

Advice Leaflet 18

Christmas Grottos & Toy Fairs – Fire Safety

Ref FS-PAN018
Rev June 2006
To be reviewed June 2009

West Yorkshire Fire & Rescue Service
Fire Safety Group
Oakroyd Hall
Birkenshaw
West Yorkshire
BD11 2DY

Tel: 01274 682311
Fax: 01274 655888

Without careful planning a Christmas grotto or toy fair could become a serious fire risk due to the confined space and the materials used in its construction.

Almost all premises, including retail outlets come under the Regulatory Reform (Fire Safety) Order 2005, and any proposals to introduce a toy fair or grotto (even temporarily) should have a risk assessment completed and where necessary discussed with the Fire Authority.

GENERAL PRINCIPLES

(a) Means of Escape

(i) There should be at least two ways out of a grotto or other enclosed area. The exits should each have a minimum 800mm clear width and should be sited far enough apart so that if a fire affects one of the exits, the other(s) can still be used. Wider exits may be needed if the floor area involved is more than 50m. A person should not have to travel more than 12m to reach an exit from the grotto.

(ii) All gangways, exit ways and exits, including those in the immediate vicinity of the grotto structure, should be kept clear and unobstructed at all times and available for immediate use.

(iii) Existing fire exit notices in the premises should not be obscured by the structure and additional exit and directional notices should be provided within the structure and externally where necessary.

(iv) Curtains should not be hung across the corridors or gangways. Where they are provided across doorways, they should not conceal fire exit notices, fire alarm sounders or emergency lighting. They should part in the centre, should be easy to draw aside and should not trail on the floor.

(v) When designing the grotto the needs of disabled persons to access and escape from the structure should be fully considered.

(b) Firefighting Equipment

Other than in very large grottos, subject to your risk assessment, it should not be necessary to provide extra fire extinguishers. Where it is necessary to re-position existing equipment, it must be put back in place following removal of the grotto.

Advice Leaflet 18
Christmas Grottos & Toy Fairs – Fire Safety

(c) Fire Alarm System

A test should be carried out to assess whether or not the fire alarm is clearly audible throughout the grotto above the level of any background music, conversation or other noise. Where necessary an additional temporary sounder or other suitable means should be provided. Specific training as to the method of raising the alarm must be demonstrated for persons staffing the grotto.

(d) Notices

Fire exit notices should be provided where necessary and they should be adequately illuminated by the normal and emergency lighting.

(e) Emergency Lighting

- (i) Emergency lighting should be provided in all types of grotto, supplied from a separate source of supply to that of the general lighting.
- (ii) Levels of illumination must be sufficient to enable persons to see their way out without the aid of the general lighting, and also to illuminate all exit notices provided. BS 5266 Emergency Lighting defines the acceptable standard.
- (iii) In the very small grottos it may be considered satisfactory to provide hand torches for the attendants.

(f) Other Fire Precautions

- (i) In a sprinklered building, where a roof is to be incorporated in the construction of the grotto, it must be of the open cell (lattice) type to allow for penetration of water. The open area must be evenly distributed and exceed 70% of the total area. The construction of a grotto should terminate at least 800mm below sprinkler deflector plates, this arrangement should also apply to storage in any storeroom associated with the structure.
- (ii) All temporary or permanent electrical wiring to the structure should be in good condition and adequately protected against mechanical damage. Flexible cables and unenclosed wiring should be installed away from any textile fabrics (see section (h) `Suitable Materials for Construction). Where it is essential for such wiring to pass through fabrics, they should be efficiently protected by insulating rings or similar devices.
- (iii) Each item of temporary electrical equipment should be provided with a readily available means of isolation from the power supply. To reduce the risk of shock and fire, the power supply to any electrical apparatus should be via a residual current device (RCD). Specific and detailed instructions should be provided for grottos and all employees and staff, including temporary staff. All staff should be familiar with these instructions.
- (iv) A competent and responsible person should be in charge during the whole time that the public are present.
- (v) There should be no overcrowding within the structure. Queuing and waiting areas should not obstruct corridors, gangways, exits and stairways.

Advice Leaflet 18
Christmas Grottos & Toy Fairs – Fire Safety

(vi) Packing cases, packing material, litter, etc, should not remain in, or in the vicinity of the structure, but should be removed to a safe storage area.

(vii) Smoking should not be allowed in or in the vicinity of the grotto and conspicuous notices should be provided to that effect.

(viii) Where temporary heating is to be provided for the grotto, this should only be with the specific approval of the Fire Authority and should be securely fixed. LPG (bottled gas) heating is not suitable for grottos.

(ix) Smoke making devices should not be used in grottos.

(g) Definition of Terms

(i) 'Non combustible' material means material deemed to be non-combustible when tested in accordance with the provisions of British Standard 476: Part 4.

(ii) 'Inherently non-flammable' material means material which is non-flammable throughout its thickness, although it has not been submitted to a flame proofing process nor can it be described as 'Non Combustible'.

(iii) 'Durably flameproof' fabric means a fabric which, after being submitted to a washing treatment, remains flameproof, as determined by the method of test prescribed in the relevant British Standard for that fabric used.

(iv) 'A process of impregnation' means a vacuum/pressure process, undertaken by a firm registered under the British Standards Institution's Scheme of Assessed Capability. Products should bear a distinguishing mark to indicate that they have been impregnated and the product should be processed to a standard of 'Class 1' when tested in accordance with the provisions of BS 476: Part 7.

(h) Suitable Materials for Construction

Materials used in the construction and decoration of the structure should have a low surface spread of flame rating (generally Class 1 minimum). There are some locations such as shopping malls where the rating would have to be Class 0). They should also be either:

(i) Non-combustible, eg, board or composite sheet material or substitutes for asbestos sheeting such as Durasteel, 3DF2, Fireline, Masterboard, Supalux, Tacboard, Tacfire, Vicuclad, Plaster and Plasterboard sheet metal and wire mesh, metallic fabric, glass and glass cloth, or other material of the same standard.
OR

(ii) Inherently non-flammable, eg, woven glass cloth and certain rigid materials which, whilst combustible, are in fact non-flammable such as Flameguard Hardboard, Masterboard, Panoflam Chipboard and Vedex Plywood.

OR

(iii) Durably flameproof.

Advice Leaflet 18
Christmas Grottos & Toy Fairs – Fire Safety

OR

(iv) Plastic materials, which have been tested to a suitable standard in accordance with BS 2782: Part 1. The use of plastic materials should be kept to a minimum or avoided altogether.

OR

(v) Made of plywood, hardboard, pulpboard or fibreboard rendered flame resistant by a process of impregnation and bearing a distinguishing mark to indicate that it has been so treated.

OR

(vi) Made of timber of any thickness impregnated and branded as in (v) above, except that timber framing of stands may be of natural unproofed timber of a minimum thickness of 25mm and counters and floors of stands may be of natural unproofed timber of a minimum thickness of 25mm, or wood chipboard or blockboard each of not less than 18mm, provided that where natural timber is used for floors it should be close jointed.

NOTES

If materials are impregnated in accordance with (v) and (vi) above but do not bear a distinguishing mark, a certificate should be obtained from the processing firm to the effect that the process of impregnation has been applied.

The applied decorative finishes of toy fairs and grottos may be of natural (unproofed) timber of a minimum thickness of 25mm provided that:

(a) The area of vertical wall surfaces does not exceed 2m² for each m² of floor area occupied by the toy fair or grotto.

(b) Where such timber is used on the outside of the toy fair or grotto it is so arranged as not to be continuous with similar timber treatment of an adjoining grotto.

Textile fabrics other than those referred to in (h)(i)(ii) and (iii) above, when used for interior decorative purposes should be:

(a) rendered satisfactorily non-flammable and fixed taut and/or in tight pleats to a solid backing of material conforming with (i) or (v) above except that such solid backing need not be provided to curtaining of window features or to fabric ceiling not inclined to an angle greater than 20° from the horizontal, and

(b) secured at floor level by a 75mm deep skirting.
Curtains to openings or recesses should be of inherently non-flammable material or material which is rendered satisfactorily non-flammable.

Advice Leaflet 18
Christmas Grottos & Toy Fairs – Fire Safety

(i) Natural and Artificial Foliage

Any natural foliage should be maintained satisfactorily non-flammable by treatment with a flame retardant process. Materials used in the manufacture of artificial foliage should be non-combustible, inherently non-flammable or durably flameproof. Artificial foliage should be approved by the Fire Authority before it is put into use. Wholly plastic artificial foliage is not normally acceptable.

Flammable toys or decorations should not be placed upon trees, and lighted candles should not be used. If decorative electric lights are used the electrical supply should be taken from a sub circuit independent of the general lighting and all fittings and connectors should be well insulated, any unprotected length of flexible wiring should be connected to the permanent installation through an approved connector and the wiring should be in good condition, as short as practicable and arrange so as to be out of the reach of the public.

BIBLIOGRAPHY

Detailed guidance on how to achieve standards of fire safety may be obtained from the following bibliography.

Listed alongside each document is the organisation from which it may be obtained.

TITLE PUBLICATION	AVAILABLE FROM
Building Regulations 1985 Approved Document B	SO
BS 5266 Emergency Lighting	BSI
BS 476: Part 4: Non-Combustibility Test for Materials	BSI
BS 2782: Part 1: Methods of Testing Plastics	BSI
BS 476: Part 7: Methods for Classification of the Surface Spread of Flame of Products	BSI
BS 5588: Part 6: Code of Practice for Places of Assembly	BSI
BS 5588-11:1997 Fire precautions in the design, construction and use of buildings. Part 11: Code of practice for shops, offices, industrial storage and other similar buildings	BSI
Risk Assessment Guide – Offices and Shops	TSO
Risk Assessment Guide – Small & Medium Places of Assembly	TSO
Risk Assessment Guide – Large Places of Assembly	TSO
Risk Assessment Guide – Outdoor Events	TSO

Advice Leaflet 18
Christmas Grottos & Toy Fairs – Fire Safety

The publications can be obtained from the following addresses:

<p>The Stationery Office Ltd PO BOX 29 Norwich NR3 1GN</p> <p>Or</p> <p>Blackwells 21 Blenheim Terrace Leeds LS2 9HJ</p>	<p>Tel: 0870 600 5522 Fax: 0870 600 5533 e-mail: customer.services@tso.co.uk web: www.tso.co.uk/bookshop/bookstore.asp</p> <p>Tel: 0113 245 2623 Fax: 0113 242 5641 e-mail: osleeds@blackwellsbookshops.co.uk</p> <p>Opening hours: Mon–Sat: 09.00 – 17.30</p>
<p>British Standards Institution (Sales) 389 Chiswick High Road LONDON W44 AR</p>	<p>Telephone Number: 0208 996 7003 e-mail: cservices@bsi-global.com</p>

For further advice regarding fire precautions standards please see the attached guides available from <http://www.communities.gov.uk/index.asp?id=1123799>