

Date: 22/06/99

Ref: 45/1/178

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 (Fire Safety - Means of escape) of the Building Regulations 1991 (as amended) in respect of a loft conversion

3. In making the following determination, the Secretary of State has not considered whether the plans conform to any other relevant requirement.

The proposed work

4. The building work to which this application relates comprises alterations to the roof space of an existing two storey house to form a single habitable room, which your drawing indicates has a floor area of approximately 43 square metres. The stair from the first floor to the loft space is existing but you state that this stair will be enclosed in fire resisting construction. You are proposing to fit a new fire door (FD20) at the foot of this stair on the first floor and the head of the stair will be open to the new loft room. The existing part of the stair from ground to first floor is open to the ground floor accommodation and discharges into the lounge on the ground floor. Escape from the lounge is via a door located near the bottom of the stair in the wall separating the lounge and kitchen and is then through the kitchen to a final exit door. You propose to install a second new fire door at the head of the flight from the ground to first floor.

5. You state that two escape windows, fully compliant with *paragraph 1.29 and diagram 4 of Approved Document B (Fire safety)*, will be provided at second floor level and also an 850mm by 500mm opening window will be provided at first floor level. You have also stated that your client is prepared to install smoke detectors on the ground, first and second floors.

6. These proposals were the subject of a full plans application which was rejected by the District Council on grounds of non-compliance with Requirements A1 (Structure - Loading), B1 (Fire Safety - Means of escape) and Part E (Resistance to the Passage of Sound) of the Building Regulations 1991. The District Council were not prepared to accept the proposals with the stair between the ground and first floor being open to the ground floor living accommodation, but you maintain that adequate provision for escape has been provided. It is in respect of this question that you have applied for a

determination. The determination application has been lodged with the Department in respect of Requirement B1 only and the Department therefore assumes that the other issues relating to Parts A1 and E of the Regulations have now been resolved.

The applicant's case

7. You consider that your proposals satisfy the objectives of Requirement B1 although you accept that you have not strictly followed the guidance given in *Approved Document B*. You point out that the house, as existing, does not have protection to the stair between the ground and first floor and that this situation is not altered by the proposal to carry out the loft conversion. You propose to provide an extra FD20 door to separate the ground and first floor in addition to an early warning system which will include smoke detectors on the ground, first and second floors.

8. You state that *paragraph 1.20 of Approved Document B* gives a choice between using a protected stair or as is suggested in paragraph 1.20(b) an alternative escape route with the top storey being separated from the lower storeys by fire-resisting construction. You also state that your client has opted to use option (b) of paragraph 1.20 and you point out that paragraph 1.29 of the Approved Document permits the use of an escape window in the case of a loft conversion.

9. You consider that the following fire scenarios will therefore apply:

(i) if a fire occurred at ground floor level then persons at first floor level would be alerted earlier than at present and would have greater protection than currently exists. Their escape would be via an escape window and persons on the new second floor would have the choice of either using the protected stair to the first floor and then using a window for their escape, or of remaining on the second floor with a double level of fire protection between the ground and second floor

(ii) if a fire occurred at first or second floor level then you consider that the unprotected stair between the ground and first floor would not be relevant because persons escaping could make use of the protected stair between the first and second floor and then escape down the open stair on the ground floor to a final exit door.

The District Council's case

10. The District Council do not consider that your proposals satisfy Requirement B1 of the Building Regulations 1991 and make the following points in support of their rejection of them:

(i) you have referred to *paragraph 1.20 of Approved Document B* which gives recommendations for houses with a floor more than 4.5m above ground level and is based on a number of essential factors being in place, such as 30 minutes fire resistance for all floors

(ii) *paragraph 1.24 of the Approved Document* states that the stairway in the ground and first storeys should be enclosed with walls or partitions which are fire resisting and that enclosure should either extend to a final exit or give access to at least two separated escape routes at ground level.

11. The District Council accept that windows in conformity with the guidance given in paragraphs 1.29 to 1.31 of the Approved Document may be considered suitable for escape or rescue purposes. However they consider that the use of such windows depends on the provision of an effective primary means of escape as is suggested in paragraph 1.24 of the Approved Document. The Council note that your stated option is to use *paragraph 1.20(b) of Approved Document B*. In view of this they consider that for this paragraph to be complied with then the argument centres on whether a window can be considered as being an acceptable alternative escape route leading to its own final exit. The Council take the view that in this case the escape windows cannot be considered as alternative routes of escape because you have not provided an acceptable primary route of escape via the stairs.

The Department's view

12. The Department considers that the primary concern in this case is the safety of the occupants of the new second floor habitable room should they need to escape or be rescued in fire. The Department is aware that the risk to the occupants of a building increases as the height of the top floor increases above ground or access level, and in this case you are proposing to extend the building from a two storey dwelling to one of three storeys.

13. Guidance on achievement of compliance with the fire aspects of the Building Regulations is given in *Approved Document B* and paragraph 1.20 has particular relevance for three storey houses. The basic assumption in this paragraph is that there will be a protected stair leading directly to a final exit as suggested in paragraph 1.20(a)(i) and indicated in Diagram 2(a) of the Approved Document. Alternatively it is permissible to have an arrangement where the stair leads to two final exits, suitably separated, as suggested in paragraph 1.20(a)(ii) and indicated in Diagram 2(b) of the document. A second approach is also given in paragraph 1.20(b) which allows for an alternative escape route to be provided which leads to its own final exit.

14. The Department expects paragraph 1.20 to be followed primarily for new three storey houses, although it acknowledges that it would be perfectly acceptable to follow the guidance given in paragraph 1.20 for loft conversions providing all the criteria were satisfied. You state that you have opted to follow the guidance given in option (b) of paragraph 1.20 of the Approved Document, however the Department accepts the District Council's view that your proposals do not satisfy the guidance given in paragraph 1.20(b).

15. The Department accepts that you have provided fire separation between the new loft room and the lower rooms but it does not consider that you have provided an alternative escape route leading to its own final exit, as is suggested in paragraph 1.20(b). In your case the existing stair is shown to discharge into the ground floor lounge with access to a final exit door being available only through the kitchen. The Department does not consider that the provision of an escape window on the first floor is an acceptable compensatory feature in lieu of the protected stair discharging to a final exit in accordance with either Diagram 2 (a) or (b). Neither does the Department consider that an escape window is an acceptable compensatory feature to an alternative escape route leading to its own final exit if the intention is, as you have stated, to follow paragraph 1.20(b). The definition of a final exit given in appendix E of the Approved Document suggests that it should be sited to ensure the rapid dispersal of persons from the vicinity of the building and the definition does not imply that a window is suitable as a final exit. To reinforce this view, paragraph 1.29 of the Approved Document suggests that a window at first floor level is suitable for self-rescue; the paragraph does not suggest that a window is also suitable for the rapid dispersal of persons.

16. The Department accepts that the guidance given in paragraph 1.20 of the Approved Document could be onerous for loft conversions and for this reason further guidance for loft conversions has been given in paragraphs 1.23 to 1.31. In particular, paragraph 1.24 gives guidance on the enclosure of the existing stair and refers back to Diagram 2 (a) or (b) as an example of an acceptable standard. Paragraph 1.25 gives guidance on doorways within the enclosure to the stair and permits a partially protected route of travel by suggesting that it is only necessary to fit self-closing devices to existing doors.

17. The Department acknowledges the merit in the provision of additional smoke detectors. However it takes the view that an early warning system will not prevent the single stair, which is intended to be the primary escape route, from becoming smoke-logged in fire. This is particularly so if the fire were to start in the ground floor lounge. The Department supports the view of the District Council that your proposals do not follow the guidance given in either *paragraph 1.20(b) or paragraph 1.24 of Approved Document B* and do not therefore satisfy Requirement B1 of the Building Regulations 1991.

The Secretary of State's decision

18. The Secretary of State has given careful consideration to the particular circumstances of this case and the arguments advanced by both parties. On the basis of the proposals as submitted, including the option of installing smoke detectors on the ground, first and second floors, 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 (Fire Safety - Means of escape) of Schedule 1 of the Building Regulations 1991 (as amended).