



Gloucestershire
Fire and Rescue Service

Working together for a safer Gloucestershire

Occupancy Calculations For Licensed Premises

Your Fire Safety responsibilities under the Licensing Act 2003

The information contained within this leaflet is for guidance only. It is not a full and authoritative statement of the law and does not constitute legal advice. The leaflet does not replace, extend, amend or alter in any way the statutory provisions of the Licensing Act 2003 or any subordinate legislation made under it or statutory guidance issued in relation to it.

Introduction

This leaflet is for the benefit of persons applying for Premises Licenses or Club Premises Certificates or variations thereto under the Licensing Act 2003 and existing licence holders. It provides guidance on how to complete the Operating Schedule with regard to Public Safety, what GFRS need on the plan, general fire safety advice on fire risk assessments and how to calculate safe occupancy figures.

Operating Schedule - Public Safety

Gloucestershire Fire & Rescue Service expect to see, in the operating schedule relating to Public Safety, a statement of commitment by the applicant to provide and maintain adequate fire safety measures, according to the risk to the premises and the activities taking place.

A suitable example of a statement **would be**;

The fire safety measures with which the premises are provided, will be maintained in good working order, and their adequacy will be determined on a regular basis, by carrying out a written fire risk assessment, as required by, and in accordance with the Regulatory Reform Fire Safety Order 2005.

I understand that the safety of occupants is also influenced by numbers of persons present, their disposition and the activities taking place, and therefore undertake to maintain a safe occupancy level.

Plans

Information that should be shown on the plans of your premises;

1. Location, door opening direction and size of exits.
2. Fixed structures that are impediments to movement.
3. Location and height of any stage or raised area.
4. Location and type of any fire safety measure (emergency lights, fire alarm, fire doors, signs, fire fighting equipment, etc).
5. Specific use of areas within the premises (as they relate to your occupancy figure, as detailed later).
6. Any additional items not detailed above, i.e. flammability of seasonal/party decorations etc.

This will allow Gloucestershire Fire & Rescue Service to determine the adequacy of your operating schedule. An example of plans is located at the end of this booklet.

Fire Risk assessment and the five steps to risk assessment,

This must be in writing

- 1) Identify the hazards.
- 2) Identify people at risk.
- 3) Evaluate, remove, reduce and protect from risk.
- 4) Record, plan, inform, instruct and train.
- 5) Review.

A template is available to download from the link below:

<http://www.glosfire.gov.uk/downloads/templatefra.pdf>

Fire Safety Checks, this does not form part of the fire risk assessment

The adequacy of existing fire safety measures in a premise should be determined by carrying out a fire risk assessment.

The following check list (although not exhaustive) has been compiled to enable applicants to address and manage fire safety measures in their building.

- Has a fire risk assessment been carried out?
- Has the maximum occupancy of the premises been determined?
- Are all fire escape routes properly maintained and free from obstructions, goods or any material that constitutes a hazard to the route?
- Are all stairways, corridors and lobbies kept free from combustible storage and furniture at all times?
- Are all stairways, ramps and steps, comprising part of the means of escape, maintained in a safe condition with even and non-slippery surfaces, with all floor coverings secured in position?
- Are all self-closing doors (other than those held open automatically) maintained self-closing at all times and not provided with any means of keeping them in the open position?
- Are there any fire doors held open with automatic devices?
- Do they close automatically on operation of the fire alarm?
- Are all exit doors, through which people may have to pass, unlocked and free to open for persons leaving the premises?
- Are arrangements in place so that persons with mobility difficulties are able to leave the premises safely in the event of fire? (Remember wheelchair users require a 900mm wide exit to safely evacuate your premises).
- Are all floors, walls and ceilings kept in a satisfactory state of repair?
- Are all surface finishes on walls, partitions and ceilings of such a standard to minimise fire spread?
- Is all fire fighting equipment readily available for use?
- Is all fire fighting equipment tested and maintained in efficient working order according to the appropriate standard?
- Are all fire alarm tests, emergency lighting tests, electrical tests and fire training recorded
- Are all notices, signs and fire exit signs legible and unobstructed?
- Has the electrical installation (fixed wiring) been checked within the last 5 years?
- If special effects such as lasers, pyrotechnics, smoke machines, foam machines, etc. are to be used, what additional fire safety measures have been provided?
- For premises with moveable seating, (village halls, etc.) are adequate gangway widths (1.06m) and seat way widths (305mm) provided? Please see example 4.
- Are the fire exits outward or inward opening? If the occupancy figure is for more than 60 people then the doors should be outward opening.

Is there a procedure in place controlling the movement of persons through each floor level?

This is not a full and extensive risk assessment this is a basic fire safety check, there may be other issues that need to be taken into consideration, and therefore it is not a full and conclusive statement of fire safety requirements.

How to Calculate Safe Occupancy Figures

As part of your fire risk assessment, nightclubs and busy city/town centre public houses (or any other premises that is providing entertainment that would have previously required a Public Entertainment License) should as part of their fire risk assessment:

Calculate the maximum number of people that can safely resort within their premises at any one time. These figures should be forwarded to Gloucestershire Fire & Rescue Service (GFRS) and incorporated in your risk assessment. **Failure to produce these calculations may result in enforcement action by GFRS, and we will consider your risk assessment not suitable and sufficient.**

To help you overcome this issue, GFRS has produced a simple system for you to apply to your building that will allow you to calculate the safe number of persons allowable.

Please note. If your building has had its occupancy capacities determined under previous legislation, providing no material alterations has been made to the building then that previously determined figure should be acceptable to GFRS. Make it part of your fire risk assessment for your building.

If you do not have an existing capacity figure you have to consider one of the two following methods to determine this.

Method detailed in The Buildings Regulations "Approved Document B"

Maximum number of people allowable

The maximum allowed in the building is based on total usable floor space available. This is determined by:

- 1) Segmenting the space into distinct areas based on the use that area is put to.
- 2) Then divide that space by the number in Table 1 below that relates to the use of that area, i.e. dance floor, bar area, seating, etc.
- 3) Remember: toilets, corridors, stairways, do not count as usable space.

Please see working example overleaf...

Calculation Example:

Using the table below; If you have a dance floor area 10m x 20m this equals 200m² of floor space, the following calculation will apply. (200 / 0.5 = 400 people).

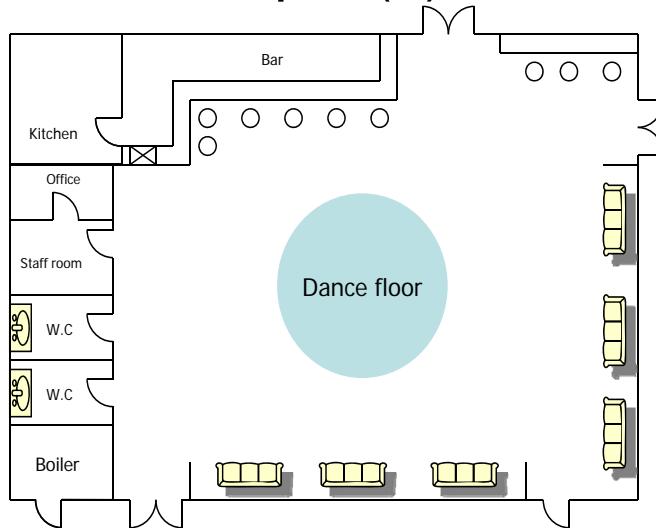
Occupancy Calculations

To assist in calculating a safe and accurate occupancy figure the following tables have been extracted from:-

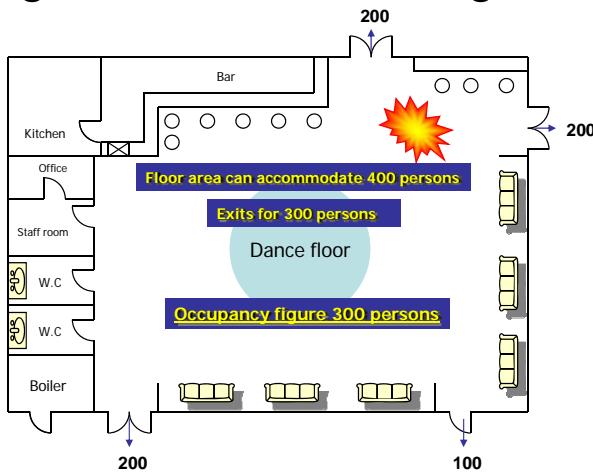
The Building Regulations Approved Document – B

Types of Accommodation	Floor Space Factor m²/person
Standing areas, bars without seating within 2m of the serving point (bar).	0.3
Assembly Halls, Dance Floors, Pop Concert Events.	0.5
Dining rooms, Seated Lounge/Bar.	1.0

Audit Inspection of Licensed Premises (worked example (1) 10mx20m)



Working example (2) of discounting
the largest exits and 45 degree rule



- Using diagrams 2 & 3 the floor area accommodates 400 persons
- measuring floor area - apply a calculation - use of each area of floor
- Each of which accommodates a different amount of people per square meter.

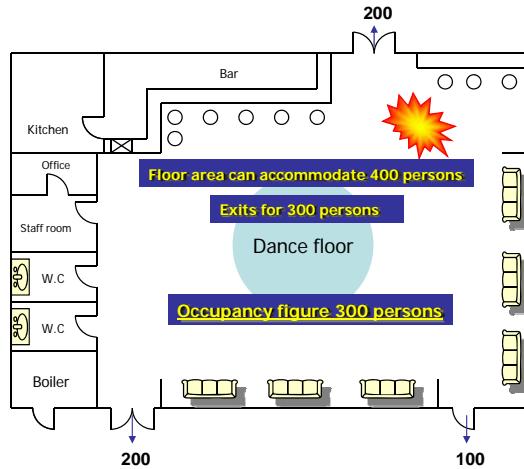
Four emergency exits

- numbers adjacent to the exits in examples 2 and 3 show number of people - escape safely from that exit
- Single outward opening – safe escape – 100
- Double outward opening – safe escape – 200

Worst case scenario

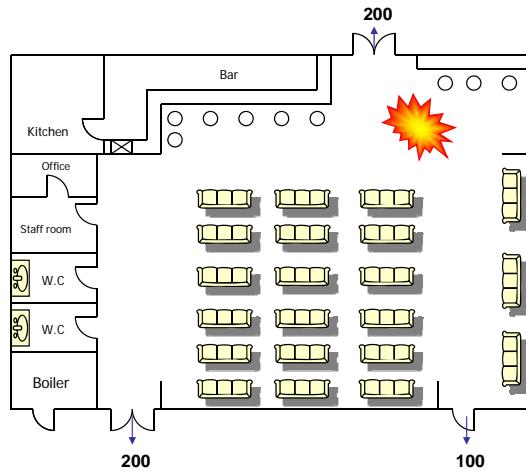
- fire takes out two exits because they are within 45 degrees of each other
- Leaving two available exits at the bottom of the plan.
- Bottom two exits allow 300 people to escape.
- Fire Service - take lowest figure of 300 - maximum occupancy figure. This includes staff members.

Working example (3) of discounting the largest exit



The example above is a dance floor that has just 3 exits in this instance, the customers and staff would turn their back on the fire and use the other 2 fire exits.

Working example (4) of gangways and seating



An example of moveable seating: Adequate gangway width 1.05m, seat way width 305mm



The occupancy of a lecture theatre is determined by the number of fixed seating within the premises.

Width of Escape Routes and Exits for Existing licensed premises.

Maximum number of persons	Minimum Exit Width outward opening door
100	750
200	1050
More than 220	5mm per person

Width of Escape Routes and Exits for new licensed premises.

Maximum Number of Persons	Minimum Width mm outward opening door
60	750
110	850
220	1050
More than 220	5mm per person

Minimum Number of Escape routes and Exits from a room or storey.

Maximum Number of Persons	Minimum Number of Escape Route/Exits
60	1
600	2
More than 600	3

Exit routes and considerations

- Are they Suitable?
- Easily, safely and immediately usable at all times
- Adequate for the number of people likely to use them
- Free from any obstructions, slip or trip hazards
- Well lit by normal and emergency escape lighting
- Available for access by the emergency services.

Evacuation time and Travel Distance

- In the majority of buildings the risk can be classed as normal
- Normal risk – 2.5 min.

When assessing travel distances to a place of reasonable safety – Which is,

- A protected stairway enclosure
- A separate fire compartment, from which there is a final exit to a place of total safety
- The nearest available final exit.

Travel Distance: Is the distance a person has to travel to a place of reasonable safety i.e

<u>Escape routes</u>	<u>Travel distance with seating in rows</u>	<u>Travel distance other areas</u>
<u>Where more than one route is provided</u>	20m High risk 32m Normal 45 Lower	25m High risk 45m Normal 60m Lower
<u>Where only a single escape route is provided</u>	10m High risk 15m Normal 18m Lower	12m High risk 18m Normal 25m Lower

Useful Websites:

<http://www.glosfire.gov.uk>

<http://www.acre.org.uk> (Action for Communities in Rural England)

<http://www.culture.gov.uk> (Department in Culture Media and Sport)

www.firesafetyguides.communities.gov.uk

<http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partb/bcapproveddocumentsb/>

A more complex building with more than 2 storey's will require complex calculation to calculate "flow through rates" in this instance please contact the Fire Safety Enforcement team on 01452 753222