

Date: 23/09/05

Ref: 45/1/220

Note: The following letter was issued by our former department, the Office of the Deputy Prime Minister (ODPM). ODPM became Communities and Local Government on 5 May 2006 - all references in the text to ODPM now refer to Communities and Local Government.

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

Determination of compliance with Requirement B1 (Means of warning and escape) of the Building Regulations 2000 (as amended) in respect of building work to erect a single storey extension

The proposed work

4. The building to which this determination relates is a semi-detached three storey house comprising ground, first and second floor accommodation, the latter involving a loft conversion. The proposed building work involves the erection of a single storey rear lounge extension, approximately 10m² on plan, with a pitched tile roof.

5. The proposed work was the subject of two full plans applications which were rejected by the Borough Council on 18 August and 26 October 2004 on the grounds that insufficient information had been provided to demonstrate compliance with Requirement B1 (Means of warning and escape) of the Building Regulations. The Council considered that the proposed ground floor extension would obstruct the existing means of escape, via ladder access, from the emergency egress window in the second floor loft room positioned on the rear roof slope. It is in respect of this question that you have applied to the Secretary of State for a determination.

The applicant's case

6. You point out that your clients were not involved in the original loft conversion. You accept that the existing emergency egress window does not comply with the current guidance in respect of the siting of roof emergency egress windows, but it is the only escape facility that has been provided for the second floor loft room.

7. You comment that if a ladder for escape purposes currently needed to be raised it would be footed at ground level opposite the loft room window and an escapee or rescuer would need to traverse the roof slope to reach the head of the ladder. The ladder would be the escape route and would be sited in front of the ground floor glazed doors and between two first floor bedroom windows, which do not provide 30 minutes fire resistance.

8. In your view, the arrangements following the erection of the proposed extension would not be materially different insofar as:

- The roof slope would still need to be traversed.
- The emergency egress window in the loft room would not be altered.
- A ladder would still be needed to affect the escape, and the pedestrian access to the rear of the house would not be affected which is available at all times.
- The escape route down the ladder would not be affected insofar that it would still pass in front of glazed doors on the ground floor and between the windows at first floor level.
- You consider that the only difference would be that the ladder access would be broken into two stages from the ground to the flat roof area of the proposed extension and then from the flat roof to gutter position. You indicate that the Borough Council has approved this method in the past.

9. You refer to the distinction between the functional requirements of the Building Regulations and the guidance in the Approved Documents. You also consider your proposals in detail against the guidance in *Approved Document B (Fire safety)* relating to: escape over a ground floor roof and a flat roof area; the need for guarding, which is considered unnecessary in your case; and whether 30 minutes fire resistance should be provided for openings within 3m of the escape route, which in your view is not reasonable when applied to loft conversions. Taking into account that the means of escape in question is from a second floor loft room, you conclude with the following reasons to support your contention that compliance with Requirement B1 has been demonstrated:

(i) The erection of the extension as proposed would not affect any of the following factors:

- facilities offered by the emergency egress window that are in place.
- the ability to transport the escape ladder to the point where it needs to be raised to affect an escape at any time.

(ii) The proposed extension offers the following:

- the extension roof would be provided with 30 minutes fire resistance.
- a leaded flat roof platform, approximately 700mm wide x 1000mm deep, which would allow for the ladder to be positioned safely to reach the gutter line. You assume that any person who attempts a ladder rescue would have sufficient experience to lift the necessary ladders and also take the view that it would be simpler to facilitate a rescue in two stages, rather than one lift to second floor level.

(iii) The door in the proposed extension and the existing window openings on the first floor would not affect the means of escape from the loft room to any greater degree than if the ladder reached the gutter position in one single lift

as at present and, therefore, by implication your proposals would align with the guidance in *Approved Document B*.

The Borough Council's case

10. As indicated above, the Borough Council considers that the proposed ground floor extension would obstruct ladder access to the existing second floor loft room emergency egress window. In the Council's opinion, the use of a flat roof ladder platform to foot a ladder to a second floor loft conversion, is not an appropriate means of escape, capable of being safely and effectively used at all material times, for the following reasons:

(i) The guidance in paragraph 2.25 of *Approved Document B* states that "the emergency egress window should be located to allow access for rescue by ladder from the ground, although it also states that escape across the roof of a ground storey extension is acceptable providing the roof is fire resisting".

(ii) However, the guidance in paragraph 2.5b, then states that "the route across the roof should lead to a storey exit or external escape route", and paragraph 2.5c also states that "any opening within 3m of the escape route should provide 30 minutes fire resistance". In this case, the route from the proposed flat roof platform would have to be by way of a ladder from the ground, which does not meet the definition of a storey exit or escape route as stated in the *Approved Document*. The Borough Council's interpretation of the guidance is that anyone escaping onto a flat roof should be able to reach a place of safety via a protected route, without having to resort to using a further ladder.

(iii) The proposed means of rescue in the event of a fire, by which the rescuer has to use two ladders, or use one ladder and then pull the ladder upwards to use again to reach the emergency egress window, is not considered by the Borough Council to be either practical or safe. The Council considers an attempted rescue by raising a ladder in one lift is simpler for any rescuer than raising the ladder in two stages; and would not consider that it is reasonable to assume that any person attempting a rescue would have any suitable or sufficient experience, or indeed that it would be apparent to any rescuer what the proposed platform on the extension roof was for.

(iv) The Borough Council also has concerns regarding the footing of the ladder on the proposed platform. The platform is proposed to be lead lined, which cannot be guaranteed to remain safe against the ladder slipping during inclement weather conditions. Also, should the rescuer have to climb the ladder to effect a rescue, the ability of the ladder to remain safely footed on the platform with two people on it is questionable in the Council's view.

11. The Borough Council concludes that your proposals do not comply with Requirement B1, which is supported by the Fire & Civil Service Authority.

The Secretary of State's consideration

12. In the Secretary of State's view, the main consideration in this case is the safety of the occupants of the existing second floor loft room should they become trapped if a fire were to occur at a lower level and the safety of any person who may attempt to rescue them.

13. Paragraphs 2.23 - 2.25 of *Approved Document B* give the context for ladder rescue from roof space / loft conversions. The specific provisions set out for such conversions provide an alternative approach to the use of a protected stair which would normally be provided in a new three storey house. Whilst it is expected that in most cases escape from loft rooms will be achieved via the internal stair of the house, it has to be recognised that the stair may not be protected to the same standard as for a new house because existing doors are retained and made self-closing only. As such a facility for external, ladder assisted, rescue is also considered necessary due to the higher risk that a person may become trapped in the loft room because the internal stair is unavailable. Due to the size and location of the proposed ground floor extension in this case, direct ladder access to the loft room would be prevented. In order to address this, you have proposed the provision of a flat platform constructed within the otherwise sloping roof of the extension which will be 30 minutes fire resistant and which you believe would facilitate such a rescue.

14. The Borough Council has, however, rejected your proposals primarily because it considers that the use of an intermediate ladder platform presents an unacceptable risk to persons escaping via the loft room window and to their rescuers.

15. The Secretary of State considers that in general the use of an intermediate ladder platform is not a very satisfactory means of achieving compliance with Requirement B1 in this type of case because there must always remain some doubt about safety in terms of erecting and traversing one or more ladders. In his view, and as a matter of principle, platforms should therefore only be used in cases where there is no alternative available to facilitate escape.

16. Where a ladder platform is proposed, the Secretary of State takes the view that it should be designed to ensure, as far as is reasonable, that the platform can be used safely. Your plan shows the platform set out to allow a ladder set at an angle of 60 degree, which is shallower than the recommended pitch of 75 degree. As such the platform would need to be increased in size to allow for this.

17. The platform would also need to be wide enough to allow assisted transfer from one ladder to another. The Secretary of State considers that the proposed width indicated of 700mm in this case is inadequate for this purpose and as such should be increased to a more suitable dimension. It would also seem advisable to incorporate into the platform something appropriate to prevent the foot of the ladder from slipping outwards.

18. However, notwithstanding any improvements which might be made to the design of the ladder platform, the Secretary of State takes the view, as indicated in paragraph 15 above, that as a matter of principle it is always important to look for better solutions to achieving compliance with Requirement B1 than having to have recourse to the use of such a platform. These could include the provision of a suitable emergency egress window to the front of the house or, better still, providing a fully protected stairway within the house by replacing existing doors with fire resisting self-closing doors thus negating the need for the emergency egress window altogether.

The determination

19. The Secretary of State has given careful consideration to the particular circumstances of this case and the arguments presented by both parties.

20. As indicated above, the Secretary of State considers that your proposals, as submitted, do not make appropriate provision for means of escape in case of fire from the existing second floor loft room. He has therefore concluded and hereby determines that your proposals do not comply with Requirement B1 (Means of warning and escape) of Schedule 1 to the Building Regulations 2000 (as amended).