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Ref: 45/1/180

*Note: The following letter was issued by our former department, the Department for Environment, Transport and the Regions (DETR). DETR is now Communities and Local Government - all references in the text to DETR now refer to Communities and Local Government.*

## **Building Act 1984 - Section 16(10)(a)**

### **Determination of compliance with Requirement B1 (Means of escape) of the Building Regulations 1991 (as amended) in respect of the provision of a gallery level within the existing roof space of a flat**

#### **The proposed work**

4. The proposed building work relates to an existing second floor flat which is approximately 7.5m x 11m and comprises a landing/hall, two bedrooms, a reception room and kitchen. The landing/hall also gives access to a stair leading down to a bathroom at half-landing level. At third floor level there is an attic covering the full plan area of the second floor. You state that the flat is situated more than 4.5m above access level and is entered from the floor below the flat, ie the half-landing bathroom level. It appears from your plans that the flat is at the top of a common stairway but you have not stated how many flats are at the lower levels or provided any details of the fire separation/protection to the common stair from those flats. Your plans indicate an 850mm x 500mm escape window to be located at second floor landing level to allow rescue by ladder from a flat roof. The Borough Council have stated that they do not have any existing records of the building or details of the fire resistance of existing doors.

5. You are proposing to convert the attic space to form a gallery/study, approximately 3.7m x 7.7m. The main landing at second floor level is designated on the plan as a library with shelving, and the new gallery will be accessed by the existing stair which previously served the attic and which leads up from this main landing. The gallery will be located to one end of the flat and centrally along its length. In addition, an automatic fire detection and alarm system to an L1 standard is to be installed. That part of the side of the gallery facing the stairway is to be open, as will be the side forming the end of the gallery and which will overhang the second floor accommodation. The second floor accommodation is to be re-designed so that the balcony will overhang a newly positioned reception room. Adjacent to the new reception room, and at the same end of the flat, there is to be a newly located kitchen. This kitchen is to have a 30 minute fire resisting door and the same rating to the wall which separates the kitchen from the stairwell. The existing accommodation on the second floor under the gallery comprises a kitchen and a bathroom. It is proposed to convert the kitchen into a second bedroom.

6. These proposals formed the basis of a full plans application on which there was further discussion. The Borough Council took the view that irrespective of whether the upper level was defined as a gallery, a staircase enclosure was required if means of escape from the building was not to be affected. Because plans of the existing construction show two door protection to the common staircase, the proposed open plan staircase was considered to adversely affect the means of escape. To overcome the problem and achieve compliance with Requirement B1 (Means of escape) of the Building Regulations 1991 the Borough required the provision of a 30 minute fire resisting (including for insulation) screen at the head of the stairs to the gallery.

7. However, you have sought independent advice from consultants which has concluded that a screen at the gallery level would be neither required nor effective; and that compliance with Requirement B1 could be achieved instead by the installation of appropriate fire detection and the introduction of other passive measures into the structure. It is in respect of the need to provide the fire screen at the head of the stair that you have applied to the Secretary of State for a determination.

### **The applicant's case**

8. You state that *Approved Document B (Fire safety)* does not contain guidance relevant to the design of flats with galleries and because of this you have followed the guidance given in *BS 5588 (Fire precautions in the design, construction and use of buildings): Part 1: 1990 (Code of practice for residential buildings)* with respect to the means of escape in case of fire.

9. You consider that you have complied with the guidance given in BS 5588: Part 1: 1990 for flats with galleries in the following context:

(i) the main level of the flat has been designed in accordance with clause 9.6 (Recommendations for flats situated more than 4.5m above ground level and entered from the floor below the flat) of the British Standard. The gallery floor has been designed in accordance with clause 9.8

(ii) the plans show that an alternative exit has been provided via an escape window leading from the second floor hall/library landing to a flat roof to allow for ladder rescue

(iii) the cooking facilities are separated from the stair leading to the gallery by fire resisting construction. The glazing within this wall is to have the same fire resistance as the wall in terms of integrity and insulation

(iv) you maintain that adequate escape from the gallery has been provided. The plans show that the access stair to the gallery leads directly to the entrance hall stair and to the flat entrance door at the bathroom half-landing level, ie below the main floor level of the flat.

(v) the travel distance from any point on the gallery to the head of the stair does not exceed 7.5m. No alternative escape from the gallery is provided or is considered to be necessary.

(vi) You are proposing to install a fire detection and alarm system throughout the flat to an L1 standard in accordance with *BS 5839: (Fire detection and alarm systems for buildings): Part 1: 1988 (Code of practice for system design, installation and servicing)*.

(vii) You have provided a copy of a previous determination given by the Secretary of State with respect to a sleeping gallery, which you suggest was a similar case to yours.

10. Your consultants are also of the opinion that the proposals would satisfy the requirements of the regulations with respect to means of escape in case of fire. They state, in particular, that there would be little benefit in providing an enclosure at the head of the stair and that it would delay escape being made from the gallery level. They also consider that because the gallery is above the second floor, any fire on the gallery is unlikely to prejudice the escape from the bedrooms.

### **The Borough Council's case**

11. The Borough Council have given the following reasons for not being able to accept your proposals as submitted:

(i) two door protection should continue to be provided to the staircase. The existing plan shows two door protection to the staircase and your proposal to remove this existing provision would adversely affect the means of escape

(ii) without the enclosure the travel distance from the upper level (gallery floor) is greater than 9m to the flat entrance door and the omission of the enclosure to the stair at the gallery level means that all rooms at the lower level are inner rooms with travel distances exceeding 9m

(iii) your layout does not comply with clause 9.6(b)1, 2 or 3 of BS 5588: Part 1: 1990 with respect to alternative escape routes, travel distance and the position of cooking facilities

(iv) storage should not be permitted in the staircase enclosure [a reference which the Department takes to be the proposed library shelving]

(v) smoke detection alone for the present layout would give early warning but does not permit the persons confronted by an outbreak of fire to escape safely down the unprotected stair.

(vi) the provision of smoke detection would be required in any case since no alternative means of escape has been provided for the gallery floor. Additional measures are considered to be necessary to compensate for the increased sleeping risk on the gallery.

(vii) the proposed alternative escape from the second floor is not acceptable. Escape must be possible without the reliance on external rescue from the lower storey of a building.

## **The Department's view**

12. The Department accepts that guidance on gallery floors in flats is not given in *Approved Document B* and that it is expected that use can be made of the guidance given in BS 5588: Part 1: 1990, as in fact you have done. However, it is not for the Department to provide an interpretation of a British Standard. The Department can only consider whether your proposal not to provide fire separation at the head of the access stair to the gallery satisfies the functional requirements of the Building Regulations 1991, which in this case is Requirement B1.

13. The Department takes the view that there are two main areas of concern with respect to your proposal not to provide fire separation at the top of the access stair to the gallery. First, there is the escape or rescue of persons occupying the gallery floor and secondly there is the question of whether means of escape has been materially altered for persons on the lower floors of the building.

14. *Clause 9.8 (a) of the BS 5588: Part 1: 1990* states the main level of the flat should be planned in accordance with the principles illustrated in figures 4, 5a or 5b. Figures 4 and 5b of the standard indicate a flat layout that has separate rooms and clearly shows a hall with the rooms leading from the hall. Although on the face of it this may appear to reflect the situation in this case, you are proposing to provide a second floor hall (with fire doors to each room) which is open from above to the gallery. In the Department's view the fact that the hall is open at the top would tend to negate the value of this fire separation provided between the hall and the habitable rooms on the second floor.

15. The Department considers that if a fire occurred in the kitchen/reception area it could spread up to and across the gallery floor, and down into the hall. The effects of this could be twofold. First, means of escape/rescue from the gallery floor could be prejudiced because the open stair could be compromised by smoke. You are not proposing to provide alternative means of escape from the gallery as is suggested in *Approved Document B* for maisonettes. If therefore the occupant of the gallery needed to be rescued, such as is likely to be the case if the occupant were a baby, then a rescuer would possibly need to come from one of the closed rooms on the second floor and traverse the open stair twice because it forms the only means of access to the gallery.

16. Secondly, the means of escape from the second floor rooms of your flat and possibly from flats situated at the lower levels of the building could be prejudiced by smoke from such a fire because of the open stair. Due to the lack of detail provided with regard to the fire separation between the flats and the common stair, the Department considers it necessary to take account of the lower level flats. In the absence of such detail the Department accepts the view of the Borough Council that existing means of escape appears to have been made worse by your proposal.

17. The Department accepts your arguments with regard to travel distance on the gallery to the head of the stair and agrees that this follows the guidance given in the British Standard. But the Department does not accept, for the reasons stated above, that your proposal shows compliance with Requirement B1 of the Building Regulations and considers that you have not shown that adequate means of escape will be available. The Department accepts the flexible approach adopted by the Borough Council with regard to not insisting on alternative means of escape from the gallery and to accepting the existing conditions at the lower levels of the building. Equally, the Department also accepts the view of the Borough Council in that to maintain a reasonable level of safety in these circumstances, then fire separation should be provided at the head of the stair giving access to the gallery floor.

18. In reaching this conclusion the Department has taken account of your proposal to incorporate a fire detection and alarm system and the points made in support of your proposals by your consultants. With regard to a previous determination case which you submitted, the Secretary of State must consider each case on its own merits. In any event, the Department notes that this related to a single storey dwelling unit.

### **The determination**

19. The Secretary of State has given careful consideration to the particular circumstances of the case and the arguments put forward by both parties. On the basis of the proposals as submitted, including the proposed fire detection and alarm system, he does not consider that they make adequate provision for safe escape. He has therefore concluded and hereby determines that your proposals do not comply with Requirement B1 (Means of escape) of Schedule 1 of the Building Regulations 1991 (as amended).