

Date: 26/07/01

Ref: 45/3/148

Note: The following letter which has had personal details edited out was issued by our former department, the Department for Transport, Local Government and the Regions (DTLR). DTLR are now Communities and Local Government - all references in the text to DTLR now refer to Communities and Local Government.

Building Act 1984 - Section 39

Appeal against refusal by the Borough Council to dispense with Requirement B1 (Means of escape) of the Building Regulations 1991 (as amended) in respect of the need for a protected stair at ground floor level forming part of building work

The appeal

3.The building to which this appeal relates is a traditionally built three storey, residential, end of terrace mews property with a pitched tiled roof. It comprises a basement, ground and first floor. The basement contains the kitchen, dining room, bathroom, and a bedroom (No. 4). The ground floor contains a large lounge and an adjacent study. The first floor accommodates three bedrooms and a bathroom.

4.The existing ground to first floor stair rises in a single flight via winders at the top to the first floor landing. It is constructed on the dividing wall with the study and is open on the other side to the lounge; and rises from the back end of the lounge towards the front elevation, over the front door. The ground to basement stair is located and descends from just inside the front door.

5.The building work involves the vertical extension of the property by the removal of the existing roof and the addition of a second floor (fourth storey) within a mansard roof construction whose height will be no greater than the existing roof apex. The new storey is less than 50 square metres in floor area and will consist of two habitable rooms, a bathroom and a small dressing room. The two habitable rooms are located on each side of the new stair and are designated as a study/snug and guest bedroom. Bedrooms 1 and 2 on the first floor are to be knocked into one to form a master bedroom, and bedroom 3 is to be re-designated as a dressing room.

6.The existing stair between the ground and first floor is to be removed and replaced for aesthetic reasons by a new 'designer type stair' comprising glass balustrading and hardwood treads which will extend from the ground floor to the new second floor. It will do so in two flights and a half landing (on the front elevation) between each floor and be open to the ground floor in a similar manner to the existing stair.

7. The new stairway will be fully enclosed at first and second floor levels but because your client wishes for aesthetic reasons to retain the open plan design of the lounge you are proposing to substitute the 'normal passive protection' recommended in *Approved Document B (Fire safety)* with a 'pro-active' system incorporating an integrated smoke and fire alarm detection system allied to an automatic sprinkler system for the ground and stairway areas.

8. The two existing doors on the first floor which open on to the stairway will be replaced (including frames) with new 30 minute fire resisting self-closing doors (FRSC) and the two new doors separating the habitable accommodation on the new second floor will also be 30 minute FRSC doors. In addition, the existing door openings to the habitable rooms opening onto the stairway in the basement will be replaced with new 30 minutes FRSC doors and frames and you state that an additional fire exit to the basement courtyard and street will be provided although this is not shown on your drawings.

9. The building work will also include upgrading of the ceiling under the existing first floor, and construction of the ceiling under the second floor so that both achieve 60 minutes fire resistance. New internal walls forming the enclosure to the stairway at first and second floor levels, will also be constructed to achieve 60 minutes fire resistance. All new windows will be single glazed vertical sliding sashes with openings in excess of the minimum standards for escape given in *Approved Document B*.

10. The above proposals were the subject of a Building Notice procedure, but the Borough Council took the view that your proposal to install a sprinkler system within a domestic situation was not adequate compensation for the omission of physical protection provided by doors and partitions. However, you considered that the Borough Council was sticking rigidly to the letter of the Building Regulations without adopting a pragmatic approach. You therefore applied for a dispensation of Requirement B1 which was refused by the Borough Council. It is against that refusal that you appealed to the Secretary of State. The material date for your appeal is .. and it therefore falls to be considered in respect of the Building Regulations 1991 (as amended up to and including SI 1999/77).

The appellant's case

11. You consider that your pro-active proposals for an integrated fire detection and alarm system allied to a domestic sprinkler system for the ground floor and stairway areas more than compensates for the lack of passive protection in the form of enclosure to the stair at ground floor level. You also consider that your proposals are in keeping with the 'pragmatic approach' supported by the then Minister of State for Housing and Planning, Nick Raynsford, in an adjournment debate relating to fire safety and, specifically, residential sprinklers on 8 March 2000.

12. In support of your case you have made the following points:

(i) You believe that an automatic system, such as is proposed, which is not dependant on rising butt hinges, spring operated door closers, or persons shutting doors, must be preferable and safer than a passive system.

(ii) You are concerned that your particular application should be considered on its individual merits, but that it has in the event been considered in too general terms simply as a passive vis a vis a pro-active system rather than being evaluated as a whole having regard to the specification and fully integrated nature of your proposed system.

(iii) All new windows will have openings in excess of the minimum standards for escape given in *Approved Document B*. Given that the windows to the two habitable rooms on the new second floor are sited above a mews which is readily accessible to the emergency services and ladder access, this means that suitable window escape will be available.

The Borough Council's case

13. The Borough Council takes the view that the installation of a sprinkler system within a domestic situation is not adequate compensation for the omission of physical protection provided by doors and partitions. In support of this view the Council has made the following observations:

(i) It is possible for a fire to occur which, in the early stages, does not generate an appreciable amount of heat but does generate smoke. This smoke would be free to migrate up the stairway thus impeding escape.

(i) Whilst the smoke may trigger an alarm it is a fundamental tenet of all guidance and previous determinations by the Secretary of State that early warning alone was not adequate and that physical protection from the effects of smoke and fire is required.

(ii) The sprinkler system has been designed using the guidance contained within LPC TB14 1990. Clause 14.3 of this guidance states *'The provision of a sprinkler system in dwelling houses or flats does not diminish the need for fire precautions, structural fire resistance, escape routes, domestic smoke detectors and safe housekeeping practices'*.

(iii) In the unlikely event that there is a rapid build up of heat with little smoke, causing the sprinkler heads to trigger on the ground floor the amount of smoke and steam generated would seriously impede the evacuation process from the upper floors even if, as is well established, the sprinklers inhibit the spread of fire.

(v) The Minister of State's comments in the adjournment debate on 8 March 2000 refer to situations where a protected route cannot, in all practicality, be provided. Whilst the Borough Council does not necessarily agree with this method of applying fire precautions, in this particular case the open plan arrangement of the ground floor dates back to building work carried out in 1965 and is not part of the design of the original building. The proposal to retain the open plan arrangement at ground floor level is therefore one of 'architectural preference'. In this respect the Council states that there have been no objections to the provision of an enclosure to the stair at ground floor level from English Heritage or other conservation bodies.

(vi) Although the Borough Council accepts that it is not strictly relevant to this determination, they are concerned about the implications of the decision on this determination given that the issue of the use of sprinklers instead of provision of physical protection is one of the commonest areas of disagreements with applicants.

The Secretary of State's consideration

14. The main consideration in this case is the safety of the occupants of the new second floor if a fire occurs on the ground floor. The guidance in *Approved Document B* for loft conversions relates only to the conversion of an existing roof space and, as such, would not be applicable to this case as the new habitable rooms are being created by a vertical extension and the replacement of the existing roof by a mansard roof structure. The Secretary of State, however, considers that it may be reasonable, in the circumstances of this case, to adopt the general approach used in *Approved Document B* for loft conversions. In the case of a loft conversion to an existing two storey dwelling house it is considered reasonable to demonstrate that adequate means of escape would be achieved by the provision of a primary escape route supplemented by an assisted escape route from the habitable rooms at second floor level.

15. When following this approach it would normally be necessary to upgrade existing stairway enclosures by making existing doors self-closing and by replacing conventional glass with fire resisting glass. If, as in this case, there is no existing enclosure at one or more level in the house then additional doors and partitions necessary to complete the enclosure should be provided. However, in this case you are proposing to install new 30 minute fire resisting self-closing doors to the first and second floor levels only, leaving the ground floor as existing in an open plan arrangement.

16. You consider that your proposal for a fire detection and alarm system covering all of the habitable rooms, in addition to a domestic sprinkler system covering all the rooms at ground floor level and the stairway, is an adequate alternative to the physical enclosure of the stairway at ground floor level. But the Borough Council has taken the view that your proposals are not adequate and have identified some circumstances where the active systems that you propose may not perform as well as partitions and closed doors.

17. In the Secretary of State's view no safety system is entirely infallible, and there will always be scenarios where such systems will not perform as intended. It is, therefore, necessary to make a subjective assessment of the overall level of safety offered by an alternative approach in comparison to the conventional solutions offered in Approved Documents.

18. The Secretary of State considers that in this case the proposals for combination of early warning from the fire detection system and fire suppression from the sprinkler system will, when considered as a whole, provide a similar level of safety for the occupants of the house as would be provided by a self-closing door of undetermined fire resistance and its enclosure. If, however, the circumstances described by the Borough Council were to occur and the occupants of the habitable rooms on the second floor found their primary escape route blocked then adequate provision would be available for assisted escape via the windows from each habitable room. Sprinkler protection might also extend the period for which the occupants of the second floor could wait to be assisted in their escape via the second floor windows.

19. For this approach to be acceptable it would be necessary to ensure that the fire detection system and the sprinkler system were adequately designed and installed to an appropriate specification. To ensure that the sprinkler system would react to a fire as quickly as possible the sprinkler heads would need to be selected carefully and be of the quick response type (as defined in *BSEN 12259 Part 1 : 'Fixed fire-fighting systems. Components for sprinkler and water spray systems. Sprinklers'*). It would also be necessary to ensure that the smoke detectors were positioned to respond quickly and were adequate in number. In this case, for example, additional detection might be required in the ground floor reception and study area. However, subject to these points being properly addressed, the Secretary of State considers that the principle of your proposals has the potential in the particular circumstances of this case to comply with Requirement B1.

The Secretary of State's decision

20. The Secretary of State has given careful consideration to the facts of this case and the arguments put forward by both parties. He has noted that the Borough Council has referred to previous determinations issued by the Secretary of State, but he is required to consider all cases on their individual merits and issues specific to previous cases will not necessarily be relevant to subsequent ones.

21. Paragraphs 14-19 above have given the Secretary of State's view on the potential for the principle of your proposals to achieve compliance with Requirement B1, having regard to the particular circumstances of this case.

22. However, you have appealed to the Secretary of State in respect of the refusal by the Borough Council to dispense with Requirement B1. The Secretary of State considers that compliance with Requirement B1 is a life safety matter and as such he would not normally consider it appropriate to either relax or dispense with it. Moreover, because in the particular circumstances of this case he considers that the principle of your proposals has the potential to comply with Requirement B1 there would appear to be no *prima facie* case for the need to relax or dispense with Requirement B1 in any event. Therefore, taking all these factors into account, the Secretary of State has concluded that it would not be appropriate to either relax or dispense with Requirement B1 (Means of escape) of Schedule 1 to the Building Regulations 1991 (as amended up to and including SI 1999/77). Accordingly, he dismisses your appeal.