Mobile amusement devices

Checklist for school fete/event organisers

Developed in consultation with Workplace Health and Safety Queensland

Mobile amusement devices are a major drawcard for many special events such as open days, fetes, festivals and fundraisers. However, these devices can be hazardous unless properly managed.

Persons conducting a business or undertaking (including **event organisers, owners and persons in control of amusement devices**) have duties under the *Work Health and Safety Act 2011* (Qld) to ensure health and safety so far as is reasonably practicable. The primary duties with regard to amusement device operation sit with the device operator and specific provisions are in the Work Health and Safety Regulation 2011. **Event organisers (school/P&C**) are responsible for providing information about the site, engaging a competent operator and ensuring a safe event. The Amusement Device Code of Practice 2023 provides practical guide on how to manage health and safety risks associated with an amusement device at a workplace.

Engaging a competent operator

The following checklist has been prepared to assist event organisers to select and monitor amusement device operators. Event organisers are to discuss this checklist with the owner/operator of a mobile amusement device during the planning phase of the event. Ensure this is done prior to engaging the operator. A competent amusement device owner/operator is to be aware of the following issues and address them appropriately.

If you have any particular concerns, discuss them with an inspector from Workplace Health and Safety Queensland (WHSQ). Ensure you make contact well before your event (preferably at least 3 weeks) - contact email: whsq.aaa@oir.qld.gov.au

➔Step 1: Planning stages – finding a competent operator

A competent operator must be able to provide:

(a) Engineer's report – annual and major inspections

In Queensland, it is a requirement for registrable amusement devices to have both an annual **and** major inspection carried out by a competent person (e.g. professional engineer).

- **Annual inspections** must be carried out every **12 months**.
- Intervals for **major inspections** are within **every 10 years**, unless otherwise specified by the manufacturer of the device or a competent person who previously inspected the device.

An annual inspection is less comprehensive than a major inspection. A major inspection involves a thorough examination of all critical components of the device, including those that are normally hidden or inaccessible during periodic and annual inspections.

The engineer's report is a comprehensive inspection and assessment of the device. The engineer inspects the device and peruses the periodic inspections, tests, maintenance, repairs and records conducted during the previous 12 months by all parties to minimise risk and ensure continued safe use.

The engineer's report is to include the engineer's name, contact details, date and signature, competencies of the engineer including that the engineer is a 'Registered Professional Engineer Queensland' (RPEQ). You can check if the engineer is a RPEQ engineer with current registration by searching the Professional Engineers of Queensland register.

Check each device has been inspected by a professional engineer within the past 12 months.

Obtain, view and take a copy of the **most recent** engineer's inspection report for each device from the person with management or control of the amusement device:

- The major inspection can be used to demonstrate compliance with the annual inspection requirement for that year. In those scenarios, the engineer's major inspection certificate should clearly state it covers both the major and annual inspection for the device.

1. Details about the most recent **annual inspection** of the device before the device is operated at the event – WHS Regulation 242(5)
    - conducted within the past **12 months** and include a statement noting when the next engineer's inspection is due.
    - The operator is to ensure an 'in-date' report is available on the day of your event (see step 4). For example, if the report has not been conducted when planning is underway ensure you have it prior to confirmation of booking.
    - A list of items requiring attention may be included; this list may include timeframes for rectifying these items or even state if the device can be used prior to these items being managed or rectified.
2. The engineer's **major inspection certificate and associated report** for the device. Seek confirmation of the manufacture date of the device from the ride owner and, if the device is more than 10 years old, the major inspection period for the device.
    - If you need further advice or have any particular concerns regarding the major inspection requirement, contact WHSQ.
    - The engineer's report is not to be confused with the 'Non-Destructive Testing Report' (NDT) that is a report of testing completed to check the structural integrity of certain critical components.

For jumping castles and inflatable devices:

- Small inflatables – where any rider accessed platform is less than three metres high – **do not** require a professional engineer for the inspection. The inspection can be done by a competent person*
- Medium inflatables – where patrons can access any platform between three and nine metres - **do not** require a professional engineer for the inspection. The inspection can be done by a competent person.
- Large inflatables – where patrons can access any platform over nine metres - **require** an annual **and major** inspection by a professional engineer.

*competent person is defined by the WHS Regulation 2011 relevant to the task.

(b) Registration information - plant registration and design registration

The majority of amusement devices require registration as an item of plant and *design* registration, with the exception of some inflatable and coin-operated amusement devices. The devices are to be registered for use with WHSQ or another WHS jurisdiction as 'Registrable Plant'.

- If the device originates from another jurisdiction that does not require plant registration (e.g. Victoria) or design registration, the device still needs to have both plant and design registration before it is operated in Queensland.
- In Queensland, plant registration is valid up to 31 January each year from the day it is granted. Once plant registration has been granted or renewed by WHSQ, a registration certificate is issued. The owner/operator is to be able to produce evidence of current plant registration.
- The design registration number (where required) should be marked on the amusement device and is also noted in the log-book. Check the 'device logbook' – where the 'class' of device is Class 2 or higher the design registration number should also be noted in the logbook.

Inflatables

- Yearly plant registration and design registration – only required where patrons can access a platform of three metres or higher.

The device is to have current and valid public liability insurance. This is not a workplace health and safety requirement, but it is in the interests of the owner and school/event organiser to ensure this is in place.

➔ Step 2: Advising WHSQ – once you have selected/identified the device(s)/operator(s)

Workplace Health and Safety Queensland (WHSQ) is monitoring amusement devices around Queensland. School events provide another opportunity to liaise with ride operators and also support schools by providing safety advice on amusement devices and general workplace health and safety matters, checking registration details, auditing ride logbooks, conducting a site set-up audit of the devices at your event.

Ensure you make contact well before your event (preferably at least 3 weeks before the event) and provide WHSQ with a list of the amusement devices that will be at the event and the details listed below. Advising WHSQ early provides WHSQ inspectors with an opportunity to research and consider a visit to view the amusement device on location. The email address to contact and notify WHSQ of your event is: whsq.aaa@oir.qld.gov.au.

Please include the name of the event and location in the subject line of the email. Also include the following details in the body of your email:

- proposed date of event, including bump-in and bump-out dates of the device
- location of event (address details)
- planned amusement device operator details, including the operator's ABN
- **planned amusement devices to be hired, including their plant registration and design registration details**
- name and contact details of event coordinator(s) e.g. school principal / P&C contact / chairperson of organising committee
- any questions you would like to discuss with a local inspector.

You can also contact your Regional senior health and safety consultant who may be able to assist you with the risk assessment process as well as liaise with local WHSQ inspectors.

Checkpoint

- ☐ WHSQ advised of event details.
- ☐ Engineer's inspection report has been sighted and the report is "in-date" (some inflatables have exceptions – see step 1).
- ☐ Engineer's major inspection certificate and report has been sighted (if applicable)
- ☐ Plant and design registration details have been addressed.
- ☐ Departmental, regional health and safety consultant advised – optional.

Sign off from event organising committee

Name: _____ **Role:** _____

Signature: _____ **Date:** _____/_____/_____

School principal name: _____

Signature: _____ **Date:** _____/_____/_____

➔Step 3: Before the event – discussion with the device owner(s) / operator(s)

Before entering an arrangement (hiring or payment) confirm with the device owner/operator how they will minimise risk to workers and others during set up, operation and removal. The following points will guide you:

Site issues – provide the ride operator with information and discuss any issues before the event.

The site should be level and large enough to accommodate the ride safely (including adequate space for the bump-in and bump-out phases). The event organisers must provide the person erecting the ride with the following documentation/information:

- Details about local conditions (e.g. recent disturbance to ground trenches or fill etc.).
- A copy of the site services layout plan (showing any overhead services, underground electricity, gas and water locations etc).
- If the site has an adverse history (e.g. flooding, poor drainage, high winds).
- Event site arrangement plan and traffic management plan with locations of amusement devices and other facilities marked (e.g. first aid, ambulance, toilets, drinking water, police and fire services etc.).
- Emergency procedures developed for the event - assist the operator to incorporate their emergency plan requirements into the overall emergency plan for the event.
- If any amusement devices are set-up or stored on site overnight, discuss and ensure there are security arrangements to prevent unauthorised access to the device.

Site information has been provided to contractor and issues discussed ☐

Gain agreement from the ride operator on the following:

1. Competent operator

The person in control of the amusement device on the day of the event is to be competent to ensure safe use. Factors to consider include employee instruction, supervisory practices to ensure instructions are followed, extent of experience with operating the amusement devices, and how the owner ensures that the competence of the operator is maintained. Operators need to instruct patrons and ensure patrons follow the safety instructions during the period of ride operation.

The amusement device will be controlled by a competent person to ensure health and safety ☐

2. Personnel training

If requested, the person with management or control of the amusement device must give the event organiser details to confirm that each person who will be operating the device at the event has completed proper instruction and training and is competent to operate the device – WHS Regulation 242(5).

Records should be available to the event organiser indicating that the following training has been completed:

- Those involved with the assembly, operation, dismantling and removal of the amusement device on the day of the event have received appropriate training and instruction and have been determined as competent to ensure safe use of the device.
- All staff who will be on site on the day of the event have been trained and determined competent in the designated emergency procedures for the amusement device and periodically practice the procedures.

Training records have been sighted ☐

3. The person erecting the ride is responsible for the following:

- Assessing the suitability of the ground to support the amusement device.
- The site services layout plan must be consulted prior to any on site digging or driving in of stakes etc.
- Providing safe passage and adequate fencing around rides and for the safety of staff and the public.
- Ensuring safe passage is available for emergency vehicles.
- Ensuring services are available e.g. electricity and water.
- If the event organiser provides an electricity supply for the amusement device to use (e.g. power outlet), the electricity supply must be electrically safe. Considerations in making it safe include ensuring:

- the electrical circuit is electrically protected with an appropriately rated device (e.g. fuse or circuit breaker) that is in good working order
- any outlet is appropriate for the environmental conditions where it is installed (e.g. protected from rain if installed outdoors, protected from vehicle and foot traffic)

Site issues have been considered ☐

4. Electrical issues

- All testing and tagging of equipment and testing of RCD (safety switch) has been undertaken by a competent person and is ‘in-date’.
- All power cables will be well secured and protected to avoid slip/trip/fall hazards, water ingress and damage from traffic etc.
- Display lighting and associated cables are to be secured and in good order.
- Festoon lighting is to be secured and located appropriately so that it is not a hazard to riders.
- There is to be sufficient general power outlets (GPOs) to prevent the use of double adaptors.
- All electrical supply equipment will be suitably protected from adverse weather conditions (type one or two RCDs to be used on all outlets).
- Records are available showing that visual inspections of the device electrical components have been undertaken by the device operator each time it is assembled on the site where it is intended to be used.

Electrical issues for the ride have been considered with the ride operator ☐

5. Power supplies including internal combustion generators

- A suitable fire extinguisher will be provided adjacent to the engine.
- Access to hazardous areas of the generator will be restricted.
- Exhaust gas will be vented to an open area.
- Acceptable noise levels are to be maintained.

- Fencing will be provided to restrict access to any power supplies (GPOs or specialised transformers).
- All electrical supply equipment will be suitably protected from adverse weather conditions (type one or two RCDs to be used on all outlets).

Power supply issues have been discussed with the operator and will be appropriate ☐

6. Risk assessments

The amusement device owner should have completed risk assessments to ensure safe operation. The risk assessments for school events (for example) are to consider similar scenarios as those found at fetes or small festivals e.g. interaction between the device and the patrons, the local environment /facility, the music/noise level is not excessive.

- The device owner/operator is to allow the event organiser to view the risk assessment records, if requested.

Risk assessment records have been sighted ☐

7. Assembly, erection and removal

- Public safety must be considered and measures put in place to ensure public safety during assembly, erection and removal of the amusement device. A documented process should be available for the event organiser to view.
- Exclusion perimeters have been established based on the maximum height of any device or any equipment/plant (boom/crane etc.) used during assembly and removal.
- Scaffolding (if used) will be assembled and removed by a person holding a scaffolding high risk work licence.
- Falls from heights during assembly and removal will be assessed and controls implemented.
- Protective padding will be placed over sharp edges.
- Members of the public and school community will not be near the devices during assembly, erection or removal.

Assembly, erection and removal issues have been considered and discussed with the operator ☐

8. Rider restraint/containment

Where a risk of falling or being ejected from an amusement device is possible, even as a result of unexpected or unusual behaviour such as panicking or skylarking, it is to be eliminated or otherwise controlled. There are a number of control methods available to the owner/operator to eliminate or minimise the risk. These include, but are not limited to, the following:

- A totally enclosed carriage or gondola where the access/egress mechanism cannot be accessed by the passenger.
- Providing a restraint device that ensures the passengers remain seated in the intended position for the duration of the ride and where at least one component of the unlocking mechanism cannot be accessed by the passenger(s).
- Where the device passes through an enclosed space, additional measures to allow for remote emergency release must be provided.
- Screening procedures to ensure that only passengers who can be effectively restrained are permitted to ride.
- An effective procedure is in place to ensure the restraint of all passengers is checked prior to commencing the ride.

- The risk of injury to the rider from their limbs etc. contacting other parts of the device or structures while the device is in motion, must be minimised. This is usually achieved by containment of the rider and/or adequate separation distances.

Note: Where concerns about rider restraint are identified the local WHSQ office are to be notified. The provision, inspection, maintenance and use of rider restraints are the responsibility of the designer, manufacturer, owner/operator and/or the competent persons associated with the ride.

Rider restraint has been discussed with the ride operator and will be appropriate ☐

9. Distance from electrical lines

The minimum separation distance that any part of the amusement device should be located away from overhead power lines is determined in accordance with the Electrical Safety Code of Practice 2020 'Working near overhead and underground electric lines'. Where the following guidelines cannot be achieved contact Energex on 13 12 53 or Ergon Energy on 13 74 66 for advice:

- Ensure that all parts of the amusement device are more than six metres away from overhead power lines.
- Rides that are higher than their base dimensions (such as ferris wheels) are to be located six metres plus the height of the ride away from the power lines and poles or towers.

Distance from electrical lines is sufficient ☐

10. Crowd control

- The operator is to assemble/dismantle amusement devices and equipment when no school/community members or members of the public are in the immediate vicinity.
- Ensure an adequate perimeter fence has been erected around the device.
- The perimeter fence is placed so the public cannot reach any moving parts of the devices (adequate clearance – e.g. two metres – to be allowed).
- Openings in the perimeter fence are supervised and unauthorised entry is prevented.
- Control stations are positioned to prevent interference by the public.
- Control stations are positioned to provide the operator with an unrestricted view of the device in operation and all embarkation and disembarkation stations.
- Signs for the control of passengers (e.g. patron's height, age, or weight restrictions, loading charts etc.) are prominently positioned, clearly legible and of a consistent presentation.

Crowd control is appropriate ☐

11. Emergency procedures

- The organiser is to assist the operator develop an emergency procedure for the site where the ride/s operation impacts on the location.
- An emergency procedure has been developed for fire, explosion, bomb threats, structural collapse, release of hazardous substances etc.
- An emergency procedure has been developed for assisting passengers who may be young, old or have disabilities.
- Emergency equipment is on hand to enable the amusement device to be moved/rotated etc. as necessary to release passengers in the event of a power failure or ride malfunction.
- The designer/manufacturer recommended safety equipment for use in an emergency is readily available.
- The emergency braking system (where required), works effectively.

- Emergency lighting and illuminated exit signs must be installed for rides that run through enclosed (unlit) enclosures, e.g. ghost trains.

Emergency procedures are in place ☐

Checkpoint

☐ Consultation with the device operator has occurred before the event.

☐ The event organiser and the amusement device owner and/or operator agree to these important safety elements.

☐ Complete 'confirmation sheet' page 10 with the amusement device owner/operator.

Land-based inflatable amusement devices

Injuries associated with inflatable devices such as jumping castles are usually minor, however they are frequent. Serious injury can result from patrons falling from height; entrapment within the device and when patrons contact with each other on the device. Fatalities have occurred when the device has become airborne due to ineffective anchorage in windy conditions.

Because of these hazards the following safety information is provided:

- **Training and design:** when hiring a device, ensure the operators are experienced with setting up the equipment, operation, and that the device conforms to relevant standards such as Australian standard (AS 3533.4.1) and European Standard EN14960-1. The operator is to have the manufacturer's safe use instructions available on site and these instructions are to be in English. The device should be checked by the operator for any wear and tear that could cause the device to deflate during operation.
- **Siting/anchorage:** the operator is to have enough ground available to secure the device in accordance with the manufacturer's requirements, and ensure the anchorage system is not a hazard for patrons (e.g. trip hazards, protruding stakes).
    - Sharp objects that could cause the device to deflate during operation are not to be near the inflatable.
    - Check for underground utilities (e.g. electricity, gas lines) before using ground stakes.

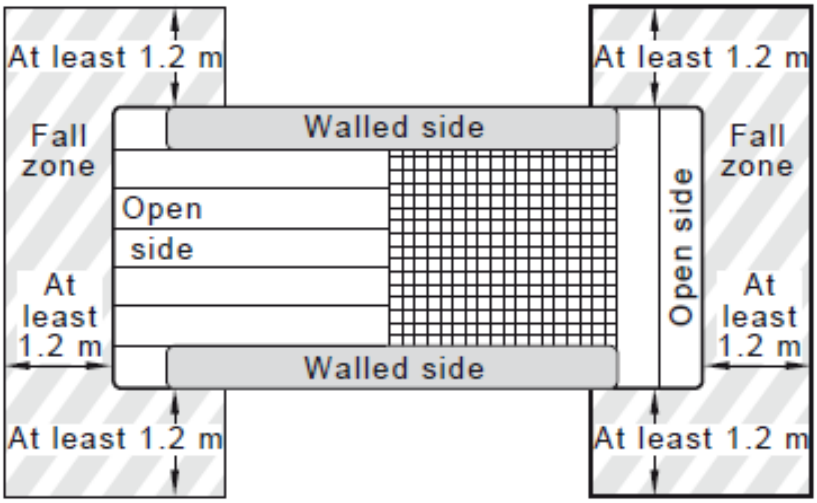
  Where the device is not secured with ground anchor stakes (e.g. if on a paved areas) the anchorage system is to withstand the same forces as if it was secured with ground anchor stakes. Operators often do not secure inflatables adequately on outdoor paved areas. Consider – a ground stake with a securing rope angle of 45^0 to the side of the inflatable device should withstand a force applied to it of around 230kg. It requires a considerable amount of sand bags, water containers or concrete blocks to replicate this:
    - A sand bag generally weighs around 20kg
    - 20 litre drum of water weighs around 20kg
    - A concrete block 500mm x 500mm x 500mm weights around 275kg.
    - The device must not be secured to vehicles.

  Where the inflatable device is not secured with ground stakes, it must be secured in accordance with the manufacturer's instructions or instructions from a RPEQ Engineer.

Alternatively, consider if the inflatable device could be placed indoors where wind loading is not an issue. Indoor inflatables may need to be secured to maintain the shape of the device or prevent the device from moving.

- **Emergency procedures:** some inflatable devices require emergency plans to extract patrons if the device deflates. This plan should be on site when the ride is operating and operators are to be competent in enacting the emergency plan.
- **Wind/weather:** the inflatable device is not to be operated if the wind speed exceeds the design specifications (the manufacture should provide 'wind speed limitations' in the manual for the device). A means of measuring wind speed should be available on site. Do not use the inflatable when it is raining, if the ride surfaces are wet or if the ride surfaces get too hot.
- **Loading of patrons:** patrons colliding with each other is the most common cause of injury. Ensure:
    - Rules are in place and enforced so patrons of similar size are on the ride at any one time.
    - Activities that cause excessive contact are monitored and minimised.
    - No one is to use the device if it is not fully inflated.
- **Falls from height:** falling and/or jumping from the inflatable device to the ground is another cause of injury. This can occur if the device has open sides, sides that are low enough for patrons to climb on and/or during rider access (getting on the device) and egress (exiting the device). The inflatable is to have appropriate containment of riders that prevent the rider from falling; rules are to be in place and enforced for safe access and egress. Fall zones with safety mats are needed where there are wall openings and sides that are low enough for patrons to climb on. Figure 1 shows recommended dimensions of fall zones that provide protection for the patrons.

Figure 1: fall zones.



Checkpoint

- ☐ Consultation with the device operator has occurred before the event.
- ☐ The event organiser and the amusement device owner and/or operator agree to these important safety elements.
- ☐ Complete 'confirmation sheet' page 11 with the amusement device owner/operator.

More information

Amusement Devices Code of Practice 2023

Creating Healthier Workplaces: https://education.qld.gov.au/initiatives-and-strategies/health-and-wellbeing/workplaces

Workplace Health and Safety Queensland: https://www.worksafe.qld.gov.au/
Amusement device regulation: Amusement device regulation | WorkSafe.qld.gov.au

Amusement ride owner/operators duties include:

- managing devices in accordance with general plant requirements and specific amusement ride requirements under the Work Health and Safety Regulation 2011 (Qld).
- ensuring the amusement device is to be designed, operated, inspected and maintained in accordance with the AS 3533 series of Australian Standards for Amusement Devices.
- managing noise emissions in accordance with Work Health and Safety Regulation 2011 and AS/NZS 1269.1 Occupational Noise Management - measurement and assessment of noise emission and exposure.

Confirmation sheet

Owner/operator	
Company name:	
Name of owner/operator	
Signature:	
Date:	
If you are satisfied that all of the issues outlined in this checklist have been addressed, you may choose to engage that operator and proceed.	
Event organiser	
Name of event organiser:	
Signature of event organiser:	
Date:	
Location details	
Event address:	

Workplace name (e.g. school name):	
Name of the principal/manager:	
Signature of principal/manager:	
Date of event:	

➔ Step 4: On the day of the event

Use the following as a reminder of agreed safety practices. Refer to Step 3 for detailed descriptions.

Safety requirement – detailed in pre-event negotiations with device owner/operator	
NOTE: Do not proceed with the device – contact Workplace Health and Safety Queensland if: a) Engineer's report – if the amusement device engineer's report cannot be produced or is not 'in date'; or b) Major inspection – if the amusement device is due for a major inspection and this has not been carried out; or c) Registration information – if there is no certificate of registrable plant or design registration number	
	
1. The amusement device is being controlled by a competent person to ensure health and safety *(refer to Step 3, parts 1 and 2).* The person in control of the amusement device is competent to ensure safe use. Operators are instructing patrons, and ensuring patrons follow the safety instruction during the period of ride operation.	
2. Training records have been sighted *(refer to Step 3, parts 1 and 2).* Those involved with the assembly, operation, dismantling and removal of the amusement device have received sufficient training and instruction and have been determined competent to ensure safe use of the device.	
3. The person erecting the device is satisfied with site issues and is taking responsibility for safe assembly of the ride (refer to Step 3, part 3). They are providing safe passage and adequate fencing for the safety of staff and the public.	

4. Electrical issues for the ride are consistent with agreed requirements. Note: power cables, lighting, general power outlets, safety switch etc.	
5. Power supply is appropriate and consistent with agreed requirements. A suitable fire extinguisher is adjacent to the engine, access to hazardous areas of the generator is restricted.	
6. Risk assessment and control strategies are implemented.	
7. Assembly erection and removal processes are being followed as previously discussed. Public safety is ensured during assembly, erection, anchoring (where required) and removal of the amusement device. A documented process is available and being followed. Scaffolding (if used) will be assembled and removed by a person holding a scaffolding high risk work licence.	
8. Rider restraint is appropriate *(refer to Step 3 part 8)* Where a risk of falling from an amusement device is possible, even as a result of unexpected or unusual behaviour such as panicking or skylarking, this risk has been eliminated or otherwise controlled.	
9. Distance from electrical lines is sufficient *(refer to Step 3 part 9)* The amusement devices are not erected within the recommended exclusion zones.	
10. Crowd control is appropriate *(refer to Step 3 part 10)*	
11. Emergency procedures are in place *(refer to Step 3 part 11)*	

12 .Other comments:

Operator name: _____ Operator signature: _____

Device(s): _____

Event representative name: _____Signature: _____

Date: _____/_____/_____ Time: _____am/pm