

Isle of Man Fire and Rescue Service

Guidance Document For Marquees and Temporary Structures

1. Introduction

This Note is prepared for the benefit of those who are planning functions in tented or temporary structures.

It must be noted that the guidance can only be of a fairly general nature, its specific application may vary depending upon the site location, conditions etc. More detailed advice can be obtained from the Isle of Man Fire and Rescue Service, Fire Safety Department and the Guide to Fire Precautions in Existing Places of Entertainment and Like Premises issued by the Home Office.

Where functions are being planned for public entertainment and or licensed to sell alcohol to members of the public by retail, early application must be made to the Department of Home Affairs, Woodbourne Road for a Fire Certificate in accordance with **The Fire Precautions Act 1975, Licensed Premises/ Entertainment Premises Designating Orders 1997**. This is irrespective of whether entertainment is provided on a chargeable basis or not. Fire Certificate applications are available from www.iomfire.com.

2. Site Selection and Access

2.1. The selected site is, wherever possible, to be well clear of buildings or activities likely to create a fire hazard. It should also allow easy access and ample clear space to enable the occupants to get to a place of safety in the event of a fire.

2.2 Spacing between structures should be not less than 6m in all directions.

2.3. Grass is to be cut as short as possible before the erection of temporary structures and the cuttings raked clear. In dry conditions the site should be watered before erection.

2.4. The site is to be so arranged as to allow access by fire engines to within 45 to 50 metres of every part of the structure.

2.5. Access routes are to be no less than 4m wide and have a clearance of no less than 4 m above the ground,

2.6. Emergency access routes and access to hydrants and other water supplies must be kept clear at all times.

3. Construction of Marquee

3.1. The marquee must be manufactured or treated so as to reduce the flame spread hazard associated with the use of large areas of textile materials.

3.2. New fabrics are to be inherently or durably flame retarded when tested to BS 7837: 1996. However, fabrics tested to the following national standards are also acceptable:-

British Standard 5438, Tests 2A and 2B,
British Standard 7157,
French Standard NFP.92503, Performance Level M2,
German Standard DIN 4102, Part 1, Performance Level B1,
Italian Standard UNI 9174, Performance Level M2,
USA Standard NFPA 701, Large scale test.

3.3. The use of structures manufactured to British Standard 5438: 1989 are still deemed acceptable at this time.

3.4. All unattached lining materials are to comply with British Standard 5867: Part 2, fabric type B, the specification for fabrics for curtains and drapes.

3.5. Linings for marquees and large tents may be suspended using ropes constructed from man-made or natural fibres and may be laced together using the same materials. Linings are only to be used if constructed from an appropriately flame retardant fabric.

3.6. It should be appreciated that any subsequent treatment to the fabric, such as the use of colour dyes, may have an adverse effect on its flammability performance and that in such circumstances the required performance level will need to be restored.

3.7. Where the marquee is provided for the purpose of public entertainment, and or for the purpose of a Licensed Premise, the Licensing Authority, will require the production of a Certificate showing compliance with one of the above Standards. (**see 3.2**)

3.8. The marquee is to be erected by a competent person and must not readily collapse when exposed to fire.

3.9. Some floor coverings may react in fire to produce large amounts of heat and smoke, although the rate of surface spread of flame may be relatively slow. The environment may also have a significant effect on the burning behaviour of materials, as wind can cause a fire to spread more rapidly. It can also blow smoke into escape routes and so adversely affect the means of escape.

A similar situation may occur where a lack of adequate ventilation causes smoke to be concentrated in a particular area.

3.10. Floor coverings used in tents and marquees may be reusable, such as coir or synthetic matting, or disposable, such as lightweight polypropylene carpets.

3.11. The most appropriate fire test for reusable floor coverings is BS 4790. Such flooring should comply with the low radius of effect of ignition in Table 1 of BS 5287 (specifically for assessment and labelling of textile floor coverings tested to BS 4790). Disposable floor covering, which is through necessity lightweight, may not meet the performance specification in BS 5287. Nevertheless, such material may be accepted for a single use inside a marquee or tent provided that it falls within one of the classifications in BS 5287 and the flame spread time does not exceed 52mm/minute.

4. Temporary decorations/fabric tableware

4.1. The flame retardant properties of all materials are to be in accordance with the relevant British Standard or equivalent European Standard.

4.2. Any proposal to use combustible decorative materials is to be notified to the Isle of Man Fire and Rescue Service, Fire Safety Department in writing and accompanied by full details, including samples (not less than 1 x 0.5m) of the material proposed to be used where requested.

5. Organiser's Responsibility

It is the responsibility of the event organiser to ensure that the safety of the occupants is not compromised. To this end, organisers should consult "The Event Guide" published by the Health and Safety Executive and the "Guide to Fire Precautions in Existing Places of Entertainment and Like Premises" published by the Stationery Office. Before people are admitted to the marquee, he/she must ensure that all relevant fire safety precautions have been taken and are being maintained.

6. Exits

6.1. In marquees intended to accommodate more than 50 people, a minimum of two exits must be provided. The minimum size of any exit is to be 1.05 metres. The travel distance from any part of a tent should not to exceed 24 metres without the prior consultation of the Isle of Man Fire and Rescue Service, Fire Safety Department.

6.2. Exits are to be clearly indicated by pictorial exit signs at least 125 mm high complying with the Health and Safety [Safety Signs and Signals] Regulations 1996 or British Standard 5499, Part 1 or equivalent European Standard.

6.3. Where a traditional "pole" marquee is to be erected on uneven ground, a solid door frame arrangement may not be suitable as the frame may become distorted and result in the door jamming. Alternatives are to provide a suitable single-action opening device or a Velcro fastening. The latter, under reasonable pressure, can allow the whole wall to open back providing a wide exit for all present.

6.4. The main criteria however, are that the fastenings are suitable for the occupant capacity, are capable of being opened by one simple action requiring no manual dexterity, and are such that people can immediately escape.

6.5. All means of escape with which the structure is provided must be kept free and clear from obstruction so as to be readily available for use by persons within the premises at all material times.

6.6. The following are factors which an Organiser and Fire Safety Officer should take into account in deciding what form of door fastening is acceptable:-

- the purpose for which the structure is being used, e.g. as a restaurant, for entertainment etc, and whether there is tiered seating or an informal seating arrangement with tables;
- whether there is permanent and full-time professional management;
- whether there are sufficient trained staff to make sure that people can leave safely (including staff on each exit);
- the proposed number of people occupying the structure (including children, the elderly and people with disabilities);
- the floor area, number of exits and whether additional exits can be made available;
- the means for raising the alarm (including whether a PA system is provided);

- the fire fighting arrangements;
- the directional signs and emergency escape lighting;
- whether the use of LPG is proposed;
- the presence of other hazardous substances; and
- the housekeeping arrangements.

6.7. The following numbers, calculated from the formulae given in Chapter 5 of the Guide to Fire Precautions in Existing Places of Entertainment and Like Premises is for the guidance of organisers. The actual number, location and size of exits may vary and is subject to conditions imposed by the Isle of Man Fire and Rescue Service, Fire Safety Department if the proposal falls within the scope of The Fire Precautions Act 1975.

51 - 160 people 2 x 1.05m exits,
161 - 240 people 2 x 1.50m exits,

6.8. Guy ropes, tent pegs and stakes must not obstruct a route to a place of safety. Where they flank such a route, they are to be shielded to form a passageway or be hazard taped, padded and illuminated so that they can be clearly seen at all times. Furthermore, they are to be regularly inspected and maintained in good order.

7. Fire Extinguishers

7.1. Fire extinguishers should be provided on the basis of one 9 litre water type extinguisher (or similar rating - 13A) per 200m² floor area, with a minimum provision of two such extinguishers. The extinguishers should be accompanied by CO₂ extinguishers in case of a fire involving the electrics.

7.2. In addition to 7.1 above, separate extinguishers will need to be provided for specialist equipment such as cooking (see 13.2 below) or disco equipment.

7.3. Extinguishers should be grouped to form fire points, be clearly indicated and located in positions which will prevent unauthorised malicious operation. Attendants are to be aware of their location and method of operation.

7.4 Extinguishers provided must have been serviced by a competent engineer within the previous twelve months, and documentation provided.

8. Warning in Case of Fire

8.1 A means of giving warning in case of fire is to be provided. The use of a public address system procedure may be sufficient. This issue is to be agreed with the Fire Safety Department.

8.2 A telephone is to be readily accessible within close proximity to the site. If none is available, a mobile telephone with good reception is to be provided to call the emergency services if needed.

9. Electrical Installations and Lighting

9.1 Electrical installations should be installed, tested and maintained in accordance with the provisions of normative standards or national guidelines such as the IEE Regulations for Electrical Installations. Work on electrical installations and appliances should only be carried out by competent persons.

9.2. All parts of a marquee to which the public will have access during the hours of darkness, are to be provided with a normal electric lighting system. The system is to provide adequate illumination to allow people to leave safely and should include outside areas to a place of final safety.

9.3. Where lighting is necessary, a system of emergency lighting is also to be provided to comply with British Standard 5266. The system must be capable of operating independently of the central source of power and should give sufficient illumination of escape routes.

9.4. In addition, exit signs, as required by 6.6 above, must be illuminated or be of the self-luminous type.

10. Seating

10.1. Seating for any performance is to be arranged with adequate gangways to discharge to exits by the most direct route possible.

10.2. The numbers of seats in a row are not to exceed 7 where there is a gangway at only one end, or 14 where there is a gangway at both ends of the row. The above may be increased in accordance with conditions laid down in the "Guide to Fire Precautions in Existing Places of Entertainment and Like Premises" and BS 5588 Part 6 1991. Layouts for premises requiring Fire Certification in accordance with The Fire Precautions Act 1975 will have to be agreed by the Fire Safety Department.

10.3. Seats laid out in theatre style rows in marquees for more than 30 people must either be fixed in position or linked securely in rows of not less than 4 seats nor more than 12. All seats on a sloping floor must be fixed in position.

10.4. Where more than 250 temporary seats are to be used, they must be secured in the following manner:

i. Seats to be linked together in lengths not less than 4, or more than 12.

ii. Rows of seats flanking gangways to be fixed to the floor. This may be achieved by the use of floor bars extending beyond the row to be fixed, to at least two adjacent rows, but not across gangways. Floor bars are to have a cambered top surface and be no more than 25 mm in height.

10.5. Gangways are to be not less than 1.2m wide with no projection into the gangway allowed to diminish its width.

10.6. Spaces beneath seating must be kept free from combustible materials, especially the accumulation of combustible waste.

11. Attendants

11.1. Attendants/ stewards, in addition to the person in charge, are to be provided on the basis of one for every 100, or part of 100 persons in the structure.

11.2. The attendants are to be easily identifiable by means of some form of conspicuous clothing or marking system, which is visible under all lighting conditions.

11.3. Attendants are to be fully aware of their responsibilities in the event of a fire. They are also responsible for ensuring that safe conditions are maintained at all times, including checking that exits remain unobstructed and that overcrowding does not occur.

11.4. A pre-arranged action plan in case of emergency is to be made, and all officials and staff made fully conversant with the action necessary to safeguard all persons on site.

11.5. Staff instruction should include:-

i / The method of calling the emergency services,

ii /The evacuation of persons safely from structures and location of assembly points.

iii. The use of fire fighting equipment.

12. Housekeeping

12.1. Adequate metal receptacles must be provided for all rubbish. Spaces beneath stands and seating must be kept clean and on no account should these areas be used for storing, or a build up of any combustible materials.

13. Heating and Cooking Appliances

13.1. Heating appliances using a naked flame or not fixed in position are not to be used when the public are in attendance. If heaters are to be used, they are used to preheat the marquee, then switched off and removed before the marquee is occupied.

13.2. Cookers, using gas or any other open flame source are not to be used in marquees. Cooking is to be carried out outside or in a separate structure and separated from the marquee by a distance of at least 6m. Such separate cooking facilities are to be provided with adequate fire extinguishers. This would normally take the form of a minimum of 1 x 5 kg dry powder extinguisher and 1 fire blanket.

13.3. Gas cylinders and their respective appliances are not to be used in marquees when the public are present. Cylinders are to stand outside the tent and only be handled and changed by persons fully conversant with the supplier's instructions.

14. Mobile "Fast-food" Vehicles

14.1. Where the use of ice-cream, hot dog or other such sales vehicles is intended, they are to be sited clear of access roads, so that the sales area is away from access roads.

14.2. Each operator must be responsible for the safety and safe operation of his vehicle, and must be made aware of the site safety plan.

14.3. Operators are to be instructed to have only sufficient LPG cylinders for the day's use, if no suitable store facilities are available.