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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 warning and escape) of the Building Regulations 1991 (as amended) in respect of alterations to the fourth and fifth floor maisonette to provide an alternative means of escape from the fifth floor of a building

The proposed work

4. The proposed building work relates to an existing Grade II listed seven storey, mid-terrace building comprising a ground and a lower ground floor, and five upper floors. The building is currently divided into residential units. The ground and lower ground floors comprise one (two bedroom) maisonette; and the fourth and fifth floors comprise a second (three bedroom) maisonette. The remaining first, second and third floors contain one self-contained flat (two bedroom) each. The building is served by a single common stair, which serves all floors with the exception of the fifth and lower ground floors. It is located in the mid-depth of the building against a party wall. The structure of the common stair well extends up to and including the fifth floor but, as existing, the fourth to fifth floor flight has been fire separated by a door and partition from the common stair well to form the internal stair of the maisonette. The plans indicate that as existing there is a ducted opening above the fifth floor landing venting the common stair via a manually operated roof light/smoke vent of 1.18 square metres.

5. The plans of the ground to third floors appear to show that there is only single door protection to each unit provided by the front doors opening directly on to the common stair (ie there is no protected lobby or common access corridor) and their fire ratings are not indicated. However, the plans would appear to show that these units are provided with an entrance hall although there is no reference to fire resistance.

6. Until recently an alternative escape route from the upper floor of the top maisonette was provided via the roof of the adjoining building, but the owner has blocked access to the roof of this building by the construction of a blockwork wall. Although the documents you have submitted suggest that the occupants of the upper storeys of the adjoining building are also reliant on access to the building in question for means of escape purposes, negotiations with the owner to re-open the route have failed, and the blocking up of the

escape route has resulted in a situation where the maisonette on the fourth and fifth floors of the building in question cannot presently be occupied until alternative fire safety arrangements have been put in place.

7. The proposed building work is therefore to provide a new fire exit to the upper floor of the top maisonette. It involves alterations to re-instate the common stair up to fifth floor level and the construction of new 60 minute fire resisting partitioning to divide the re-instated fifth floor flight of the common stair from the upper floor of the maisonette. A fire door is to be provided at this level giving access from the maisonette to the common stair.

8. In addition, you propose to install a fire alarm and detection system to an L3 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, in the building*. It is also proposed to convert the existing smoke vent at the head of the common stair to automatic operation activated by the smoke detection system, together with a firemans switch at ground floor level.

9. Internal, vertical access between the lower and upper floors of the top maisonette will be replaced by the installation of a spiral stair. The doors opening onto the spiral stair enclosure are shown on one of your plans and are denoted as fire resisting. In order to accommodate the spiral stair and the new top flight to fifth floor level of the common stair, you propose to re-design the bathrooms and make minor amendments to the internal layout of the maisonette.

10. The above proposals formed the basis of a full plans application which was rejected by the City Council on the basis of non-compliance with Requirement B1 (Means of escape) of the Building Regulations 1991, and because there were insufficient constructional details to determine whether the proposals complied with Requirements A1 (Loading) and K1 (Stairs, ladders and ramps). The Council also indicated that the modifications to the smoke alarm installation required their agreement to ensure compliance with Requirement B1. The Council considered that whilst your proposals recognise the need to minimise the threat from fire for occupants of the fourth and fifth floor maisonette, the measures proposed do not constitute satisfactory means of escape in the absence of a roof escape for the purposes of Requirement B1. However, in the circumstances, you take the view that your proposals provide a reasonable level of fire safety arrangements to protect future occupants of the fourth and fifth floor maisonette. It is in respect of the question of compliance with Requirement B1 that you have therefore applied to the Secretary of State for a determination.

The applicant's case

11. You state that, with the assistance of a fire research consultancy, you have considered a number of options for providing alternative means of escape from the fourth and fifth floors, ie from the existing upper level maisonette, but these are either unacceptable on planning or the building control grounds. You therefore propose the following in support of your claim that a reasonable level of fire safety in terms of the means of escape from the maisonette will have been provided:

(i) a new escape route from the existing fifth floor will be provided via a new doorway opening onto the common stair which is to be extended from the fourth to fifth floor level. You consider that this arrangement will achieve the objective of providing safe escape from the upper level of the maisonette should a fire occur on the lower level, i.e. the fourth floor

(ii) to provide early warning for the occupants of the fifth floor of the maisonette of a fire occurring on the fourth floor, an inter-linked mains operated smoke detection system with detectors located in each of the fourth floor habitable rooms will be provided

(iii) to address the situation where a fire occurs in any of the flats located below the maisonette, smoke detectors will be provided at each landing level of the common stair. In addition to this a heat detector will be provided in the entrance hall of each of the lower apartments; and it is considered that the provision of these heat detectors instead of smoke detectors will help reduce the potential for false alarms

(iv) an automatic smoke vent of one square metre in area will be provided at the head of the common stair, activated either by the operation of any smoke detector within the stair enclosure or by a fireman's switch located on the ground floor. You believe this would be helpful in some circumstances, but would be content to retain manual operation if this is considered more appropriate given the comments by the City Council (see sub-paragraph 12(i) below)

(v) the fire alarm and detection system will be fault monitored and the building will be provided with a concierge during the day.

The City Council's case

12. The City Council does not consider that your proposals constitute adequate compensation for the deletion of the alternative roof escape from the fourth and fifth floor maisonette which has been blocked off by the adjoining property owner. In addition the Council makes the following points in support of their rejection:

(i) the smoke vent at the head of the common stair already exists and is intended for the fire brigade use only. In their view your proposal to have this automatically opened on the activation of smoke detectors would create a flue effect and could draw fire into the stairway

(ii) a pressurisation system for the common stairway would be considered to be an acceptable solution but is regarded as impractical for this building

(iii) fire warning systems located in the common parts of flats are not encouraged by the current codes of practice because of the possibility of false alarms. Also the dependability of the proposed alarm system for safe escape from the maisonette relies on the maintenance of both the alarm system and components which are partly located in other dwellings.

The Secretary of State's consideration

13. In this case both floors of the maisonette, ie the top two storeys of the building, are in excess of 11m above ground level and you state that it is not possible to follow the guidance given in either *Approved Document B (Fire safety)* or *BS 5588: Fire precautions in the design, construction and use of buildings Part 1: 1990 Code of practice for residential buildings*. In general these documents suggest, for buildings such as this, that it is necessary to provide an alternative exit(s) from the top floor of the maisonette and that every dwelling should be separated from the common stair by a protected lobby, or where applicable, a common access corridor.

14. Under the provisions of Section 16(10)(a) of the Building Act 1984 the Secretary of State is able to determine whether plans of the proposed work are in conformity with the Building Regulations 1991 (as amended). The Secretary of State therefore has to determine in respect of regulation 4(1) of the Building Regulations whether the building work in question complies with the relevant requirements of Schedule 1 of the regulations; and, in respect of regulation 4(2), whether as a consequence of that building work being carried out the building as a whole complies with the relevant requirements of Schedule 1 or, where it did not comply, is no more unsatisfactory than it was before the work was carried out.

15. In respect of regulation 4(1) it is considered that your proposed building work involving the re-instatement of the common stair to the fifth floor level accessed by a new fire door on the upper floor of the maisonette; the internal alterations including the installation of a spiral staircase; and the installation of a fire detection system within the maisonette, are in compliance with Requirement B1 insofar as they will provide adequate escape from the maisonette to the point of egress to the common stair.

16. In respect of regulation 4(2) two questions arise. The first is what should be taken as the appropriate reference base from which to judge whether compliance, with the relevant requirements, of the building as a whole will be achieved or will be made no worse after completion of the building work. The second is the judgement itself about the compliance of the building as a whole

after completion of the proposed building work (ie compliance of Requirement B1 in respect of the maisonette and flats below using the common stair).

17. In this case the alternative escape route from the upper floor of the top maisonette across the adjoining roof has been blocked off by building work to an adjacent property carried out by the owner of that property. The City Council has subsequently advised that they are considering the possibility of enforcement action for failure to maintain the approved means of escape. The blocking off of this alternative escape route pre-dates your application for a determination and it is therefore in relation to the current situation that a determination of compliance of the proposed building work and of the building as a whole, after completion of that building work, has to be considered.

18. From the information available, the Secretary of State takes the view that the alternative escape route across the roof provided a route for occupants of the maisonette which would enable escape away from the source of a fire. It follows that reliance for escape by these occupants is currently - and will remain under the proposals - exclusively dependent upon the common stair and that this should therefore be as safe as possible.

19. Thus taking the current position of a blocked off alternative escape route, and the fact that this route was accessible to occupants of the top maisonette only, it is considered that the proposed building work would improve the internal means of escape from the maisonette to the point of egress to the common stair. As far as escape from the point of egress from the top maisonette via the common stair is concerned, it is considered that the installation of the heat detectors in the entrance halls of the lower flats and smoke detectors at each landing level of the common stair should ensure that the current state of compliance of the building as a whole is made no worse. This judgement is based on the view that the re-instated smoke vent to the common stair should be manually rather than automatically operated.

20. Under the criteria of regulation 4(2) the compliance of the building as a whole can therefore be considered to be improved insofar as the internal means of escape from the top maisonette to the point of egress to the common stair is concerned; and to have been made no worse in respect of means of escape from the point of egress from the top maisonette via the common stair, or from the front doors of the lower flats via the common stair. However, this should not be taken to imply that the means of escape from the maisonette in the context of the whole building is satisfactory. Equally, given the limited information about the fire separation between the lower flats and the common stair, it should not be assumed that the objective of the common stair being as safe as possible is necessarily being achieved. It should also be noted that the criteria of regulation 4(2) are being applied in this instance to a reference base situation which may have arisen according to the City Council due to a breach of the regulations.

The determination

21. The Secretary of State has given careful consideration to your proposals and the particular circumstances of this case. He has concluded and hereby determines as follows:

(i) in respect of regulation 4(1) of the Building Regulations 1991 (as amended), the proposed building work comprising the extension of the common stair to the fifth floor; the internal alterations to the maisonette; and the fire detection system proposed inside the maisonette, comply with Requirement B1 (Means of warning and escape) of Schedule 1 to the regulations.

(ii) in respect of regulation 4(2) of the Building Regulations 1991 (as amended), compliance of the building as a whole with Requirement B1 of Schedule 1 to the regulations will be improved by virtue of the new - compliant - internal means of escape from the top maisonette to the point of egress to the common stair. Compliance of the building as a whole in respect of means of escape from the point of egress from the top maisonette via the common stair should be rendered no worse than existing; and similarly compliance should be rendered no worse than existing in terms of means of escape from the lower flats. However, the view expressed in this sub-paragraph should not be taken as implying that the state of compliance in respect of the means of escape from the top maisonette is satisfactory in the context of the whole building.

22. As explained at paragraphs 16 and 17 above, this determination is based on the current situation wherein there is no longer an alternative escape route across the roof of the adjacent property.