

DETERMINATION OF COMPLIANCE WITH REQUIREMENT B5 (ACCESS AND FACILITIES FOR THE FIRE SERVICE) IN PART B (FIRE SAFETY) OF SCHEDULE 1 TO THE BUILDING REGULATIONS 2000 (AS AMENDED), IN RESPECT OF THE ERECTION OF FOUR TWO-STOREY HOUSES, ON LAND REAR OF ... ROAD

The proposed work and question arising

4. The papers submitted indicate that the building work to which this determination relates is the proposed erection of four two-storey houses, two detached and two semi-detached, on land to the rear of ...Road, which is currently occupied by a number of garages. Access to the site will be via a lane from ... Road, which you say is approximately 170m in length and 2.8m in width.

5. The above proposed work was the subject of a full plans application which was deposited with the Council on 29 September 2010 and rejected on 11 November 2010 on the grounds that your proposals do not comply with various requirements in Schedule 1 to the Building Regulations 2000 (as amended), including Requirement B5 (Access and facilities for the fire service). However, you disagree with the Council's view that reasonable access has not been made within the site of the proposed houses to enable fire appliances to gain access to the buildings, for the purpose of compliance with Requirement B5(2). It is in respect of this question that you have applied for a determination.

The applicant's case

6. You enclosed a detailed statement with your letter of 2 February 2011 to support your view that you have satisfied the relevant requirements of the Building Regulations in this case, i.e. Part B (Fire safety). You acknowledge that the question arising "revolves around the extent of the reasonableness of the facilities to assist firefighters in the protection of life and the reasonableness of provision to be made within the site to enable fire engines to gain access to the building" for the purpose of compliance with Requirement B5. You add that the level of reasonableness depends on the individual situation and compare the circumstances of your proposals to that of a high rise building which could be 200m from the seat of a fire.

7. You believe that the assessment of adequacy of reasonable access should be "checked against the fire protection of the building" and in the same manner that a high rise block of flats would be upgraded you have looked similarly to provide reasonable facilities to assist firefighters in your case. In this respect you state that the construction of the houses would not require having a fire engine in close proximity and would include the following facilities:

- escape windows, fire doors and a fire alarm system upgraded to the quality required for a block of flats and mixed usage;
- concrete ground and first floors;
- plasterboard roof structure, which you are prepared to upgrade if necessary, and other fire resisting construction materials;
- allowance for a horizontal dry fire main to be installed from the entrance to the access lane to a suitable position near the centre of the site.

8. You consider that the reasonableness of your proposed provisions is much above the level of a high rise block as, in addition to the passive fire protection measures referred to above, you are proposing to install a sprinkler system in the houses. You conclude with the key points of your case:

- the design and construction of the proposed buildings is as good, or better, than for a high rise block;
- the means of escape are better because of the proximity to the ground;
- the houses will be further protected by a sprinkler system;
- the general access to the houses will be good;
- a fire may be no further away from a fire engine than it would be on the upper storeys of a high rise block.

9. You also commented further giving your views on the representations made by the Council to the Secretary of State, in particular the enclosed comments from the ... Fire & Rescue Service, which you believe do not give full and reasonable consideration to the proposed additional fire protection measures in your case. In addition you refer to other two/three storey buildings, which you say have restricted access and generally no fire precautions.

The Council's case

10. The Council argues that your proposals do not satisfy Requirement B5 of the Building Regulations, in particular 5(2) which states that "Reasonable provision shall be made within the site of the building to enable fire appliances to gain access to the building".

11. With reference to the guidance on Requirement B5 of the Building Regulations in Approved Document B (Fire safety, Volume 1 - Dwellinghouses) relating to vehicle access, the Council claims that, as the width of the route accessing the proposed houses is less than the minimum of 3.7m indicated, a fire appliance responding to a situation in the buildings would have to stop on the main road and set up its firefighting operations which would be well in excess of the limit of 45m indicated. The relevant distance is to the furthest most point in each house and your drawings indicate that this point in one of the houses would be about 165m.

12. The Council has submitted a copy of a letter from the ... Fire & Rescue Service, which makes a number of points supporting the Council's arguments and challenging yours, including your comments comparing your proposals to a high rise block of flats.

13. In particular, although the use of sprinklers as a compensatory measure is supported, the Fire and Rescue Service does not believe that their use in your situation provides adequate compensation for the failure to enable a fire appliance, its crew and

equipment, reasonable access to the proposed houses, as indicated in Approved Document B. While it may be reasonable to double the specified 45m distance for vehicle access where sprinklers are proposed the Fire and Rescue Service considers that your proposal to increase it by more than three and half times that figure is not acceptable. This is due to the weight of the fire-fighting equipment and because the equipment needed for a fire incident will not be known until the fire officer in charge has made his/her way along the access lane to assess the situation. It is also suggested that the sprinklers, on which your proposals are reliant, may not be maintained over time and are not guaranteed to function.

14. The Council has also submitted photographs demonstrating the “apparent” access difficulties that the Fire and Rescue Service would have from the lane to the houses. Although the additional fire protection measures you have proposed for the buildings are noted, in the Council’s opinion “this does not negate the need for fire service access to affect fire and rescue operations in the event of a fire situation”. The Council believes that it would not be possible to oversee the proposed development from where a fire appliance would set up its firefighting operations and that it is “not reasonable for the Fire Service to have to deal with a fire situation when their principal support equipment is beyond a reasonable distance from the buildings in question”.

The Secretary of State’s consideration

15. The Secretary of State has given careful consideration to the particular circumstances of this case and the arguments presented by the parties. He notes that he has been asked to make a determination in respect of Requirement B5 of the Building Regulations relating to the access and facilities for the fire service, in particular, provision within the site to enable fire appliances to gain access to the proposed buildings. You indicate that your proposals comply overall with Part B, albeit outside the guidance that support the regulations, whereas the Council argues that they do not satisfy Requirement B5(2) in relation to vehicle access.

16. The Secretary of State takes the view that the fundamental point in question in this particular case is whether the proposed provisions demonstrate a reasonable level of compliance in relation to Requirement B5. You believe that the adequacy of reasonable access should be “checked against the fire protection of the building” and that the provisions you have proposed within the site should be considered as compliant. You have also referred to other buildings which you say have limited access and compared your circumstances to that of a high rise building. However, the Secretary of State is required to consider each case on the basis of its own merits and, as per the reasons explained in comments provided by the Fire and Rescue Service (a copy of which the Council has submitted), he does not consider that there is a direct comparison to a high rise building. He has therefore not regarded this as a material consideration in determining this case.

17. The Council has had regard to the guidance on vehicle access in Approved Document B and considers that as the width of the lane accessing the proposed houses is less than the minimum of 3.7m indicated, then a fire appliance responding to a situation in the buildings would have to stop on the main road which is in excess of the limit of 45m indicated. The Council highlights that the relevant distance is to the furthest most point in each house and that this would be about 165m in one of the houses. The Council has noted the additional fire protection measures proposed, but states that this does not negate the need to provide for fire service access.

18. The Secretary of State notes that the guidance in Approved Document B states that vehicle access for a fire (i.e. pump) appliance should be within 45m of all points within dwellinghouses; this takes account of the actual distance that the Fire and Rescue Service needs to carry ladders, kit and lay hoses etc from the vehicle to a potential point of fire. The guidance is intended for the more common building situation but, while it is accepted that there may well be alternative ways of achieving compliance, any variation to the approved guidance should be agreed with the relevant Building Control Body.

19. Requirement B5 and the guidance in Approved Document B, particularly the 45m criterion, are based on the physiological demands on firefighters engaged in search and rescue and on the restrictions that may be imposed by their equipment. Relevant research in relation to firefighter physiology is available on the Building Disaster Assessment Research Reports page of the Department's website.

20. The Secretary of State is of the opinion that all firefighting and other rescue activities are dependent to a greater or lesser extent upon the physiological capabilities of firefighters. Thus the physiological limitations of firefighters must also be taken into consideration in this particular case. Safety and efficiency are the two major operational concerns of the Fire and Rescue Service and both require judgements to be made about the workload that firefighters can undertake in different circumstances. Some of these variables include: tasks (carrying, dragging, lifting, on the level or up or down stairs); and physical load (equipment, including Respiratory Protective Equipment (RPE) and Personal Protective Equipment (PPE)).

21. In your response to the comments provided by the Fire and Rescue Service, the Secretary of State notes you say that it would not be necessary to walk down the lane in question (some 165m) wearing the breathing apparatus (BA). Whilst this may be the case this would not remove the need for the Fire and Rescue Service personnel to carry the necessary equipment from the vehicle to the actual incident. He takes the view that walking the proposed extended distance in PPE while carrying BA and a hose would be physically demanding and this would apply whether or not an extended dry fire main was provided.

22. The Secretary of State is of the opinion that increased exertion for firefighters prior to carrying out operational duties would have a significant impact on their ability to carry out firefighting and search and rescue activities. This could therefore lead to firefighters not being fully fit to commit to the fire compartment. There appears, therefore, to be no significant benefit for the proposed inclusion of a horizontal dry fire main and the Secretary of State has also not regarded this as a material consideration in determining this case.

23. The Secretary of State recognises the merit in the additional fire protection measures that have been proposed in the houses. He considers that a suitable fire detection and alarm system could reduce the reaction time of the occupants and therefore reduce the risk of becoming trapped. He acknowledges that the installation of a suitable sprinkler system, if maintained, and the passive fire protection measures could also reduce the risk of the occupants becoming trapped and, in the event they were, potentially increase the time they could safely remain in the building before being rescued. He is of the opinion that such measures may provide sufficient benefits in order to vary the requirements for Fire and Rescue Service vehicle access, whilst still satisfying the functional Requirement B5 in some circumstances. In this respect it is apparent that the Fire and Rescue Service has acknowledged this and agreed that in some circumstances the distances can be varied.

24. However, the Secretary of State takes the view that whilst in combination the proposed additional features go some way in providing compensatory measures in order to satisfy Requirement B5 of the Building Regulations, this does not eliminate the need to facilitate the Fire and Rescue Service having to attend a potential incident. Nor does it justify the significant increase in distance that they would be expected to travel on foot from vehicle access point to potentially the furthest most point in each house. In this respect, he considers that compliance with Requirement B5 has not been demonstrated in this case.

The determination

25. As indicated above, the Secretary of State considers that your proposals as submitted, do not make reasonable provision for access and facilities for the Fire and Rescue Service in this case. He has therefore concluded and hereby determines that the plans of your proposed building work do not comply with Requirement B5 (Access and facilities for the fire service) in Part B (Fire Safety) of Schedule 1 to the Building Regulations 2000 (as amended).

26. Please note that in the application of building regulations to the proposed building work, it is relevant when the work begins. Where the work - which as in your case is the subject of full plans deposited with the Council before 1 October 2010 - is started before 1 October 2011 and is to be carried out in accordance with those plans the Building Regulations 2000 (as amended) will apply and the Secretary of State has made his determination on this basis. But if the work is started after that date, the Building Regulations 2010 (which came into force on 1 October 2010) will apply instead. However, currently there is no difference in practice as the substantive provisions have not changed.

27. Please also note that the Secretary of State has no further jurisdiction in this case and that any matters that follow should be taken up with the Building Control Body.