

rmp

Inflatable Structures



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Overview

Inflatables, such as castles, slides, domes etc. can be bought from a number of different manufacturers and suppliers in the UK, both new and second hand. They come in a wide range of sizes and shapes and can be designed for use by adults, children or both. They can also be hired by organisations or members of the public for special events. For the purposes of this article we will be assuming that you will be hiring the equipment and using a company that specialises in this area including the safe operation of the equipment on the day.

Legal

There are a number of circumstances in which an organiser of an event involving inflatables might be held legally liable for any injury or property damage suffered by a participant or a member of the public and so it is important that hirers and event organisers do not divorce themselves from their legal duties.

The main law governing health and safety at work in the UK is the **Health and Safety at Work etc. Act 1974 (HSWA)**. This places general duties on employers, the self-employed and people in control of premises to ensure, so far as is reasonably practicable, the health and safety of their employees and anyone else that maybe harmed by work activities or the workplace, e.g. members of the public.

The Management of Health and Safety at Work Regulations 1999 complement and expand on the general HSWA duties mentioned above, requiring employers and the self-employed, among other things, to carry out risk assessments and have effective arrangements in place for managing health and safety and emergency arrangements.

The Corporate Manslaughter and Corporate Homicide Act 2007 now makes it possible for a corporation to be found guilty of manslaughter and homicide without the need to identify an individual within the organisation to prosecute. The offence of corporate homicide or manslaughter is related to the way in which senior managers organise the activities of the organisation. The Act refers to senior management as the people who:

- Make decisions about how activities are to be managed or organised, and
- Manage or organise the whole or a substantial part of those activities.

Whilst prosecutors will need to establish that the criterion for a gross breach of duty of care has taken place, clearly there is scope for any organisation holding an event to be subject to the Act.

Suppliers and Operators

Robust procedures for appointing suppliers and operators of inflatable structures are critical. Your organisation should have a procurement process in place and this should be used. Remember, you may have a duty towards persons who you have appointed and are on your land. Check currency of memberships of approved bodies, licences, insurance arrangements, and references from previous events where they have provided similar services. Risk assessments and method statements must be provided by the suppliers or operators of the inflatable structures, and you must check to ensure that these are adhered to throughout the provision of their services. This means periodically checking that controls indicated in their risk assessment are implemented and they are working within the scope of their method statements.

The following hazards have been known to occur with inflatable structures and should be considered within the context of the risk assessment:

- Instability and blowing away in windy conditions
- Situations caused by loss of pressure as a result of:
 - failure of the fabric
 - failure or loss of power to the blower
 - disconnection of the blower
 - litter blocking the air intake and/or vents
- Falls from the structure
- Windows tearing or detaching
- Tripping (particularly over anchorages)
- Injury to users caused by boisterous behaviour, overcrowding or not separating larger users from smaller ones
- Access to dangerous (parts of) machinery (e.g. inadequately protected or unguarded blowers).
- Electrical hazards (e.g. shock or burns)
- Inadequate means of escape in case of fire
- Lifting injuries caused by manual handling
- Injury to users caused by wearing inappropriate clothes and shoes
- Suffocation
- Entrapment

Risk assessments and method statements provided by suppliers and operators of inflatable structures should complement those undertaken by the owner or controller / organiser of the event involving the inflatable structure and not be considered in isolation as risks may be presented from within the greater context of: people; activities; equipment; and the environment.

First Aid and Contingencies

First aid: as part of your safety arrangements, you must have appropriate response procedures in place should someone be injured during the use of the inflatable structure, so think about how many first-aiders you will require, how you will contact the emergency services if required, and whether the emergency services have ease of access to the location. Consider these factors as part of your risk assessment and consult the First Aid at Work Regulations 1981 to see if you are subject to any statutory obligations.

Contingencies: above all else, the safety of people using the inflatable structure is of paramount importance. You need to have contingency plans in place, including the identification of circumstances in which you will remove the inflatable from use such as high winds, structural failure, equipment failure, accidents etc.

Key Risk Management Principles

Although the risks presented by inflatable structures will vary according to factors such as size, construction, location, nature of use etc., it is worthwhile to consider some of the generic risk management principles that should be applied in practice. These are summarised below:

Installation

A few basic measures can make all the difference to an event:

- 1 If you are buying an inflatable or renting one for an event, ensure it has been built to the current British Standard (BS EN 14960) and if it has, there will be a label on it saying so. If there is no label you may be taking a risk with the safety of those using it.
- 2 Buyers should ensure they get an invoice stating that the inflatable has been manufactured to this standard.
- 3 The label will tell you when it was made, how many people can use it and what heights they should be.

- 4 After its first year and annually thereafter, the inflatable must be tested by a competent person to make sure it is still safe for use. A new unit should have an 'initial test' carried out at the point of manufacture to confirm it complies with BS EN 14960. Hirers should ask to see proof of this test.
- 5 Every inflatable should have at least 6 anchor points, though bigger ones will need more. The operator manual that should be supplied with the inflatable will tell you how many there should be. If there is no manual you cannot be sure how many tie down points there should be for safe use.
- 6 All the anchor points must be used, preferably with metal ground stakes at least 380mm length and 16mm diameter with a rounded top. Anchor points on the inflatable should have a welded metal
- 7 'O' or 'D' ring fitted to the end. If ground stakes cannot be used then a system of ballast using water or sand barrels or tying down to vehicles that will give at least the same level of protection should be used. Each anchor point should have the equivalent of 163kgs to give this. Beware of tripping hazards if you secure in this way.
- 8 Have a good look at the inflatable when it is blown up. The outer edges of the front step should at least line up with the centre of each of the front uprights. Under no circumstances should the width of the step be less than this. The whole unit should look symmetrical. If it looks misshapen or deformed there may be internal problems which may make bouncing unpredictable.
- 9 If there is an electrical blower with the inflatable this should be tested like any other portable electrical appliance. The tube that connects the blower to the bag should be at least 1.4m in length

In use

Making sure that the inflatable is operated safely is equally important; the majority of injuries come from misuse. There should be constant supervision when the inflatable is blown up and it is strongly recommended that hirers ask for this to be provided as a condition of hire.

In addition, the following points should be considered:

- The structure must be anchored according to the manufacturer's specification and not used in adverse weather conditions outside of its recommended safe use limits.
- When the inflatable is being operated outside, use an anemometer to measure the wind speed at regular intervals. If one of these is not available, the inflatable should not be operated outside. Do not use smartphone weather app to measure wind speed as they do not take localised conditions into account.

- The structure must be under constant supervision and control by the operator's representative or, if left to the insured, by someone who has received full and sufficient training in the working of the structure. Numbers of supervisors will depend on the number of participants.
- Restrict the number of users on the inflatable at the same time to the limit in the manual or on the unit label. Don't exceed the user height limit given in the manual or on the unit label and keep bigger users separated from smaller.
- Numbers and age groups using the structure at any one time should be limited for safety reasons, varying according to the size of the structure.
- Access to the structure must be strictly controlled and spectators must be kept at a safe distance from the structure using a suitable barrier if numbers warrant this.
- Ensure users can get on and off safely and that there is safety matting at the entrance in case of falls or ejections. These mats should not be more than 5cm in depth.
- Users should not wear shoes, should take their glasses off if they can and pockets should be emptied of all sharp or dangerous items.
- Users should not eat or drink whilst playing or bouncing and anyone obviously intoxicated should not be allowed on; they are a danger to themselves as much as to others.
- Don't let things get too rough and don't let users climb or hang onto the walls. Don't let users try to somersault.

Insurance

The public liability cover provided by RMP is a blanket cover catering for the 'usual activities' of the authority. Hiring inflatables is not uncommon to form part of a community activity so strictly speaking this could be deemed to form part of the authority's usual activities.

Notwithstanding this, inflatables do have special risk considerations and it is important that the authority keeps a tight rein of such hirings.

They should also ensure that for each event the appropriate risk management guidelines described above are being undertaken. If there is any doubt about the activity then the authority should seek clarification from RMP.

It is possible for groups other than the authority itself to be covered under the authority's policy, for example Parent Teacher Associations under a council policy, and here no cover should be considered available to such groups unless they have cleared the activity with the authority (and RMP if appropriate).

When hiring an inflatable the requirements for insurance should be made clear at the outset. In some instances, particularly where the hiring company is providing supervision, the hiring company will provide insurance cover; in others the hirer will be responsible. Care must be taken with regard to any clauses in the hiring agreement to ensure that the authority is not being asked to accept any unnecessary or unreasonable liabilities or waiving any rights, e.g. of subrogation. No cover will be provided under the authority's policy for other companies or groups supplying or operating the inflatable.

The authority should obtain evidence of the hiring company's public liability cover and they need to ensure that the limit of indemnity provided therein is acceptable to the authority given the specific circumstances of the event and the structure being provided. This insurance should also contain an 'indemnity to principals' clause to further protect the authority.

Resources

[HSE guidance on safe use of inflatables](#)

[National Association of Inflatable Hirers Information Sheet 49](#)

[PIPA Inflatable Play Inspection](#)

[BS EN 14960:2013 Inflatable play equipment. Safety requirements and test methods](#)

The Event Industry Forum

The Purple Guide to Health, Safety and Welfare at Music and Other Events.

British Standards Institution

PAS 51:2004 Guide to industry best practice for organizing outdoor events.

Further information

For access to further RMP Resources you may find helpful in reducing your organisation's cost of risk, please access the RMP Resources or RMP Articles pages on our website. To join the debate follow us on our LinkedIn page.

Get in touch

For more information, please contact your RMP consultant or account director.

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