



**RU Safe?**

## ***RU SAFE?***

This booklet has been produced to help people who want some information and guidance about entertainment in small places such as fringe theatres, pubs and clubs as well as cinemas, restaurants, cafés and bars.

Members from the *Technical Standards* Standing Committee have written *RU Safe?* as a free introduction into safety in entertainment.

The members are from the Association of British Theatre Technicians (ABTT), the Chartered Institute of Environmental Health (CIEH), the District Surveyors Association (DSA), the Institute of Licensing (IoL) and the London Fire Brigade (LFB).

If you need more information please do purchase a copy of the *Technical Standards for Places of Entertainment* from either the Association of British Theatre Technicians (ABTT) [[www.abtt.org.uk](http://www.abtt.org.uk) or 020 7242 9200 or write to 55 Farringdon Road, London EC1M 3JB] or Entertainment Technology Press [[www.ETnow.com](http://www.ETnow.com) or 01223 550805 or write to The Studio High Green, Great Shelford Cambridge CB22 5EG].

The *RU Safe?* Guide is free; extra copies can be downloaded from the website: [www.rusafe.org.uk](http://www.rusafe.org.uk)

Hope this helps!

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## INTRODUCTION

*RU Safe? is for people (the “operators”) who run or are considering running small venues (such as pubs and fringe theatres and cinemas as well as restaurants, cafés, clubs and bars with entertainment) with, say 150 people in the building at any one time.*

*This Guide has been produced to help these operators understand the necessity for safety and whether or not it is necessary to apply for a **premises licence**. It will assist operators to decide whether their building will meet the necessary safety standards and what, if any, additional modifications may be needed.*

*The technical details included in this Guide provide a basic level of information but is not everything that you may need to know. It does not replace the Technical Standards for Places of Entertainment (called in short Technical Standards) where additional, more comprehensive and detailed information can be found.*

*Suitably qualified people and the local Council should also be consulted. For example operators proposing to provide food or drink, even if only occasionally or not as a main activity, have by law to register with the local Environmental Health Authority – see Appendix 1.*

*Note this Guide basically relates to safety of venues in buildings. Once ready for opening other information is needed for day-to-day activity. Section N of the Technical Standards provides information on management and staff, disability concerns, escape routes, fire prevention and action as well as scenery and effects. Live music concerts together with safeguarding children and animals are also covered.*

## 1. PLANNING: FIRST STAGES

### 1.1 Number of people admitted

- Where people gather in a confined space there is always a potential for injury or even fatality because of the dynamics of crowd behaviour especially in panic. The number of people (the “accommodation”) allowed in the building at any one time should therefore be limited to avoid overcrowding and to ensure that toilets (“sanitary accommodation”), ventilation and how to get out to a place of safety (the “means of escape”) are adequate. Sometimes, particularly with the conversion of existing buildings, the limitations of the existing structure, the number or width of the exits or the available facilities may limit the number of people.
- The law generally requires that facilities should be accessible to everyone including people with disability in all new buildings and conversions of existing buildings – see also Sections B5, C1, C3 and N3 in Technical Standards. The Equality Act 2010 requires reasonable physical adjustments to features that make it unreasonably difficult for disabled people to use a service.

People should be able to move easily around the premises so escape routes and circulation space should not be included in any calculations.

Table 1.1: How much floor space is needed for each person to avoid overcrowding	
Use of area	Space per person
Bar areas and similar refreshment areas – standing within 2m of the serving area	0.3m <sup>2</sup>
Public houses, halls or areas without seating – music and similar entertainment only for a standing audience only	0.45 m <sup>2</sup>
Cabaret style seating chairs around tables arranged to identify gangways which provide free and ready access to all exits	1.0 to 1.5m <sup>2</sup>
Dance area	0.5m <sup>2</sup>

Restaurants and similar table and chair arrangements around dance areas – seating provided only at tables	1.0 to 1.5m <sup>2</sup>
Individual seats	<i>Where the layout of seats known count number of seats</i>
Bench seating	<i>Where layout of benches known: divide bench length by 450mm</i>
<p><b>Table 1.1 helps to calculate the permitted maximum number of people in the building using Calculation A (Appendix 4).</b></p> <p>Escape routes and circulation space should not be included in these calculations.</p>	
<p><b>More information in Technical Standards, Section B3</b></p>	

## 1.2 Means of escape

*People should be able to escape quickly and easily in an emergency. Careful planning of escape routes from rooms through doorways, corridors and stairways leading to final exits away from the building to a place of safety is essential. Conversions of existing buildings require particularly careful consideration as the existing arrangements may not be satisfactory; sometimes it may be necessary to provide new exits.*

- There should be more than one exit from a room unless everyone in the room is within 18m of the exit.
- Each exit should lead via an independent route to a place of public safety leading to the public highway.
- If a person is standing between two exits and the angle between the two exits and the person is less than 45° then the exits are too close together and are only counted as one exit. However these can be considered as separate exits if the routes are separated by fire-resisting construction.

- Allowances should be made for people in wheelchairs or who have difficulties walking to escape in the event of an emergency. Trained staff and/or special escape routes may be required.
- The exit routes through the building should be easy to see at all times. Furniture, loose or fixed, should not be allowed to block exit routes.
- If furniture is moved to make room for a dance floor, it should never be stored in an exit route or where it might form a hazard.

<b>Table 1.2 The maximum distance you can walk before you must reach a way out of the premises.</b>			
Location		Number of ways to an exit	
		One way only	More than one way
Public areas	Seating in rows	15 metres	32 metres
Public areas	Open floor areas	18 metres	45 metres
<b><i>More information in Technical Standards, Section C1 &amp; C3</i></b>			

**1.3 Height and width of escape routes**

*Escape routes should be high and wide enough to allow speedy movement to a safe place. Height is measured from the floor, except that the height of staircases is measured from the “pitch line of the stair” (see 1.4). The width is measured at 1500mm above the floor.*

All escape routes should have a minimum height of 2100mm in new buildings, or at least 2000mm in an existing building.

- All escape routes should have a minimum unobstructed width of 1200mm in a new building, or at least 1050mm in an existing building. If an exit route in an existing building is not usable by wheelchair users, then a minimum width of 900mm is acceptable.

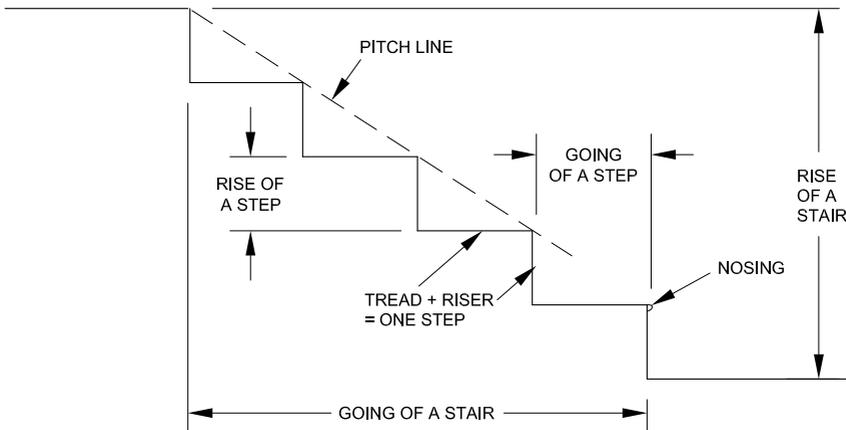
For restricted routes used only by a small number of staff refer to *Technical Standards*.

Table 1.3 Recommended minimum number and width of escape routes				
Number of people who may use the building	Small room with one exit no more than 15m away if room has fixed seating or 18m if an open area  ONE exit not less than mm wide	Ground floor only with direct access to the street or large open space and no special hazard  ONE exit not less than mm wide	All other buildings Each exit should be in a different direction	
			At least TWO exits each not less than mm wide	At least THREE exits each not less than mm wide
60	800	800	800	
75		1000	850	
100		1100	900	
110			950	
125			1000	
150			1050	850
200			1050	900
<p>Widths less than 1050mm generally apply only to existing buildings and are not suitable for wheelchairs unless the doors are power-operated.</p> <p><i>Table 1.3 helps how to calculate the minimum numbers of exits from the building using Calculation B (Appendix 4).</i></p>				
<p><b>More information in Technical Standards, Section C1 &amp; C3</b></p>				

## 1.4 Stairs

*There should be nothing within stair enclosures that could create a fire hazard. Many entertainment buildings have basements in public use and direct routes from the basement to the rest of the building may be desirable for operational reasons. However, basements are more likely to become filled with smoke in a fire and people generally climb stairs more slowly. Basement stairs should therefore be wider to allow for the number of people who may be climbing the stairs if there is an evacuation.*

*Stair components are made of steps, each of which has a “riser” and a “going”.*



- A step's riser ( $r$ ) is the vertical height from one step to the next.
- A step's going ( $g$ ) is the horizontal depth of a step.
- The pitch line, that is the overall angle going up, should not change.
- A general principle for a stair to ensure a satisfactory pitch is:  $2r + g =$  between 550mm and 700mm.
- A step's riser should be between 150mm and 170mm.
- A step's going should be between 250mm and 400mm (the preferred dimension being 300mm).

- The length of each step's going should be the same throughout the flight of stairs. The height of the step risers should be the same throughout the flight.
- No step should overlap the next step below by more than 25mm.
- Any landing or level area should be at least as long as the stair is wide.
- The rise on stairs between landings should not exceed 1800mm.
- There should be not more than two successive flights on a stair without a turn.

Except at ground level, there should be at least two stairs leading directly to the external doors or via a fire-resisting corridor leading to the external doors.

If a stair serves a basement more than 3m below ground level, then the minimum width of the stair should be 1100mm.

If a basement venue holds not more than 60 people, including staff and performers, a single stair is sufficient provided the stair leads directly to an exterior door or via a fire-resisting corridor to an exterior door.

No other area, except toilets, should open onto a protected stair or corridor unless the area is separated by a minimum 30 minute fire-resisting construction.

Stairs used by staff only and not serving more than 10 persons should be at least 600mm wide.

For stairs serving more than one floor above or below ground level see Section C3.

### ***More information in Technical Standards, Section C3***

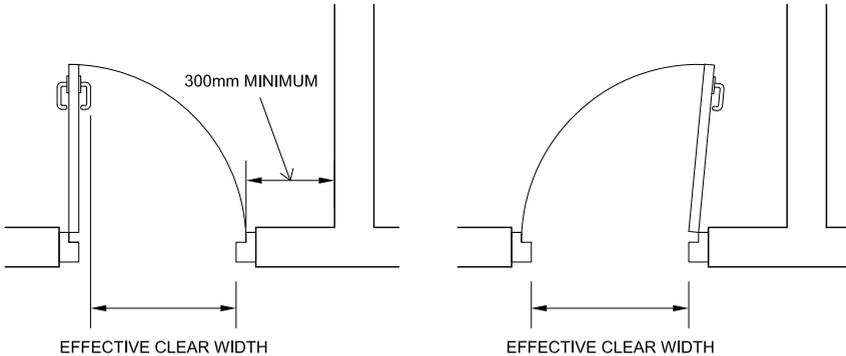
#### **1.5 Doors**

- Doors on escape routes should have a minimum height of 2060mm in new buildings, or at least 1960mm in an existing building.
- Doors on escape routes should have a minimum width of 1050mm in a new building, or at least 850mm in an existing building (see top Figure next page).

*Internal* single doors in new buildings should be at least 800mm wide, or at least 775mm in an existing building. Where there are double doors, at least one of the doors should be this wide.

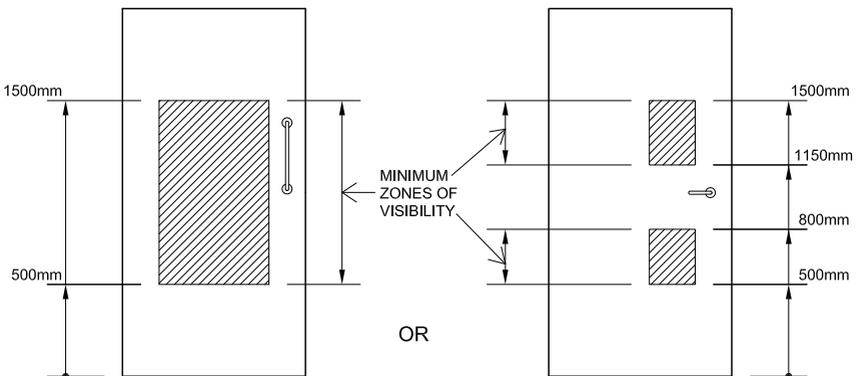
**External single doors in new buildings should be at least 1000mm wide, or at least 800mm in an existing building. Where there are double doors, at least one of the doors should be this wide.**

- All doors should open in the direction of escape unless there are less than 60 people in the room or corridor.



**Doors should open to at least 90° (see above). Any door furniture, cabin hooks or other fittings should not obstruct the full opening. Curtains should never be hung across doors or escape routes.**

**Double swing doors, doors across corridors and doors which might cause an obstruction should be fitted with safety glass vision panels (see below). Fire-resisting safety glass panels should be fitted in fire doors.**



## 1.6 Door fastenings

*Doors and gates on escape routes should be free from fastenings or secured with simple fastenings that can be readily operated without having to use both hands, keys, codes or similar means. This does not preclude the use of a key to open the door from outside.*

- All locks and bolts should be locked open and any removable devices, such as bolts, chains or padlocks, must be removed before the building is occupied.
- A door alarm system is preferable to removable security devices.
- Where there may be more than 60 or more people present, any fastenings on doors should be panic bolts or panic latches operated by push bars complying with *BS EN 1125* (see Appendix 3).
- If a room holds less than 60 people, push pads or lever handles complying with *BS EN 179* (see Appendix 3) are acceptable.
- Generally the use of latches operated by lever handles should be avoided in public areas. However round knobs should not be used as they may be difficult to operate.

All door furniture should be fitted between 800mm and 1200mm above floor level and have visual contrast with the doors. Push plates should be provided for pushing doors and handles to pull doors to avoid confusion.

***More information in Technical Standards, Recommendations C1.46-C1.47***

## 1.7 Steps and threshold bars

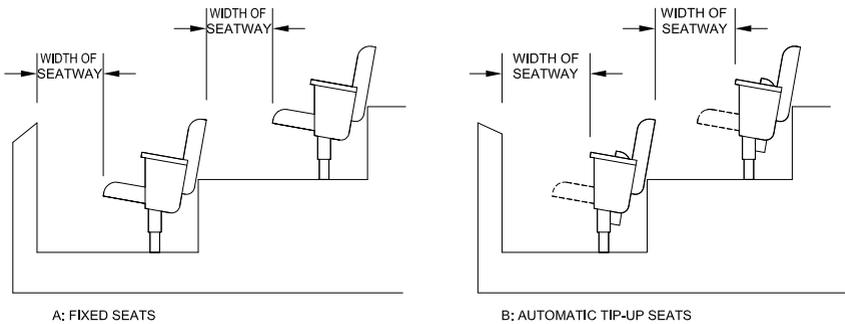
No door should open immediately over or onto a step. **A single step on the line of a doorway is not acceptable** because people could easily trip and fall over. There should be a landing at least as wide as the door, and at least as long as the width of the door plus 400mm, between the door and the first step of any stair where the door opens towards a step or stair.

There should be no tripping hazard across any doorway or escape route. However, chamfered bars (to reduce weather exposure) or threshold seals (to reduce sound) are acceptable provided they do not exceed 6mm in height nor cause a trip hazard.

### 1.8 Seating in rows

Seating should be fixed to the floor wherever practicable. Where seating is fixed the first part of the escape will be between the seats (usually called the 'seatway') leading to the 'gangway' or aisle that leads to an exit. It is important that seatways do not hinder rapid evacuation. Seats are often made to tip up so they take up less space and improve accessibility.

- *Seatways should be not less than 300mm wide.*



When a seating layout is permanent the seats should be fixed firmly to the floor. Seatways should be substantially level and clear of tripping hazards. Tip up seats should always tip up **automatically**.

It is important that loose seating does not get in the way in an emergency. Where there are more than 50 temporary seats, they should be fixed together in lengths of not less than four seats and be sufficiently secured to avoid easy separation or “snaking” under pressure. This is particularly important in areas **adjacent to exits**.

- *Gangways need to be wide to avoid local overcrowding as people leave the seatways.*

Gangways from seatways should be at least 1100mm wide except gangways intended for use by no more than 60 people may be not less than 900mm wide. Gangways accessible to people with impaired mobility should be at least 1000mm wide in all cases.

Table 1.4 Recommended maximum number of seats in any row		
Seatway width mm	Maximum number of seats in a row	
	<i>Gangway on one side only</i>	<i>Gangway on both sides</i>
300 to 324	7	14
325 to 349	8	16
350 to 374	9	18
375 to 399	10	20
Note that seatways should be at least 300 mm wide		
<b><i>More information in Technical Standards, Section C2</i></b>		

## 2. TOILETS (SANITARY ACCOMMODATION)

*Sufficient sanitary accommodation must be provided. Separate provision for staff may be required by the local authority or desirable. The law also requires suitable toilet accommodation for the use of people with impaired mobility in all new buildings and conversions of existing buildings.*

### 2.1 Toilet accommodation

Table 2 parts 1 to 4 show details for toilet provision.

Washbasins are sometimes fitted within the WC compartment. However this may cause undue delay particularly where a seated audience need to use toilets at an interval. It may be wise to provide extra WCs and washbasins.

Unisex WCs are sometimes permitted – see *Technical Standards G1.Commentary* and *G1.12 & G1.47*.

There should be some accessible unisex toilets, which enable persons of either sex to assist mobility-impaired people – see *Technical Standards G1.Commentary* and *G1.37 to G1.47*.

See also Calculation C (Appendix 4) for minimum provision needed for toilet accommodation.

***More information in Technical Standards, Section G1***

<b>Table 2.1: Minimum toilet provision: unisex WCs</b>			
	<b>Disposal units for sanitary dressings</b>	<b>Water Closets</b>	<b>Wash hand basins</b>
<b>Unisex</b>	1 in every toilet	2 for up to 25 people; 3 for up to 50 people plus 1 for every additional 35 people thereafter	1 per WC
<b>Cleaner's sink</b>	At least one bucket/cleaner's sink per block of toilets		
<p>Note 1. Unisex water closets should be in self-contained cubicles with full-height walls and doors.</p> <p>Note 2. It may be sensible to provide additional urinals for men.</p>			

<b>Table 2.2: Minimum toilet provision: segregated WCs</b>			
<i>See Table 2.3 for minimum accommodation in existing buildings</i>			
	<b>Urinals</b>	<b>Water Closets</b>	<b>Washbasins</b>
<b>Male</b>	1 per 50 males or part thereof	2 for up to 150	1 per WC plus 1 per 5 urinals
	<b>Disposal units for sanitary dressings</b>	<b>Water Closets</b>	<b>Washbasins</b>
<b>Female</b>	1 in every toilet	1 for every 25 plus 1	1 per WC
<b>Cleaner's sink</b>	At least one bucket/cleaner's sink per block of toilets		
<p>If no more reliable estimate assume ratio 50% females to 50% males</p> <p>Note: For larger premises see G1.47 <i>Technical Standards</i>.</p>			

<b>Table 2.3: Minimum provision in existing small premises</b>			
<b>Not exceeding 50 people</b>			
	<b>Urinals/Disposal units for sanitary dressings</b>	<b>Water Closets</b>	<b>Washbasins</b>
<b>Male</b>	–	1	1
<b>Female</b>	1	1	1
<b>Not exceeding 150 people</b>			
	<b>Urinals/Disposal units for sanitary dressings</b>	<b>Water Closets</b>	<b>Washbasins</b>
<b>Male</b>	1	1	2
<b>Female</b>	2	2	2
If no more reliable estimate assume ratio 50% females to 50% males Note: A minimum of 2 WCs is desirable to allow for maintenance.			

<b>Table 2.4: Minimum toilet provision for mobility-impaired people</b>	
A washbasin and unit(s) for the safe disposal of sanitary dressings & soiled continence aids should be provided in each toilet and WC	
<b>New buildings</b>	
<b>Type</b>	<b>Provision</b>
Wheelchair-accessible unisex toilets should be additional to the other toilets	a) One close to the main entrance; and b) One in each location where separate-sex toilets are provided
Ambulant-accessible single-sex WCs	One in each location where separate-sex toilets are provided
Ambulant-accessible single-sex WCs with cubicles at least 1200mm wide	One in each location where there are 4 or more WC cubicles (excluding unisex facilities)
<b>Existing buildings, if space limitations constrain provision of wheelchair-accessible unisex toilets</b>	
Ambulant-accessible single-sex WCs preferably 1200mm wide	One in each location where single-sex toilets provided

## **2.2 Baby-changing**

*Baby-changing should not be carried out in public areas. Where space is severely limited it is acceptable to install the facility in a unisex accessible toilet.*

Baby-changing facilities, where provided, should be accessible to disabled people.

In smaller buildings a wall-mounted folding baby-changing table may be provided in a unisex wheelchair-accessible toilet provided that when the table is folded there is a clear floor area of at least 1500mm x 2200mm.

***For more information see G1.Commentary and G1.25 – G1.28 in Technical Standards.***

## **3. HEATING, LIGHTING, ELECTRICAL AND VENTILATION**

*The installation and all equipment, both electrical and mechanical (such as fans, pumps and heating), must be safe and remain in good condition if in use. Careful installation and regular testing are needed.*

### **3.1 Electrical Installation**

The electrical installation in the building should always comply with the *BS 7671* (see Appendix 3).

Any temporary installation should comply with *BS 7671* or *BS 7909* (see Appendix 3).

- Only competent persons should be used for any work on the electrical installation. Competent persons include qualified members of the Institution of Engineering & Technology (IET), the Electrical Contractors Association (ECA) and the National Inspection Council for Electrical Installation Contracting (NICEIC).
- An installation certificate or condition report, as appropriate, should be provided by a competent person for any existing installation, extension or alteration of an electrical circuit. Copies of the electrical test certificates including those for emergency lighting should be kept in the building and available for inspection.

- All sockets in performance areas should be protected by appropriate RCDs rated at 30 milliamps which should be tested every 3 months.

All switchgear and distribution boards should be inaccessible to the public.

- All RCD trips should be tested every 3 months using the 'test button' to ensure they work correctly.

### ***More information in Technical Standards, Section F1***

#### **3.2 Lighting including emergency lighting**

For safety purposes, there is a requirement for two lighting systems. These two systems are *Normal Lighting* and *Emergency Lighting*.

- *Normal Lighting* means the lights that are switched on when the first member of staff arrives at the building and are switched off when the last member of staff leaves the building.
- *Emergency Lighting* means the lights that will come on automatically if there is a failure of a local lighting circuit or total power failure.

Each system alone should be capable of providing the minimum lighting level to enable everyone to see their way out of the building to safety.

There are two types of emergency lighting systems which may be employed. One type may be installed so that the emergency lights only activate when there is a power failure (non-maintained emergency lighting). The alternative emergency lighting system is where both the normal lighting and emergency systems are permanently on whenever the building is occupied (maintained emergency lighting).

Copies of the test certificates for emergency lighting together with those for batteries should be kept in the building and available for inspection at all times.

- Light switches in public areas should be key-operated or otherwise protected against unauthorised operation.

Non-flush light fittings on walls or ceilings should be at least 2100mm above the floor or pitch line of stairs to avoid any harm. Any pendant fitting weighing more than 1kg should hang on a separate suspension and not hang from the electric cable.

- In small village halls and similar venues it is acceptable to use plug-in emergency lighting and exit signs provided the internal batteries are adequately charged.

**More information in Technical Standards, Section F2**

**3.3 Ventilation**

Adequate ventilation for healthy conditions should be provided to all parts of the building. Mechanical supply and extract ventilation should be installed where there are insufficient openable windows and/or doors or where they have to be kept closed to control noise. Extract ventilation should be correctly balanced to suit the installation. Copies of the mechanical ventilation test certificates should be kept in the building and available for inspection at all times.

<b>Table 3: Minimum input of fresh air to be provided to all parts of the building</b>	
<b>Level of activity/type of accommodation</b>	<b>Fresh air input in litres per second per person (l/s/p)</b>
Seated areas	8
Offices	10
Dancing activities	12
Lavatories	Greater of 6 l/s per WC/urinal or 6 air changes per hour
Kitchens	At least 30 air changes per hour
Dressing or changing rooms	At least 10 air changes per hour
<b>Note: This table provides the absolute minimum input of fresh air. It is often insufficient to provide satisfactory conditions for the occupants – see Table 21 in <i>Technical Standards</i>.</b>	
<b>Table 3 helps to calculate the minimum input of fresh air using Calculation D (Appendix 4).</b>	

**More information in Technical Standards, Section F3**

### 3.4 Heating, cooking and gas appliances

- Gas boilers, gas installations and appliances should be inspected and certified as safe and adequate by a Gas Safe Registered Engineer. Copies of the gas safety certificates should be kept in the building and available for inspection at all times.

Heating appliances should have suitable guards securely fixed in position to prevent unauthorised persons having access to the controls or being able to approach too close to the appliance and possibly endanger themselves. Temporary or portable heaters should not normally be provided.

Means should be provided to cut off manually the gas/electrical supply to the cooking equipment in an emergency. These should be in a readily accessible position adjacent to the exit from the cooking area. A sign should be provided adjacent to the emergency cut off control suitably worded **Gas/Electricity emergency cut off control** and the off position or method of operation clearly indicated. Lighting circuits should not be affected by the operation of the emergency cut off control.

### 3.5 Installed equipment, especially overhead installations

- All parts of overhead equipment, such as stage lighting, loudspeakers, video panels and projectors, should be mounted at least 2100mm above the floor (and above 2500mm where there might otherwise be tampering).
- All components should be fixed or suspended so as to be unlikely to fall or cause harm.
- All suspended equipment should have enough fixings to ensure that if one fixture fails the equipment cannot harm anyone. Lighting rigs and other suspensions should usually have at least 3 non-combustible means of suspension.

All fixing points for suspension should be routinely tested and certified as safe by a qualified structural engineer. Copies of the inspection and test certificates should be kept in the building and available for inspection.

- Fixing points for suspensions and rigs should be labelled to indicate their maximum safe loading.

***More information in Technical Standards, Section K2***

## 4. FIRE AND OTHER HAZARDS

### 4.1 Fire separation

*The building should be constructed so as not to collapse in the early stages of a fire and furnished so as to restrict the spread of fire.*

All walls, floors and structural components should be fire protected to prevent early collapse in the event of a fire.

High fire risk areas should be constructed to provide at least 30 minute fire resistance; these include boiler rooms, changing rooms, plant rooms and stores for hazardous substances.

When converting a building where it is not possible to meet this fire resistance, other measures, such as the installation of an automatic fire detection system and limitation on the type of materials stored in the building, will usually be acceptable.

*Table 1 in Section A3 in Technical Standards gives further details of the recommended minimum performance requirements for fire-resisting construction.*

**More information in Technical Standards, Section E1**

### 4.2 Restriction of surface spread of flame

*Wall and ceiling finishes, furniture and soft furnishings may contribute significantly to the growth of a fire whilst the volume of smoke produced by the burning of such items may cause problems with the safe evacuation of the building and subsequent fire fighting. Care is therefore needed to select materials that do not readily catch fire nor spread fire across their surfaces and which have a low rate of heat release and smoke emission.*

- It is essential that wall and ceiling surfaces, fixtures, fittings, furniture and soft furnishing are fire-resistant, and maintained in that condition.

**More information in Technical Standards, Section E2**

### 4.3 Fire fighting equipment

- Sufficient numbers and types of fire extinguishers and other fire fighting equipment should be provided. There should be at least one water extinguisher (rating 13A) and one carbon dioxide extinguisher (rating 34B) for each 200 m<sup>2</sup> area per floor. There

should also be one carbon dioxide extinguisher (rating 34B) and one fire blanket for every kitchen. Additional fire fighting appliances may be needed. Advice should be taken from the *Fire safety risk assessments* (see Appendix 2) or the local Fire Authority.

- All fire extinguishers should be serviced after any use and at least annually by a competent person and the certificate(s) be kept in the building and available for inspection at all times.

#### 4.4 Fire alarms

*All buildings should have a means to give early warning in the event of a fire.*

*In very small open-plan buildings such as a village hall where any fire would be quickly detected by the people present and there are no unoccupied parts of the building, warning to others may be by direct shout or simple manual device such as a bell, whistle or gong. However, most entertainment premises will require an electrical system incorporating manual break call points, electronic sirens or bells and a simple control panel. If the building has areas where fire can develop unobserved or where people work alone and a fire might not be seen, it may be necessary to upgrade the system to include fire detection.*

Any electrical fire detection and alarm system should comply with *BS 5839:1* (see Appendix 3). The fire detection and alarm system should be certified as safe and adequate. Copies of the inspection and test certificates should be kept in the building and available for inspection at all times.

Only competent persons should test and issue the certification of the fire detection and alarm system. Competent persons include qualified members of the Institution of Engineering & Technology (IET) and of the Electrical Contractors Association (ECA) the National Inspection Council for Electrical Installation Contracting (NICEIC), the Loss Prevention Council 1014 Scheme and the British Approvals for Fire Equipment SP203 Scheme.

- In most small premises (with under 150 people total occupation) the operation of the Fire Warning System should trigger the immediate and total evacuation of the premises.

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- Visual evacuation alarms, such as strobes should, in addition to audible warning, be provided in all areas where people might be isolated as in all toilets, showers or changing rooms.
- It may not be immediately necessary to leave the building where alternative arrangements are in place, for example, sufficient numbers of trained staff who will carry out pre-arranged actions and help people evacuate if and when necessary.
- Where loud music is played, visual alarms should be provided to operate when the fire alarm is activated.
- Where loud music is played, a means of muting the sound system should be provided.

All electrical music equipment in the premises should be controlled through the sound limiter where there is one.

- Where there is a risk of false or malicious alarms the most appropriate positions for fire alarm call points, if agreed with the Fire Authority, may be restricted to staff-controlled areas.

### ***More information in Technical Standards, Section H1 & H2***

#### **4.5 Escape routes and other safety signs**

Safety signs including fire safety signs should be provided wherever necessary.

- Safety signs should be in the correct shapes and colours with pictograms and additional text if needed – see *BS 5499* and/or *BS EN ISO 7010* (see Appendix 3).
- Safety signs should be adequately internally or externally illuminated. Safety signs should not be used for any other information.

### ***More information in Technical Standards, Section J2***

#### **4.5.1 Escape signage**

- Escape signage should be adequately illuminated by both normal lighting and emergency lighting so that if one lighting system were to fail, the sign would still be adequately illuminated.

Escape route signs should be of similar pattern and adequately illuminated whenever the building is in use.

Where the normal lighting can be dimmed the signs should have illumination from both normal and emergency sources.

Escape route signs should be installed between 2100mm and 2500mm above floor levels, measured to the underside of the signs.

***More information in Technical Standards, Section J1***

#### **4.6 Communication**

*Adequate communication is necessary in all buildings. Where there is an emergency or need to evacuate the building the fire alarm system may not suffice. Systems such as public address may be necessary to communicate with the public or the staff.*

- Adequate communication is needed both for routine management, and for use in an emergency. In many cases a responsible person, such as the duty manager, equipped with two-way communication with designated members of staff is sufficient.
- Managers should fully understand the procedures for public safety including the maintenance of the building as well as having all staff trained before the premises is open to the public. Managers should ensure there is a safe and efficient managed procedure in the event of an emergency or other need to vary usual practice.

***More information in Technical Standards, Section H1***

## **5. PLANNING - NEXT STEPS**

*The objectives of the Licensing Act 2003 are the prevention of crime and disorder, public safety, prevention of public nuisance and the protection of children from harm. Licences are generally issued by the local authority, after the responsible authorities have confirmed the building is suitable and other arrangements are accepted.*

## **5.1 Local Authorities**

Before the building opens to the public, the following authorities should have been consulted and their approvals agreed ***whether or not it is necessary to apply for a premises licence***:

Local Authority for Planning including where there is to be a change of use or alteration of structural layout

Local Authority for Health & Safety

Local Environmental Health Authority (both food and noise)

Local Fire Authority

Local Licensing Authority

Local Trading Standards Authority

Local Police Authority

Scaled plans may be required. Plans may also assist with staff and emergency escape training as well as assisting with **risk assessments**.

## **5.2 Risk assessments**

The *Management of Health and Safety at Work Regulations 1999* and the *Regulatory Reform (Fire Safety) Order 2005* both require risk assessments to be carried out for entertainment buildings.

Thorough risk assessments should be undertaken: all significant hazards and the likelihood of accidents should be considered. Significant findings of risk assessments should be recorded and appropriate action taken before the public are admitted.

The risk assessment should also demonstrate there are suitable arrangements for the safety of disabled people in the event of an emergency.

*Note 1: For guidance on health and safety risk assessments and for fire risk assessments see Appendix 3.*

*Note 2: Special effects such as dry ice, smoke, indoor fireworks, lasers, strobe lighting and real flame require specialists for both installation and operation. **More information in Technical Standards, Section K3***

*Note 3: Temporary stages and equipment such as speakers, stacks and/or towers should not obstruct escape routes or exit doors.*

The risk assessments for the building should be kept within and be available for inspection at all times.

### 5.3 Certification

Various satisfactory certificates will normally be required before the public may be admitted to the building. It is likely that certificates will be needed for the **electrical installation**, the **emergency lighting** installation, the **fire detection and alarm** arrangements and, where installed, any **mechanical ventilation**, **gas equipment and rigging** and **other overhead equipment**.

These certificates should be kept in the building and made available for inspection at all times.

### APPENDIX 1: FOOD SAFETY

Pubs, wine bars, restaurants, cafes, shops and other activities supplying food or drink have to be registered with the local authority as a food operating business at least 28 days before opening the building to the public.

It is recommended to contact the local Environmental Health Authority to seek advice well in advance for their assistance on the requirements of the law. The proposed premises should be constructed properly with good design, layout and hygiene. The staff have to be adequately trained with proper systems put in place to ensure that all food and drink are provided safely.

### APPENDIX 2: FURTHER READING

#### **Technical Standards for places of entertainment**

ISBN 978 1 904031 70 3 Obtainable from:

ABTT, 55 Farringdon Road, London EC1M 3JB [www.abtt.org.uk](http://www.abtt.org.uk) and  
Entertainment Technology Press, The Studio, High Green, Great  
Shelford, Cambridge, CB22 5EG [www.etnow.com](http://www.etnow.com)

#### **Fire safety risk assessment - Small and medium places of assembly**

ISBN-13 978 1 85112 820 4 and can be downloaded from [www.firesafetyguides.communities.gov.uk](http://www.firesafetyguides.communities.gov.uk)

Other guides on fire safety risk assessment include *Theatres, cinemas and similar premises*; and *Open air events and venues*.

**APPENDIX 3: REFERENCES (first order references in the text)**

BS EN 1125: Building hardware. Panic exit devices operated by a horizontal bar for use on escape routes. Requirements and test methods

BS EN 179: Building hardware. Emergency exit devices operated by a lever handle or push pad for use on escape routes. Requirements and test methods

BS 7671: Requirements for electrical installations. IET Wiring Regulations

BS 7909: Code of practice for temporary electrical systems for entertainment and related purposes

BS 5266-1: Emergency lighting. Code of practice for the emergency escape lighting of premises

BS 5839-1: Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises

BS 5499: Safety signs, including fire safety signs. Series of parts those relevant are:

Part 4: Code of practice for escape route signing

Part 5: Graphical symbols and signs. Signs with specific safety meanings [for existing signs]. See BS EN ISO 7010 for new signs

Part 10: Code of practice for the use of safety signs, including fire safety signs

BS EN ISO 7010: Graphical symbols. Safety colours and safety signs. Registered safety signs [for new signs]

## APPENDIX 4: CALCULATIONS

<i>Calculation A for the maximum accommodation in the building</i>			
Type of Accommodation	Floor area in square metres	Space factor from Table 1.1	Max. number of people accommodated
Bar areas etc. standing within 2m of the serving area		Divide floor area by 0.3	
Public houses, halls or areas without seating – music and similar only for a standing audience		Divide floor area by 0.45 m <sup>2</sup>	
Cabaret style seating chairs around tables arranged to identify gangways that provide free ready access to all exits		Divide floor area by 1.0 to 1.5m <sup>2</sup>	
Dance area		Divide floor area by 0.5m <sup>2</sup>	
Restaurants and similar arrangements around dance areas – seating provided only at tables		Divide floor area by 1.0 to 1.5m <sup>2</sup>	
Individual seats		Count number of seats	
Bench seating (length in mm)		Divide length by 450 mm	
<b>Total number of people in building any one time</b>			

<b>Calculation B for the minimum number of exits required</b>	
Total number of persons in the building (Calculation A above)	Minimum number of exits and minimum width of escape routes required see Table 1.3.

<b>Calculation C for the recommended minimum provision needed for toilet accommodation - see Table 2 parts 1 to 4</b>			
<b>Number of males</b> (assumed 50% from total accommodation Table A)	<b>Male sanitary accommodation</b>		
	WCs 2 plus 1 over 150	Urinals – 1 per 50 or part thereof	Wash basins – 1 per WC & 1 per 5 urinals
<b>Number of females</b> (assumed 50% from total accommodation Table A)	<b>Female sanitary accommodation</b>		
	WCs 2 for up to 25 plus 1 for every additional 25	Wash basins 1 per WC	Disposal units 1 in every toilet

<b>Calculation D1 for the minimum ventilation required other than in lavatories, kitchens and dressing or changing rooms – Table 3</b>			
	<b>Figure A</b>	<b>Figure B</b>	<b>Multiply A by B =</b>
Use of room/ area	Litres of fresh air/per second/per person	Number of people using the room/ area see Accommodation Table A	<b>Minimum fresh air input required per second in litres</b>
Seated areas	8		
Offices	10		
Dance areas	12		

<b>Calculation D2 for the minimum ventilation required for lavatories – see Table 3</b>			
<b>Which is greater</b>	<b>Figure A</b>	<b>Figure B</b>	<b>Minimum fresh air input required per second in litres</b>
<b>EITHER</b>		No. of WCs and urinals	Multiply Figure A by Figure B =
	6 litres/second per WC and/or urinal		
<b>OR</b>		Volume of room measured in (cubic) metres	Multiply Figure A by Figure B by 1000 divided by 3600 =
	6 air changes/ hour		
<b>Note: It is usually necessary to extract slightly more air than supplied to avoid smells being drawn into other areas.</b>			

<b>Calculation D3 for the minimum ventilation required for kitchens &amp; changing rooms – see Table 3</b>			
	<b>Figure A</b>	<b>Figure B</b>	<b>Minimum fresh air input required per second in litres</b>
Kitchens		Volume of room measured in (cubic) metres	Multiply Figure A by Figure B by 1000 divided by 3600 =
	30 air changes/hour		
Dressing or changing rooms		Volume of room measured in (cubic) metres	Multiply Figure A by Figure B by 1000 divided by 3600 =
	10 air changes/hour		
<p><b>Note: Where odours or fumes may be present, for example in kitchens and changing rooms, it is usually necessary to extract slightly more air than supplied to avoid odours or fumes being drawn into other areas</b></p>			
<p><b>Extract ventilation should be provided from theatre auditoria and similar spaces with an extraction rate of up to 90% of the total air supplied depending on the rate of leakage and/or exhaust via other paths</b></p>			
<p><b>See <i>Technical Standards F3.09</i> for a stage fitted with a safety curtain</b></p>			

The *RU Safe?* Guide is free; extra copies can be downloaded from the website: [www.rusafe.org.uk](http://www.rusafe.org.uk)

If you need more information please do purchase a copy of the Technical Standards for Places of Entertainment from either the Association of British Theatre Technicians (ABTT) [[www.abtt.org.uk](http://www.abtt.org.uk) or 020 7242 9200 or 55 Farringdon Road, London EC1M 3JB ] or Entertainment Technology Press [[www.etnow.com](http://www.etnow.com) or 01223 550805 or The Studio High Green, Great Shelford, Cambridge CB22 5EG].



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