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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 two additional storeys to a three storey building to form a maisonette.

The proposed work

4. The building work to which this determination relates is the provision of two additional storeys to an existing three storey building to form a new maisonette. The existing plan dimensions of the building are approximately 17m by 6m.

5. The existing accommodation comprises a ground floor shop with separate self-contained three bedroom flats on both the first and second floors. The shop and the stairway to the upper floors are accessed from the street via a common entrance lobby. This lobby is approximately 4m deep and 1m wide, with the main shop door on the right hand side as you enter and a door leading to the stairway to the upper floors at the end of the lobby furthest from the street. The final exit from the lobby to the street is in the form of a gate.

6. The proposed new two bedroom maisonette will be constructed within a mansard roof over two floors on top of the existing second floor. The maisonette will be accessed by extending the existing common stairway up to the new third floor, which will contain a protected entrance hall, bathroom, kitchen/living room and a bedroom. A protected internal stairway is then proposed within the maisonette leading up from the third to the fourth floor, which will contain the master bedroom and an en-suite bathroom.

7. These proposals were the subject of a full plans application which was first rejected by the Borough Council on 12 June 2003. A subsequent re-submission was also similarly rejected by the Council on 16 February 2004 principally because the Council considered that there was inadequate separation between the escape route from the common stairway to the upper floors and the ground floor shop and therefore did not comply with Requirement B1 (Means of warning and escape) of the Building Regulations. However, you believe that your proposals - as detailed below - would achieve

compliance. It is in respect of this question that you have applied to the Secretary of State for a determination.

The applicant's case

8. You recognise that there are a number of means whereby compliance with Requirement B1 could be achieved, some of them requiring works within the shop on the ground floor. However, as you do not own the property that would be affected by those works, these solutions would not be available to you. You have therefore taken advice from a firm of fire and safety consultants and submitted a report containing a risk assessment which details the following proposed package of measures which you indicate you are able to implement for the purpose of achieving compliance with Requirement B1.

9. To reduce the risk and the extra distance from the proposed maisonette to a place of safety it is proposed that:

(i) the existing flats at first and second floor levels of the building will be separated from the common stairway by protected hallways with self-closing FD30s smoke sealed fire doors.

(ii) the entrance doors to the existing flats will also be self-closing FD30s smoke sealed fire doors.

(iii) all doors within the proposed maisonette, at third and fourth floor levels, together with the entrance door will also be self-closing FD30s smoke sealed fire doors.

(iv) floors will be made to provide fire compartmentation between occupancy to a minimum standard of 30 minutes. All holes in fire resisting walls and floors will be effectively sealed against the passage of fire and the products of combustion.

(v) fire stopping and cavity barriers will be provided between the walls to the stair shaft and the external walls.

(vi) a fire alarm system complying with *BS 5839: Part 1: 1988 (Fire detection and alarm systems for buildings Part 1. Code of practice for system design, installation and servicing)* will be provided to give warning to the occupants of the building in case of fire in the shop.

(vii) smoke detectors connected to the fire alarm will be provided in the shop.

(viii) an inter-linked mains operated fire alarm system conforming to *BS 5446: Part 1: 1990 (Components of automatic fire alarm systems for residential premises Part 1. Specification for self-contained smoke alarms and point-type smoke detectors)* will be provided in the proposed maisonette with smoke detectors in all habitable rooms together with a heat detector in the kitchen.

(ix) an emergency lighting system conforming to *BS 5266: Part 1: 1988 (Emergency lighting Part 1. Code of practice for the emergency lighting of premises other than cinemas and certain other specified premises used for entertainment)* will be provided in all common parts of the building.

(x) the fire alarm and emergency lighting systems will be maintained in accordance with the relevant codes. The final exit to the public way will only be fitted with fastenings which can be readily operated without the use of a key.

10. In addition, in order to provide adequate protection to the foot of the stairway to enable the occupants of the flats and the proposed maisonette above to escape should a fire occur within the ground floor shop, the following measures are also proposed by your fire and safety consultants:

(i) the main door to the shop will be upgraded to a self-closing FD30s smoke sealed fire door.

(ii) a fire curtain will be provided to completely cover the shop door. It will be fitted on the lobby side of the door so that it cannot be obstructed when the shop door is open. The fire curtain will offer a minimum period of two hours fire resistance and resist the passage of smoke.

(iii) the fire curtain will be linked to the fire alarm and set to close on the actuation of the alarm, with a possible slight delay of no more than five minutes built in to the final descent of the fire curtain.

(iv) the fire curtain will be provided with a gravity fail safe and close in the event of a mains failure. The controls to open and close the fire curtain will be positioned to prevent unauthorised use. Audible and visual warnings will be positioned to warn staff and customers that the fire curtain is about to descend.

(v) staff in the shop will be made aware of the purpose of the fire curtain; the importance of maintaining the entrance free of display material etc; that the curtain will close automatically five minutes after the actuation of its smoke detector and that they should ensure that evacuation of the shop is completed as soon as possible. A contract for annual inspection and maintenance of the fire curtain will be entered into with the manufacturer.

11. the fire and safety consultants' report concludes that the above proposals are likely to be more effective than a fire door in an inner lobby approach which would provide an additional barrier to shoppers entering the shop and would be likely to be left propped open for long periods.

12. you have also provided details of two examples of the application of fire curtains and add that in your view a sprinkler system is far more complicated to install.

The Borough Council's case

13. The Borough Council identified the following issues as relevant when rejecting your full plans applications:

(i) the finished floor level of the new top storey of the building would be in excess of 11m above outside ground level.

(ii) the upper level of the proposed third and fourth floor maisonette does not have a means of escape independent of the lower level.

(iii) the common stairway providing the sole means of escape from the upper floor residential occupation is used as the principal entrance and exit way for the ground floor shop.

(iv) the existing flats were not shown as having sufficient protected separation between the potential seat of any fire and the common escape stairway.

(v) the ground floor shop was shown as being separated from the common stairway by a single non-fire resisting or self-closing door.

14. The Borough Council notes that you have agreed to incorporate the recommendations set out in the schedule attached to its original full plans rejection notice in your proposals with the exception of a protected lobby separating the shop from the common stairway. The Council states that it has discussed a number of alternatives with you relating to the ground floor arrangement, including the possibility of providing a single self-closing FD30s smoke sealed fire door to the opening between the shop and the entrance lobby with an automatic sprinkler system within the shop. But the Council did not consider that the proposal in your subsequent full plans re-submission for a smoke curtain associated with a fire resisting door to be acceptable for the following reasons:

(i) as stated above, the building would be over 11m above outside ground level with the common stairway providing the only escape route from the upper floors.

(ii) the height and orientation of the building would effectively prevent external rescue by the Fire Service.

(iii) the fire curtain would only provide passive fire protection without controlling the rate of fire growth or fire spread.

(iv) the fire curtain control system would be susceptible to false alarms normally occurring with such systems, leading to possible abuses of the system.

(v) as the fire curtain would be effectively mounted external to the shop it would encourage the occupiers of the shop to place insufficient interest in its maintenance as it does nothing for the protection of the shop. However, a

sprinkler system would be seen to actively protect the occupiers and property of the shop and encourage a greater degree of "ownership".

15. The Borough Council also comments that in its view the two examples you refer to as evidence of the use of smoke curtains are not relevant in this case.

The Secretary of State's consideration

16. The Secretary of State takes the view that what needs to be considered in this case is the safe escape of the occupants of the proposed two storey maisonette in the event of a fire. The means of escape from within the maisonette to the common stairway in the building is not in question. However, whilst the building is an existing one, the proposed work creates an entirely new dwelling. It is necessary therefore for the Secretary of State to determine whether the means of escape from this new dwelling (ie the maisonette) to a place of safety outside the building complies with Requirement B1 of the regulations

17. For buildings with more than three storeys above the ground storey, stairs that serve dwellings should not normally serve other occupancies. Given the difficulties that this presented to your proposals the Borough Council has suggested a number of alternative approaches relating to the ground floor arrangement. You indicate that you were unable to implement these approaches as they involved works within the shop unit which is outside your control.

18. Having taken advice from fire & safety consultants you have proposed an alternative to the Borough Council's suggestions, which involves the installation of a proprietary fire curtain designed to drop down over the opening between the shop and the escape route from the flats and maisonette above. Your consultants have suggested that the provision of the fire curtain would be more reliable than a fire door in an inner lobby approach and that it would both offer a minimum period of two hours fire resistance and resist the passage of smoke. However, the Borough Council has raised a range of concerns about this proposal including its long term reliability and its suitability for this application.

19. The Secretary of State considers that the resistance to the passage of smoke afforded by the fire curtain is particularly important in this proposal. However, the technical details of the curtain you have provided do not indicate that there is any evidence to support your suggestion that it would be effective in this regard. The Secretary of State also shares the concerns of the Borough Council over the long term effectiveness of this proposal and the potential for variations in fire risk as and when the shop changes hands.

20. The provision of a lobby would not, on its own, meet the guidance given in *Approved Document B (Fire safety)* for a dwelling of this height. To meet this guidance the escape route should be completely independent of other occupancies such as the shop. Whilst there may be other approaches to this problem which would meet Requirement B1 they should be fully justified and

provide a level of safety equivalent to that provided by following the guidance in *Approved Document B*. Your proposals, at best, would provide a level of safety which is worse than that given by following this guidance. Furthermore, you have failed to demonstrate that the proposed smoke curtain will perform as suggested. As such your proposals as submitted do not demonstrate compliance with Requirement B1.

The determination

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

22. 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 proposed maisonette. 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).