Acts

(NSW, QLD, ACT, NT, SA, TAS and WA)

Part 2 Health and safety duties –

- Division 2, Primary duty of care, Section 19
- Division 3, Further duties of PCBU, Section 20, 21 ([22, designers of structures](#)) , 26
- Division 4, Duty of Officers, Section 27 Duty of Workers, Section 28, Duty of other persons at the workplace, Section 29

OHS Act 2004 (VIC)

Part 3 General duties relating to health and safety –

- Division 2, Main duties of employers, Section 21, 22, 23, 24, 25, 26,
- Division 5—Duties of other persons ([27, 28 designers of structures](#)) 31

Consultation

WHS Acts

(NSW, QLD, ACT, NT, SA, TAS and WA)

Part 5 - Consultation, representation and participation

- Division 1 - Consultation, co-operation and co-ordination between duty holders, Section 46
- Division 2 - Consultation with workers, Section 47, 48, 49

OHS Act 2004 (VIC)

Part 4 - Duty of employers to consult

- Section 35, Duty of employers to consult with employees
- Section 35A, Duty to consult with other employees in relation to duties relating to labour hire

Risk Management/ General workplace management

Model WHS Regulations

Chapter 3 General risk and workplace management

- Part 3.1 Managing risks to health and safety, ss 32, 33, 34, 35, 36, 37, 38
- Part 3.2 General workplace management, ss 39, 40, 41

Victoria OHS Regulations

Chapter 2 General duties and issue resolution

- Part 2.1 General duties Proper installation, use and maintenance of risk control measures, s 18
- Part 3.1 - Hazardous manual handling, Hazard identification, Section 26, Control of risk, Section 27, Review of risk control measures, s 28

Prevention of Falls

Model WHS Regulations

Chapter 4 Hazardous work

- Part 4.4 Management of risk of fall, s 78; Specific requirements to minimise risk of fall, s 79; Emergency and rescue procedures, s 80.

Victoria OHS Regulations

Chapter 3 Physical Hazards

- Part 3.3 Prevention of falls, ss 43, 44, 45, 46, 47, 48, 49

Building Codes:

- Australian Building Code Board - Temporary Structures
[ABCB Standard - Temporary Structures](#)
- National Construction Code
[National Construction Code | NCC \(abcb.gov.au\)](#)
- Class 9b Buildings, Temporary tiered seating, concourses and embankments [Part I1 Class 9b buildings | NCC \(abcb.gov.au\)](#)

Safe Work Australia Codes of Practice:

- Safe Work Australia, Safe Design of Structures Code of Practice 2018
[Model Code of Practice: Safe design of structures | Safe Work Australia](#)
- Safe Work Australia, Managing the Risk of Falls Code of Practice 2018
[Model Code of Practice: Managing the risk of falls at workplaces \(safeworkaustralia.gov.au\)](#)
- Safe Work Australia, Consultation, Cooperation, Coordination Code of Practice 2023
[Code of Practice - WHS consultation, cooperation and coordination - July 2023 \(safeworkaustralia.gov\)](#)

Worksafe Victoria OHS Compliance Codes:

- Workplace Facilities and the working environment 2023
[Compliance code: Workplace facilities and the working environment \(worksafe.vic.gov.au\)](#)
- Hazardous Manual Handling 2019
[Compliance-code-hazardous-manual-handling-2019-12.pdf \(worksafe.vic.gov.au\)](#)
- First Aid in the Workplace 2021
[First aid in the workplace compliance code \(worksafe.vic.gov.au\)](#)
- Prevention of Falls in General Construction 2019
[Compliance-code-prevention-falls-general-construction-2019-12.pdf \(worksafe.vic.gov.au\)](#)

Australian and New Zealand Standards:

AS/NZS 1576:2019 Scaffolding Part 1, General requirements

AS/NZS 4576-2020 Guidelines for scaffolding

AS/NZS 2293.1:2018 Emergency lighting and exit signs for buildings, Part 1: System design, installation and operation

AS/NZS 1170.2:2021 Structural design actions, Part 2: Wind actions

AS/NZS 1170.1:2002 Structural design actions, Part 1: Permanent, imposed and other actions

AS 1530.1: Methods for fire tests on building materials, components and structures, Part 1: Combustibility test for materials (ISO 1182:2020, NEQ)

AS 3600.2018: Concrete structures

AS 1657:2018 Fixed platforms, walkways, stairways and ladders - Design, construction and installation

AS/NZS 1664.2:2020 Aluminium structures, Part 2: Allowable stress design

AS 2444 2001: Portable fire extinguishers and fire blankets - Selection and location

AS/NZS 2890.6: Parking facilities, Part 6: Off-street parking for people with disabilities

AS 1428.5:2021: Design for access and mobility, Part 5: Communication for people who are deaf or hearing impaired

Guidelines

- Identification of safe best practice in the construction and deconstruction of temporary demount-able structures
[Identification of safety good practice in the construction and deconstruction of temporary demountable structures](#)
- The Purple Guide to Health, Safety and Welfare at Music and Other Events has been drawn up by the Events Industry Forum in consultation with the UK events industry, including

representatives from regional and national Government.

<http://www.thepurpleguide.co.uk/>

- For more UK based information visit the following website:

[Event safety - Temporary demountable structures](#)

Institution of Structural Engineers. Temporary demountable structures. Guidance on design, procurement and use (3rd edition). UK, 2007

[Temporary demountable structures: Guidance on procurement, design and use \(Fourth edition\) - The Institution of Structural Engineers \(istructe.org\)](#)

ANSI E1.21-2013

Entertainment Technology – Temporary Structures Used for Technical Production of Outdoor Entertainment Events – E1.21 establishes a minimum level of design and performance parameters for the design, manufacturing, use and maintenance of temporary ground supported structures used in the production of outdoor entertainment events. The purpose of this guidance is to ensure the structural reliability and safety of these structures and does not address fire safety and safe egress issues.

[ANSI E1.21 - 2020 \(nutheatrestock.org\)](#)

[WorkSafe Victoria - Search Search Results: Guidelines OHS](#)

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Version 2 note: Version 1 of the LPA Safety Guidelines were written when the Model WHS was believed to be rolled out in all Australian states and territories. This did not occur, and Victoria maintains its OHS Act and Regulations. The key differences include the use of the terms ‘Employers’ (as opposed to PCBU) and ‘employees’ (as opposed to workers). This version of the Guidelines has been modified to include this difference.