Hall occupancy; numbers and related fire issues.

Schools Safety Guide

Document information

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Purpose	To give school leadership guidance on maximum hall occupancy numbers for various events and activities.		

Contents

Introduction

This guide should assist you in determining how many people can safely use your school hall and get out in an emergency. The calculations should form part of the school's fire risk assessment.

Occupancy should be based both the physical capacity of the hall and the availability of exits:

To calculate physical capacity of the hall

This is determined by calculating the usable floor area in m^2 and dividing that by 0.5; therefore, a 20m by 10m hall could hold 400 standing people – (20 x 10)/0.5 = 400.

However, this is not the final figure for the room as you still need to calculate the available exit capacity.

To calculate the available exit capacity

The capacity of an escape route is measured by the number of persons per minute that can pass through it, so to establish the capacity it is necessary to measure the width of the route at the narrowest point.

The following guide can be used to determine the general capacities of escape routes (see also **BB100** below). Note the Fire Authority tend to class schools as high-risk buildings:

A width of at least 750mm can accommodate up to:	**A width of at least 1050mm can accommodate up to:**
• 80 people in higher risk premises; or • 100 people in normal risk premises	• 160 people in higher risk premises; or • 200 people in normal risk premises

An additional 75mm should be allowed for each additional 15 persons (or part of 15).

The total width of the escape routes should not be less than that required to accommodate the maximum numbers of people likely to use them. Note: The minimum width of an escape route should not be less than 750mm and, where wheelchair users are likely to use it, not less than 900mm.

There are also minimum numbers of escape routes:

- Up to 60 people – minimum 1 escape route
- 61 to 600 people – minimum 2 escape routes
- More than 600 people – minimum 3 escape routes

When calculating the overall escape route capacity for premises that have more than one way out, you should normally assume that the widest exit is not available because it has been compromised by fire. If doors or other exits leading to escape routes are too close to one another, you should consider whether the fire could affect both at the same time. If that is the case, it may be necessary to discount them both from your calculation.

To return to the previous example, if your 20x10 hall with a physical capacity of 400 has only two exit routes, then the smallest of the exits must be a minimum of 2100mm wide to accommodate all 400; if the exit is narrower, the capacity of the hall would be reduced accordingly.

If the hall has three exit routes, each 1050mm wide, then discounting one (compromised by fire) still leaves 2100mm width of exit route, hence the hall could accommodate all 400.

Use of halls with chairs in rows or chairs and tables

Use of chairs and other furniture will reduce the physical capacity of the hall.

Where rows of chairs are used, you should leave a 1m wide corridor around the edge, and if you have more than 14 chairs in a row we would advise you have a 1m centre aisle.

Where tables and chairs are used, you should ensure that the layout does impede egress to the final exits.

BB100 considerations

The capacities of escape routes quoted above are from the Fire Safety Risk Assessment for Educational Premises guide (produced to support the Regulatory Reform (Fire Safety) Order). Figures in that guide differ slightly from those in Building Bulletin 100 used by Building Control when assessing building plans. If you are planning new school buildings, you should contact your Building Control or an architect familiar with BB100 for clarification.

Other factors to consider

- Exits doors should open in the direction of escape and must not be locked when the hall is in use
- Appropriate signs identifying escape routes should be in place; if exits are no longer in use (either permanently or temporarily), signs must be amended accordingly
- Exit routes should be visible from all parts of the room and must not be blocked by furniture, etc
- Where evening activities take place, appropriate emergency lighting should be installed. In addition, you must ensure that all appropriate exit routes are still available and have not been locked for security purposes
- Curtains/drapes should be of fire retardant material or treated with a suitable fire-retardant product – the Fire Authority may ask you to prove that any curtains/drapes you use are suitable and that when cleaned, are suitably retreated
- Curtains/drapes should not be used on ceilings or escape routes/circulation areas and should not cover emergency lighting, fire alarm call points, detectors and sounders, escape doors and fire signs/notices

Further information

Schools should contact their competent fire risk assessor/advisor or the councils fire safety advisors in the first instance. The health & safety unit can also be contacted for advice.

Additional information on fire safety can be found in the Fire school safety guide (SSG).

Specific guidance on fire safety in education premises is available on the Communities and Local Government website:
http://www.communities.gov.uk/publications/fire/firesafetyrisk6

Sandwell Council has a Safety Management Procedure (SMP) on Fire that Voluntary Controlled and Community Schools must adhere to.