Regional Building Control (RBC)

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How far apart should school buildings be where they are on the same site, in order to satisfy the Building Regulations?

There are really two issues here, firstly the positioning of a notional boundary and secondly the distance that the building needs to be from that boundary and unfortunately neither of these resolve themselves into simple statements.

Because educational establishments are classed as being in the 'assembly' purpose group under the Building Regulations as defined in Appendix D of Approved Document B, then a notional boundary needs to be provided between the buildings. Reference is made to paragraph 13.6 and diagram 42 of Approved Document B.

This only applies to assembly or residential buildings where the risk to life safety is considered to be greater and would not apply to say office buildings unless they were part of the Crown estate when they would come under the Crown Fire Standards. However, it needs to be pointed out that, even though there is possibly more of a life safety issue, assembly buildings would require less distance to the boundary than say storage or industrial buildings because the fire severity is considered to be less.

The notional boundary need not be located midway between the buildings and can be located in the most advantageous position to suit the scheme. For example, if the elevation of one of the buildings was brick with no openings such as widows or doors, then the notional boundary could be located along the line of that elevation.

The calculation of the distance to the boundary is also variable and depends on the following:

1. The size of the building or compartment. In a multi-storey building with compartment floors then only the floor with the largest number of openings (unprotected areas) need be considered but if there are no compartment floors then the whole elevation needs to be considered for unprotected areas.

2. The number of openings in that elevation and the size of these openings, which includes windows and doors or other unprotected areas such as ventilation openings or combustible cladding systems.

3. Whether the buildings are fitted with sprinkler installations, reduced boundary distances may be appropriate with buildings fitted with sprinkler installations.

4. The use of the buildings, which are probably in the assembly purpose group in the case of schools although this need not always be the case and could be an office.

The distance calculation is usually done using the tables in the BRE document BR 187 (External fire spread: building separation and boundary distances) and which is referred to in Approved Document B. These tables were originally part of the 1985 Approved Document B but were removed in the next edition of the Approved Document and expanded into a separate document by BRE.

When calculating the boundary distance all of the above factors have to be considered and the actual distance can vary considerably. As before if the elevation is brick with no openings or unprotected areas then the distance to the boundary could be zero.

It should be noted that the above information relates to the guidance given in Approved Document B (B4 – External fire spread) for boundary distances of school buildings on the same site. However, paragraph 0.27 of Approved Document B states:

‘The design of fire safety in schools is covered by Building Bulletin (BB) 100 published by the DfES. Part B of the Building Regulations will typically be satisfied where the life safety guidance in that document is followed.’

The guidance in BB 100 is split into colour coded life safety and property protection guidance. The key points relating to life safety are highlighted with an orange background and property protection recommendations are highlighted with a blue background. Paragraph 7.3.2.2 of BB 100 states:

‘The separation between buildings on the same site is normally only recommended for the purposes of property protection’. This paragraph is highlighted in blue and is not therefore considered necessary for life safety.

The inference from this is that a notional boundary need not be applied to school buildings and this is at variance with the guidance given under B4 of Approved document B. The implication of this is that, although building control may not be able to insist on the provision of a notional boundary they will probably wish to recommend it.

It also has to be remembered that the Fire Officer may have a view on this and may question the non-provision of a notional boundary, particularly if sprinklers are not provided.

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