



City of Perth

Temporary Structures

GUIDELINES



Acknowledgement

We acknowledge the Whadjuk Nyoongar people, Traditional Owners of the lands and waters where City of Perth is today and pay our respects to Elders past and present.



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Certification

Certification ensure that the temporary structure has been designed, inspected or installed complies with the relevant Australian Standards or reference documents and is fit for purpose.

Certification should be provided by a competent person using their company letterhead with the following information:

1. Indicate if the certificate is relevant to a design, inspection or installation
2. Date of certificate issue
3. Date of inspection or Date of installation
4. Address of the site
5. Description of work
6. Referencing the relevant current Australia Standards (AS) or documents the assessment has been based on
7. Listing of drawings or plans forming part the certification;
8. Indicating design criteria and limitations
9. Declaration from the competent person that the temporary structures meets the requirements under the BCA, reference AS or documents and is fit for purpose;
10. Signature of competent person;
11. Name of competent person;
12. Qualification of competent person;
13. Registration or license of competent person.

For installation certificate, the installer is required to be appropriately licensed by WorksafeWA. E.g. High Risk Work license

Note that the following minimum professional indemnity insurance should be available and a copy of the certificate of currency is to be provided upon request:

- \$1M for any one claim; and
- \$2M in aggregate during any one period of insurance.

Design Requirements

This guideline is based on the combination requirements specific to City of Perth, the partial adoption of the Temporary Structures Standards, 2015 from the Australian Building Code Board (ABCB) and the National Construction Code (NCC) 2019, Volume 1, amendment 1.

Unless agreed, the requirements as set out in this guideline are minimum benchmark for an event application to be supported.

Event organisers, equipment hires companies, contractors and competent person are to apply due care and consideration in ensuring that temporary structures are generally in accordance with this guideline and any other legislation that is not administer by the City.

Sufficient documentation is to be in place to ensure compliance and should there be any variation, the City should be consulted prior to proceeding.

Structural Provisions – General design consideration

Importance Levels of Temporary Structures

- Temporary structure designed to contain no more than 300 people – 2
- Temporary structures designed to contain more than 300 people – 3

Note that for major events, the City may require all temporary structures to be designed to achieve an importance of level of 3.

Design Events for Safety:

- Importance level of 2:
1:500 Probability of exceedance for Wind
- Importance level of 3:
1:1000 Probability of exceedance for Wind

Fire Safety Provisions

Fire hazard properties:

Roof and/or wall coverings are to be non-combustible or is to achieve the minimum requirements as setout in the table below.

Location	Flammability Index	Spread-of-Flame Index	Smoke-Developed Index
For roof and/or wall coverings:			
(a) Within 4m of the base of the temporary structure and for air-supported temporary structures (without other supporting framework)	6	9	8
(b) In very other case	25	9	8

Flammability Index – as determined by AS 1530.2

Spread-of-Flame Index – as determined by AS/NZS 1530.3

Smoke-Developed Index – as determined by AS/NZS 1530.3

Separation between Structures:

A temporary structure must be separated from another temporary structure or an existing permanent building in accordance with the table below.

	Separation distances between a temporary structure and another temporary structure or an existing permanent building
Temporary structure with a floor area of not more than 750m ²	1.5m
Temporary structure with a floor area more than 750m ² but not more than 3000m ²	3m
Temporary structure with a floor area than 3000m ²	6m

*Note that multiple temporary structures may be combined to make one larger temporary structure provided the combined total floor area is used to determine the separation requirements.

Where separation required above is not provided, firefighting provisions is to be provided. (see below on Fire Fighting Equipment)

Combustible materials placed/stored beneath tiered structures and stages:

The area beneath tiered seating, viewing structures, elevated platforms and stages must not be used for storage of combustible materials.



Fire Fighting Equipment

Access to fire hydrant or providing water for firefighting:

For temporary structure with a floor area of more than 750m² but not more than 3,000m², it shall be positioned so that it is not more than 90m from a fire hydrant or water storage with connections for firefighting in accordance with the requirements of AS2419.1 and containing not less than 10,000 litres of water is available.

Where the floor area of the temporary structure is more than 3,000m², it must be located so that any part of the temporary structure is not more than:

- 90m from one fire hydrant and 120m from a second fire hydrant; or
- 90m from water storage with connections for firefighting in accordance with the requirements of AS 2419.1 and containing not less than 36,000 litres of water.

Should the above is not available, a letter of support from DFES should be in place.

Portable fire extinguishers:

Portable fire extinguishers shall be provided as follows:

- 1x 4.5kg AB(E) rated dry chemical powder extinguisher adjacent to any generator or switchboard
- 1x 4.5kg AB(E) rated dry chemical powder extinguisher located adjacent to any cooking area
- 1x 4.5kg AB(E) rated dry chemical powder or foam type located adjacent to any flammable liquid or gas container
- 1x 4.5kg AB(E) rated dry chemical powder for every 100m² of floor area of the temporary structure. Where more than one is required, they are to be distributed evenly and be located within 5m of an exit point.

Egress Provisions

Number of exits required

Enclosed tents, marquees or similar - The number of exits for enclosed marquee shall be as per follows:

Persons accommodated	Number of exits required
1 - 50	1
51 - 200	2
201 - 400	3
401 - 600	4
601 - 1000	5
Over 1000	5 plus one additional point of egress of each additional 450 persons or part thereof

*Note that exits are to be evenly distributed around the perimeter of the structure

Where a tent, marquee or similar temporary structure has more than one storey, every storey above the ground is to have a stairway or ramp serving as an exit and not less than 2 stairways or ramps if it accommodates more than 50 persons (see above table).

Stages or elevated platforms - Must have a minimum of 2 exits.

Tiered seating or viewing structure or similar -

- Every tiered or viewing structure must have a minimum of 2 exits; and
- For a tiered seating or viewing structure containing more than one tier of seating, every tier must have not less than 2 aisles or ramps each leading to an exit.

Dimensions for exits and paths of travel to exits

Enclosed tents, marquees or similar temporary structures - an exit or path of travel to an exit must be determined in accordance with the table below and have an unobstructed height throughout of not less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980mm.

Where tents, marquee or similar temporary structure has more than one storey, an exit or path of travel to an exit must be determined in accordance with the table below and have an unobstructed height throughout of not less than 2m.

Tiered seating or viewing structures or similar – The dimensions of exits shall be in accordance with the table below.

Persons accommodated	Min. aggregate width of exits (mm)
1 – 100	1000
101 – 200	1000 plus 250mm for each 25 persons (or part) in excess of 100 persons
201 - 2000	2000 plus 500mm for every 60 persons (or part) in excess of 200 persons
> 2000	17m plus a width (in metres) equal to the number in excess of 2000 divided by 600

*Required widths may be reduced by 200mm at doorway but where it is servicing as wheelchair accessible doorway, a minimum of 850mm clear door width is to be maintained.

Stages or elevated platforms - An exit or path of travel to an exit must have:

- An unobstructed height throughout of not less than 2m, except the unobstructed height of a doorway may be reduced to not less than 1980mm; and
- An unobstructed width of not less than 1m, except the width may be reduced by 200mm at doorway unless it is servicing as wheelchair accessible doorway, a minimum of 850mm clear door width is to be maintained.

Exit travel distances

Enclosed tents, marquees or similar – The maximum travel distance to an exit must be not more than 40m where only one exit is provided and 60m where more than one exit is provided.

Stages or elevated platforms – The maximum travel distance to an exit must not be more than 40m.

Tiered seating or viewing structures or similar - The maximum travel distance to an exit from a tiered seating or viewing structure or similar must be not more than 60m.

Exits doors and curtains across points of egress

All exit doors in a temporary structure must open outwards.

Where a flap or curtain is used to cover an exit, it must be designed so that when it is secured, it will not obstruct or impede egress.

Emergency Lighting and Exit Signs

Emergency lighting

Where an enclosed temporary structure is having a floor area more than 500m², an emergency lighting system must be installed unless a minimum illumination level of 0.2 lux is available.

Design and operation of emergency lighting

An emergency lighting system must activate upon failure of the power supply to the normal lighting in the temporary structure and use light fittings that –

- Comply with the requirements of AS/NZS 2293.1; or
- Provide a minimum illumination of 0.2 lux at floor level for
 1. 30 mins for a structure designed to accommodate not more than 1000 persons; and
 2. 1 hour for a structure designed to accommodate more than 1000 persons

Exit signs

Exit signs must be provided for an enclosed temporary structure.

Directional exit signs

If an exit from a stage or seating structure is not readily apparent to persons occupying the structure, directional signage must be installed in appropriate positions in corridors, lobbies, aisles, crossovers or the like, indicating the direction of the exit.

Design and operation of exit signs

An exit sign must:

- Be clearly visible at all times when the structure is occupied and be either –
 1. Photoluminescent exit signs comply with Specification E4.8 of NCC Volume One; or
 2. Electrically illuminated exit signs complying with AS 2293.1; and
- Be placed over any door, flaps or openings leading to an exit from the structure; and
- Be positioned between 2m and 2.5m above the floor; and
- Be illuminated whenever the public are present within the structure, including when the main lighting in the structure is dimmed or extinguished.



Access and Sanitary Facilities

Safe Movement and Access

Pedestrian ramps

A ramp serving an entrance or exit must have a gradient not steeper than 1:14, and be provided with a suitable non-slip surface.

Ramps must be provided with landings at the top and bottom of the ramps and at intervals not more than 9m for a 1:14 ramp or 15m for a 1:20 ramp.

Where a landing is required to be provided, the follow must be provided:

- Min. 1000mm x 1200mm long where it does not involve a change-in-direction; or
- Min. 1500mm x 1500mm long where there is a 90deg change in direction;
- Min. 1540mm x 2070mm long where there is a 90deg to 180deg change in direction.

Stairway construction

A stairway must have:

Not more than 18 and not less than 2 risers in each flight; and

Going (G) and riser (R) and slope relationship (2R+G) in accordance with the below table;

Goings and risers that are constant throughout one flight, except as permitted; and

Risers which do not have any openings that would allow a 125mm sphere to pass through between treads; and

Treads of solid construction (not mesh or other perforated material) if the stairway is more than 10m high or connects more than 3 storeys; and

Treads which have a luminance contrast non-slip finished or a non-skid strip near the edge of the nosings; and

Landings may be used to limit the number of risers in each flight and must be not less than 750mm long, and where it involves a change-in-direction, the length is measured 500mm from the inside edge of the landing.

*Note that a flight means that part of a stairway that has a continuous series of risers not interrupted by a landing or floor.

Where a stairway discharges to a sloping public walkway, road or similar:

- The riser (R) may be reduced to account for the slope of the walkway or road; and
- The quality (2R+G) may vary at that location.

The dimensions of goings (G) and risers (R) are considered constant if the variation between:

- Adjacent risers, or between adjacent goings, is no greater than 5mm; and
- The largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10mm.

Riser (R)	Max. 180mm Min. 115mm
Going (G)	Max. 355mm Min. 280mm
Slope Relationship (2R+G)	Max. 700mm Min. 550mm

If required to be accessible, stairway must comply with AS 1428.1.

Barriers to prevent falls

A continuous barrier to prevent falls must be provided along the side of:

- A roof to which general access is provided; and
- A stairway or ramps; and
- A floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and
- Along the side of any delineated path of access to a temporary structure.

If the trafficable surface is 1m or more above the surface beneath.

The requirements above do not apply to:

- The perimeter of a stage, rigging loft, or the like; or
- Fixed platforms, walkways, stairways and ladders associated to plant room, machinery rooms and the like where they will comply with AS 1657

Barrier construction

The height of a barrier must be in accordance with the following:

- The height must be not less than 865mm above the nosing line of the stair treads or the floor of a ramp with a gradient not less than 1:20.
- The height must be not less than –
 1. 1m above the floor of any access path, balcony, landing or the like where the path of travel has a gradient less than 1:20; or
 2. 865mm above the floor of a landing to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed a length of 500mm.
- The height of a barrier may be reduced to 700mm above the floor in situation where it would interfere with sightlines if a horizontal projection is provided which extends not less than 1m outwards from the top of the barrier.

A transition zone may be incorporated where the barrier height changes from 865mm on the stair flight or ramp to 1m at the landing.

Openings in a barrier must be constructed so that they do not permit a 125mm sphere to pass through it and for stairs, the opening is measured above the nosing line of the stair treads.

A barrier must be designed to take loading forces in accordance with AS/NZS 1170.1

For floors, more than 4m above the surface beneath, any horizontal elements within the barrier between 150mm and 760mm above the floor must not facilitate climbing.

A wire barrier if proposed will be subject to approval from the City and demonstrating compliance with D2.16 of the NCC.

A glass barrier must comply with AS 1288.

Handrails

Handrails must be:

- Located along at least one side of ramps and stair flights; and
- Located along each side if total width of the stairway or ramp is 2m or more; and
- Fixed at a height of not less than 865mm measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and

- Continuous between stair flight landings and have no obstructions on or above them that will tend to break a handhold

If required to be accessible, handrails must be provided to each side of the ramp and stair in accordance with AS 1428.1.

Tiered seating structures, concourses and embankments

The design requirement for tiered seating structures, concourses and embankments must comply with either H1.4 of the NCC Volume One or the requirements below:

- The maximum slope must not exceed 30 degrees when measured from the horizontal plane.
- Aisles and cross-overs must be evenly spaced throughout the structure and have –
 1. A minimum width of 1m; and
 2. The aggregate of aisle widths leading to an exit must be not less than the required width of that point of egress; and
 3. No one aisle may service more than –
 - a. 120 patrons where individual seatings with backs is provided; or
 - b. 200 patrons in any other case
- Transverse aisles or cross-overs must be provided at a horizontal distance of not more than 10m between any row of seats.
- When applying the barrier requirements, the height of a plat barrier that directly abuts seatings (i.e. with no aisle between the seat and the barrier) must be measured from the plat or seat base whichever is higher.
- All individual moveable seats must be –
 1. Fixed in groups of not less than four (4); and
 2. Not used in stepped or ramped seating areas.
- The gradient of the floor surface must be not steeper than 1 in 8, or the floor must be stepped so that –
 1. The height of each step in the stepped floor is not more than 600mm; and
 2. The height of any opening in such a step would not allow a 125mm sphere to pass through; and

3. If an aisle divides the stepped floor and the difference in level between any 2 consecutive steps –
 - a. Is more than 230mm but not more than 400mm – intermediate step with a step riser of not than 180mm must be provided (See Figure 1); and
 - b. Is more than 400mm – equally spaced intermediate step riser of not more than 180mm must be provided in the aisle (See Figure 2); and
 - c. The going of intermediate steps must be not less than 280mm and such as to provide as nearly as practicable equal treads throughout the length of the aisle.

Figure 1

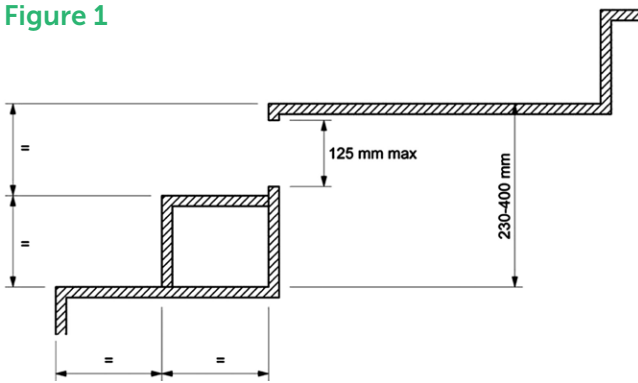
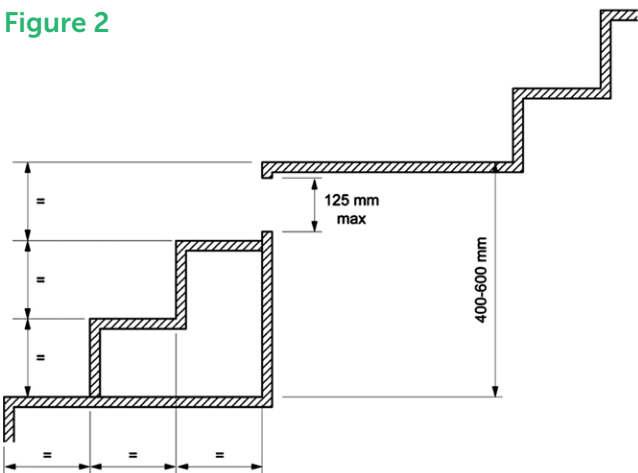


Figure 2



Access for People with a Disability

It is a requirement under the WA Disability Services Act 1993 (amended 2004) for local government authorities develop and implement a Disability Access and Inclusion Plan (DAIP) that

outlines the ways in which the local government will ensure people with disability have equal access to its buildings, facilities and services. The Act requires local governments to take all practical measures to implement their plan. A copy of the City's DAIP is available in the below link: perth.wa.gov.au/live-and-work/community-services-and-facilities/access-and-inclusion

Within the DAIP, seven (7) outcomes have been identified to reduce and eliminate barriers affecting equity of access and all who live, work, visit or do business in the City. The DAIP Implementation Plan set-out specific target on how the outcomes can be achieved. To assist event organisers to demonstrate compliance with the DAIP, the City has developed a checklist the facilitate the assessment and this can be provided on request.

In addition to the above, the relevant requirements under the NCC will be adopted in ensuring minimum accessible features are allowed for temporary structures.

In satisfying the requirements below does not mean that the event complies with the Disability Discrimination Act 1992 (DDA). The event including all temporary structures would still be subject to the general DDA provisions that make it unlawful to discriminate against a person with a disability.

General Access Requirements

Access to temporary structures – An accessway through the main principle pedestrian entrance must be provided to a temporary structure:

- From the main points of a pedestrian entry at the allotment boundary; and
- From another temporary structure connected by a pedestrian link; and
- From any accessible carparking space within allotment.

Enclosed tents, marquees or similar – To and within all areas normally used by the occupants

Stages or elevated platforms – To and within all areas normally used by the occupants

Tiered seatings or viewing structures or similar – To and within all areas normally used by the occupants except that access need not be provided to tiers seatings that do not contain wheelchair seating

spaces. The number and grouping of wheelchair seating spaces are as follows:

Number of fixed seats in a room or space	Number of wheelchair seating spaces	Grouping and location
Up to 150	3 spaces	1 single space; and 1 group of 2 spaces
151 to 800	3 spaces; plus 1 additional space for each additional 50 seats or part thereof in excess of 150 seats.	Not less than 1 single group of 2 spaces; and not more than 5 spaces in any other group.
801 to 10,000	16 spaces; plus 1 additional space for each additional 100 seats of part thereof in excess of 800 seats	Not less than 2 single spaces; and not less than 2 groups of 2 spaces; and not more than 5 spaces in any other group; and the location of spaces is to be representative of the range of seating provided.

Exemptions – The following areas not required to be accessible:

- An area where access would be inappropriate because of the particular purpose for which the area is used
- An area that would pose a health or safety risk for people with a disability
- Any path of travel providing access only to an area exempted above.

Signage – The following areas are required to be provided with signage in accordance with AS 1428.1 and AS 1428.4.2:

- Sanitary facilities
- Area or room provided with a hearing augmentation system identifying
 1. The type of hearing augmentation; and
 2. The area covered within the room; and
 3. If receivers are being used and where the receivers can be obtained
- Where directional signs are provided, they are to incorporate international symbol of access. E.g.

directional signs for sanitary facilities, alternative pedestrian entrances and around event space
 Hearing augmentation – A hearing augmentation system is recommended to be provided where an inbuilt amplification system, other than one used only for emergency warning is installed.

- Within an enclosed temporary structure, hearing augmentation must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system.
- Where a system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than:

Persons accommodated	Numbers of receivers required
Up to 500	1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater.
501 - 1000	20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons.
1001 - 2000	35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons
> 2000	55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons

- Any screen or scoreboard associated with a class 9b building and capable of displaying public announcements must be capable of supplementing any public-address system, other than public address system used for emergency warning purposes only.

Tactile Indicators – Unless exempted for access, tactile indicators are recommended to be provided to warn people who have a vision impairment that they are approaching –

- A stairway; and
- A ramp other than a step ramp or kerb ramp; and
- In the absence of a suitable barrier:
 1. An overhead obstruction less than 2m above floor level, other than a doorway; and
 2. An accessway meeting a vehicular way adjacent to any pedestrian entrance to the temporary structure,
- Tactile ground surface indicators required above must comply with sections 1 and 2 of AS/NZS 1428.4.1

Sanitary Facilities

Sanitary facilities must be provided in accordance with the following –

- Where the event is held mainly within the temporary structure, the number of sanitary facilities must be determined based on the accommodation numbers and in accordance with the table below:

	CLOSET PANS		URINALS		WASHBASINS	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Male Facilities	1 - 100	1	1 - 50	1	1 - 50	1
	101 - 300	2	51 - 100	2	51 - 200	2
	>300	Add 1 per 200	101 - 150	3	>200	Add 1 per 200
			151 - 200	4		
			201 - 250			
Female Facilities	1 - 25	1	N/A	N/A	1 - 50	1
	26 - 50	2			51 - 150	2
	51 - 100	3			>150	Add 1 per 200
	101 - 150	4				
	151 - 200	5				
	201 - 250	6				
	>250	Add 1 per 100				

*Note: sanitary facilities need not be provided for a temporary structure accommodating not more than 20 people.

- Where the event is not held mainly within the temporary structure, the number of sanitary facilities must be determined based on the number of people attending the event where the temporary structure (s) will be erected and in use, the number of sanitary facilities must be provided as follows:
 - One closet fixture for every 200 female patrons or part thereof.
 - One closet fixture or urinal for every 200 male patrons or part thereof, at least 30% of which must be in the form of closet fixture.
 - One washbasin for every 200 patrons or part thereof.
- A reduction factors may be applied based on the duration of the meeting:
 - More than 4 hours – 100%
 - Less than 4 hours – 75%
 - Less than 2 hours – 50%
- Sanitary facilities must be adequately screened from view

Accessible Unisex Sanitary Facilities

- Where sanitary facilities are provided, at least 1 accessible unisex sanitary facility must be provided and more than 1 bank of sanitary facilities are provided, not less than 50% of those banks
- An accessible unisex sanitary facility must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products.
- The circulation spaces, fixtures and fittings of all accessible sanitary facilities provided must comply with the requirements of AS 1428.1.
- An accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and
- Where two or more of each type of accessible unisex sanitary facilities, the number of left and right-handed mirror image facilities must be provided as evenly as possible.



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formats and languages upon request.