**CPA Response to the Depart. of Education Consultation**

**Building Bulletin 100: Fire Safety Design for Schools**

**Close 18th August 2021**

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| **Topic and Question** | **Answer** | **Explanation if answer is No** |
| **Fire Suppression Systems** | | |
| BB 100 recommends that automatic fire suppression systems should be installed in all new school that have a storey with a finished floor level over 11m above ground level.  **Q1.** Do you agree with this recommendation? If not please explain why. | Yes / No | We support the National Fire Chiefs Council call for the installation of automatic fire suppression systems (AFSS) in all new and converted school buildings of any height and the retrofitting of AFSS to existing school buildings as part of refurbishment works where material alterations are made. |
| BB 100 recommends that automatic fire suppression systems should be installed in all new special school buildings.  **Q2.** Do you agree with this recommendation? If not please explain why. | Yes / No |  |
| BB 100 recommends that automatic fire suppression systems should be installed in all new boarding accommodation.  **Q3.** Do you agree with this recommendation? If not please explain why. | Yes / No |  |
| BB 100 offers some relaxation of requirements in school buildings fitted with automatic fire suppression systems such as larger fire compartment sizes.  **Q4.** Is there scope for easing requirements further in such buildings or are the current relaxations sufficient. | No | The current relaxations are sufficient. |
| **Fire Detection and Alarm Systems** | | |
| BB 100 now recommends a minimum level of automatic fire detection and alarm system provision. Previously it did not with decisions being made on a project by project basis. The minimum level of coverage recommended is:   * Special schools and residential accommodation in boarding schools - category L2/P21 systems * Mainstream schools - category L3 systems (raised L3/P2 if enhanced property protection required).   **Q5.** Do you agree that this minimum level of protection is right for these types of schools? If not please explain why.  [Note 1 - Category ‘L’ is for life safety and ‘P’ for property protection.   * **L2** - Escape routes, rooms that open onto an escape route, and high fire risk areas (e.g. kitchen, boiler rooms) that do not open onto an escape route. * **L3** - Escape routes and rooms that open onto an escape route * **P2** - High fire hazard areas (e.g. kitchens, boiler rooms, plant rooms) subject to a risk assessment to establish level of risk.] | Yes / No | We believe there should be greater provisions in BB 100 for the protection of property to reduce the number of schools destroyed or closed due to fire incidents. |
| **Vertical Means of Escape** | | |
| The new version of BB 100 says “new, multi-storey school buildings must have at least two staircases and single escape stairs are not acceptable”.  **Q6.** Do you agree with this recommendation? If not please explain. | Yes / No |  |
| BB100 now recommends the provision of an evacuation lift in all new multi-storey school buildings as it offers a safer and more dignified way for evacuating occupants with limited mobility from upper floors. It also advises that the minimum number and size of evacuation lifts in mainstream schools should be related to the number of pupils and storeys served:   * For schools with no more than two storeys and fewer than 900 pupils, a single evacuation lift of 1400mm x 1100mm (internal dimensions) * For larger schools on at least three floors and 900 pupils or more, a single two wheelchair lift of 2000mm x 1400mm or two lifts of 1400mm x 1100mm adequately separated on plan.   For special schools it advises that the evacuation lift provision should be determined on an individual basis but subject to a default minimum of:   * For all multi-storey special schools a lift of 2000mm x 1400mm * For all non-ambulant2 special schools a two wheelchair lift 2400mm x 1400mm.   [Note 2 - As defined in BB 104 - Area guidelines for SEND and alternative provision.  (SEND - Special educational need and disabled)]  **Q7.** Do you agree that evacuation lifts should be provided in new multi-storey schools rather than standard passenger lifts and that the level of provision recommended is reasonable? If not please explains why. | Yes / No |  |
| **Compartmentation** | | |
| The original BB 100 recommended a fire compartmentation size of 800m2 for a non-sprinklered school building.  AD-B recommends a maximum of 2000m2, while BS 9999 has 8000m2.  It is proposed that the new version of BB 100 should recommend a compartment sizes that match AD-B. That is:   * For single storey school buildings no limit on compartment size with or without automatic fire suppression * For multi-storey school buildings 2000m2 without automatic fire suppression, 4000m2 with them.   **Q8.** Do you agree that the recommended compartment sizes in BB 100 should be increased to match the recommendations in AD-B for educational buildings? If not please explain why. | Yes / No | Compartment sizes should not be increased for school buildings.  Furthermore, to provide greater surety of fire containment within compartments and to help reduce the potential risk to occupants from smoke and toxic gases, we recommend:  (1) For roof areas in particular, only construction products attaining a Euroclass reaction to fire classification of B-s1,d0 or better as per EN 13501-1 should be used for components in the roof, especially where areas of the roof pass over compartment walls.  (2) Compartment walls and floors should also be to a fire classification of B-s1,d0 or better. |
| **Inclusive design and special schools** | | |
| Guidance on accessibility is more comprehensive in the new version on BB 100 reflecting the need for schools to be more inclusive. Guidance on fire safety in special schools is also expanded and includes advice on fire suppression systems.  **Q9.** Do you consider this guidance is detailed enough? If not please explain why. | Yes / No |  |
| **Boarding accommodation** | | |
| For the first time BB 100 includes advice on fire safety in boarding schools. This includes recommendations on:   * Fire detection and alarm systems * Fire suppression systems * Compartmentation * Internal linings * External walls and cladding materials   **Q10.** Do you consider this guidance is detailed enough? If not please explain why. | Yes / No | External walls & cladding materials  The requirement for residential areas of boarding schools to have an external wall constructed to achieve a Class A2-s1,d0 or better should apply to all areas of boarding schools.  Compartmentation  Walls and floors should be constructed of A2-s1,d0 of better materials to act as a fire stop. The question of routine damage to compartment walls and floors needs to be considered due to the volume of foot traffic through the school buildings. Any exposure of underlying materials due to damage, building maintenance or routine work leaves possible combustible materials exposed. This source of fuel for the fire need to be avoided.  Internal linings  We agree with escape routes only being constructed from A2-s1,d0 or better materials. Other areas we recommend materials of Class B-s1,d0 or better. |
| **Cladding** | | |
| BB 100 now sets higher fire standards for external cladding than before and includes new categories of school buildings. The requirements are:   * Cladding on a school building with a storey 18m above ground level should achieve Class A2-s1, d0 or better * Cladding on school buildings below that height should achieve Class B-s1, d0 * Where school buildings are prone to vandalism as determined by a security risk assessment at feasibility stage any cladding to ground floor walls should achieve Class A2-s1, d0 or better * The residential areas of boarding schools should have external walls including the external surfaces of walls constructed of materials achieving Class A2-s1, d0 or better.   Q11. Do you agree with these requirements? If not please explain why. | Yes / No | For cladding on external walls, we agree with a fire class of A2-s1,d0 or better as given in the guidance, but this needs to be  extended to all to all school building irrespective of height.  We do not agree with any height thresholds being set for distinguishing between fire classes of materials. All materials should be a minimum class of A2-s1,d0.  There are very few school buildings, if any, which are 18m (6 stories) high. This seems an unnecessary threshold to deal with. |
| **Fire Safety Management** | | |
| BB 100 now includes a greatly expanded section on fire safety management. This mainly focusses on responsibilities under Building Regulations Regulation 38 and the Regulatory Reform (Fire Safety) Order. It does not include advice on day to day management issues or good housekeeping as BB 100 is a technical document rather than a school management tool.  **Q12.** Do you agree with this approach and do you think the guidance is sufficient? If not please explain why. | Yes / No |  |