

# Woodland Meed College (SEND)

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## RIBA Stage 2 - Fire Safety Report

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# WOODLAND MEED COLLEGE (SEND)

14-08-106362

DATE: 7<sup>TH</sup> OCTOBER 2020

## RIBA Stage 2 – Fire Safety Report

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## **1.0 Introduction**

The purpose of this report is to provide a fire engineering assessment and outline fire safety strategy for the proposed Woodland Meed College (SEND) is intended to be read in conjunction with the Architectural floor plans and M&E Stage 2 reports.

This outline fire strategy will address issues relating to means of escape, internal fire spread, external fire spread, and Fire Service access, and is principally based upon the guidance given in Approved Document B Volume 2 (ADB), Building Bulletin 100 (BB100) and any referenced British Standards.

This report deals only with statutory requirements, and property protection is not, therefore, explicitly addressed unless otherwise stated. As such the building insurers should be consulted at an early stage to ensure that any additional needs are satisfied.

## 2.0 Building Description

This project consists of the construction of a new College building on the grounds of the existing college site situated off Birchwood Grove Road, Burgess Hill, West Sussex RH15 0DP.

The new building will be two storey, have an overall area of approximately 3300m<sup>2</sup> with a maximum height of around 9.9m.

The new building will provide education for SEND children and young adults from 14 years to 19 years.

The building will consist of a mixture of Classrooms types, Workshops, Staffroom, ICT Rooms, General Store Rooms, Meeting Rooms, NHS Hub, Oxygen Store Room, Hydrotherapy Pool, Plant Rooms, Changing Facilities, Toilets, Office Spaces, Physiotherapy Room and Sensory Rooms. Access to the upper floor is provided by two fire protected staircases and two fire evacuation lifts.

Access to the new building will be via the existing road to the adjacent school site. This will also accommodate parking for the staff on site.

The buildings will generally be designed in accordance with the guidance contained within BB100 for schools, although fire safety engineering may also be used to justify deviations from the recommendations, as permitted under section 1.8 of BB100.

The new buildings will not be provided with automatic sprinkler systems, this will be detailed further in Section 4.1 of this report.

### 3.0 Means of Warning and Escape

#### 3.1 Means of Giving Warning

Under the guidance of BB100, all buildings should be provided with a method of alerting the occupants in the event of a fire being detected.

It is proposed to include new automatic fire detection and alarm system within each building, which will incorporate manual calls points, throughout the main areas to Category L1 standard in accordance with BS 5839: Part 1 : 2013.

The new fire alarm panel will be located in the Main Reception Area of the building and will be linked to the existing school building.

Upon activation of a detector or break glass unit anywhere within the building the fire alarm system will go into full alarm and send a signal to a 24hour monitoring station such as a Red Care system.

It is envisaged that sounders and beacons are to be installed throughout the new buildings.

Please refer to the Electrical Engineer's documents for further details.

#### 3.2 Travel Distances

The internal arrangement of the building will be such that the following travel distances stated within BB100 are not exceeded.

Location	Max Travel Distance in One Direction Only (metres)	Maximum Travel Distance in More Than One Direction (metres)
Places of special fire hazard	9	18
Areas with seating in rows	15	32
Areas not listed above	18	45
Ground storey of small premises with a single exit	27	N/A

The travel distances detailed above are generally measured from the most remote point to a storey exit (which is a final exit from the building or a protected stair access door). However, it is noted that the dimensions above are travel distances and, therefore, if the internal layout of partitions

and furniture are not known then direct distances should generally be used for assessment. The direct distance is taken as 2/3rds of the permitted travel distance.

All travel distances on the proposed plans are within the maximum limits set out above.

### **3.3 Horizontal Means of Escape**

A simultaneous evacuation policy shall be utilised at the college, where all occupied spaces shall be evacuated at the same time.

All exit widths should be a minimum of 900mm as recommended in Building Bulletin 77 (BB 77) and the Standards Specifications, Layouts and dimensions (SSLD) document for schools with a large number of pupils with special educational needs.

A clear height of 2m should be maintained throughout the escape routes in the building. Doorways are exempt from this minimum height.

The classroom doors should have a clear exit width of 900mm unless otherwise stated.

All doors from the Main Hall in the building should have a minimum clear exit width of 1050mm and should open in the direction of escape.

Due to the high risk nature of cloak rooms, it is not suitable to have toilet areas with a single escape route through these areas. This situation should be avoided where possible in all new areas of the building, unless otherwise agreed with Building Control and the Insurance Company.

### **3.4 Vertical Means of Escape**

The new building is two storey and provides access to Classrooms, Group Rooms, Calm Room, Toilets, Staff Room, Plantroom, Server Room, Conference/Meeting Room, Cleaners Cupboard, Mobility Equipment Stores, Offices and External Terraces on the First Floor.

There are two staircases one at each end of the building both of which should have a minimum effective clear width of 1100mm.

There are also two fire evacuation lift installed adjacent each of the staircases, these should be installed in accordance with BS 9999 Annex G.2., and include protected lobbies on both floor levels, protected egress routes out of the building, secondary electrical supplies, refuge areas on the First Floor suitable sized for the number of occupants likely to use them, an emergency voice communication system and evac chairs.

### 3.5 Disabled Evacuation

The evacuation of disabled persons is the responsibility of the building, its occupants and management; no reliance can be placed on or assumed from the fire authority.

It is necessary to consider all disabilities, and the general principles for designing effective escape for other types of disability are summarised below.

**Hearing impairment:** Persons with hearing impairments can generally be expected to appreciate that there is an evacuation by following cues from non-hearing-impaired persons. Flashing beacons are to be provided in the entrance hall, hall, staffroom, toilets and any areas, which may be used by members of staff working alone, e.g. plant room.

**Visual Impairment:** Predominantly visual impairment can be accommodated effectively by management response for assisted escape.

**Cognitive and Learning Difficulties:** Although it is reasonable to assume that persons with learning difficulties are accompanied, successful escape is also helped by ensuring legibility of the building – as recommended in BS 8300.

Disabled staff and occupants will be encouraged to produce PEEPS (Personal Emergency Egress Plans) in collaboration with the building management; this will ensure an appropriate resource and response tailored to the individual needs of the disabled person and the specific features of the building itself (the “Building Capability”). PEEPS can also be prepared for the “generic” types of disability, to ensure the best management response for evacuation of the public, contractors, and other non-staff.

**Mobility Issues:** The building is two storey and the first floor is accessed by disabled occupants, the requirements for vertical evacuation are significant.

- The first floor is provided with 2 No fire escape staircases, which are both protected with 60 minutes fire compartmentation from both sides.
- Refuge points are available on the First Floor of each of the stair cores. These will be provided with evacuation chairs and an emergency voice control panel linked to a master station adjacent the fire alarm panel in the main entrance.
- Fire evacuation lifts are to be provided in accordance with BS 9999 Annex G.2.
- Single travel distances from each of the first floor classrooms is below 13 metre, which is within the allowable limits.
- All egress routes will provide the required minimum effective clear widths in accordance with Approved Document M



- Management policies and procedures will be in place in the building to ensure disabled occupants can egress safely.
- PEEPS will be produced by the staff to ensure the needs of the disabled persons have been catered for.
- Staff will be provided with suitable training in the evacuation of disabled persons.
- The fire detection system provides a greater level of protection in the new building, which is recommended in BS 5839 part 1. The system will provide a L1 level of coverage will be linked to the existing school fire detection system and a 24 hour monitoring station
- Emergency lighting will be provided in accordance with BS 5266 Part 1
- Egress signage will be installed to comply with the Health and Safety (Safety sign and signals) Regulations 1996 and to conform with BS EN ISO 7010:2015.

Since it is unlikely that students or visitors will be alone in the building; it should be easy to manage people with mobility issues using a buddy system. Any staff with mobility issues or other disabilities should have their own needs assessed to determine what level of assistance they may require.

The premises management will, by PEEP determination and risk assessment, have a policy and procedure put in place to deal with any occupants who may be deemed to require assistance in the event of an evacuation.

All areas should be easily accessed by wheelchair users, therefore any escape routes with steps should be provided with suitable ramps, or be managed in such a way that these routes can safely be avoided during an emergency evacuation.

There may be minor level changes around the external areas that require provisions for disabled occupants. Any level changes around the premises should be evaluated to ensure they comply with Approved Document M: Access to and use of buildings, and Approved Document K: Protection from falling, collision and impact.

### **3.6 Emergency Lighting and Escape Signage**

All escape routes and accommodation areas will be provided with emergency lighting. Escape routes should be provided with adequate artificial lighting, with lighting to the escape stairs being on a separate circuit from that supplying any other part of the escape route.

The provision for emergency lighting includes all external escape routes, which should also be fully demarcated.

Every escape route should be distinctively and conspicuously marked by emergency exit signage complying with the Health and Safety (Safety sign and signals) Regulations 1996. In general, signs containing symbols or pictograms that conform to BS EN ISO 7010:2015 satisfy these regulations.

## **4.0 Internal Fire Spread**

### **4.1 Automatic Suppression Systems**

No automatic sprinkler system will be installed in this building, contrary to what is advised in BB100 Section 1.2 and 1.6. As recommended in BB100 we have completed a fire risk based assessment and the result of which only recommend a sprinkler system is installed.

Based on the above outcome it has been decided not to include a sprinkler system, however we have improved the level of automatic fire detection within the building, staff training and management of fire safety arrangements will be of a good standard to reduce the risk to the life safety of the occupants using this building. Additionally, the building will be provided with a good level of compartmentation throughout which will reduce the risk to property protection.

### **4.2 Structure**

The new structural frames, beams, columns, load-bearing elements, and floor structures for both buildings should be provided with 60 minutes fire resistance on the exposed faces, in accordance with BB100.

However, it is noted that load-bearing elements of structure that support only the roof (and not any means of escape route, plant, external terracing, or wall that is fire resisting) need not be provided with any particular period of fire resistance.

### **4.3 Compartmentation**

In accordance with BB100 Table 9 the maximum compartment size of a multi- storey, un-sprinklered school building is 800m<sup>2</sup>.

Subject to allowance from the Insurance Company and Building Control, there may be a requirement to provide additional compartment walls throughout the building in order to achieve the maximum compartment size shown above.

The main compartment walls shall have 60-minute fire resistance for integrity and insulation from each side separately. These have been indicated on the Ground and First Floor Fire Safety drawings.

As detailed in BB100 section 6.3.2.1 to reduce the extent of property damage all floors will be 60-minute fire resistance for integrity and insulation from the underside.

#### **4.4 Fire-Resisting Construction**

Service riser elements of structure, etc. will have 30-minute fire resistance for integrity and insulation from each side separately.

All services penetrations will be fire stopped.

Where ductwork passes through services ducts / riser, fire dampers will be installed including access panels.

Places of special fire hazard are set out in BB100 Section 3.1 “boiler rooms; storage spaces for fuel and other highly flammable substances; laboratories; technology rooms with open heat sources; kitchens; oil-filled transformer and switch-gear rooms; rooms housing a fixed internal combustion engine”

Cloakrooms are classed as areas of special fire risk due to the likelihood of arson occurring in these rooms. Unless the cloak areas are open within the classrooms, they should have 30-minute fire resistance for integrity and insulation from each side separately.

Multi-use halls also present an increased fire risk due to the large number of occupants and the likelihood of activities such as school performances.

All such high risk areas should be separated from the remainder of the building by 30-minute fire resistance for integrity and insulation from each side separately and accessed via an FD30 door, unless otherwise stated.

The Kitchen roller shutter will need to be 30-minutes fire-rated and linked to the fire alarm system so it automatically closes when the alarm activates.

If the wall between the kitchen and the hall is not provided with fire resistance, the roller shutter may be manually operated and should be kept shut whilst the server area is not being used.

#### **4.5 Cavity Barriers and Fire-stopping**

In accordance with Section 6.4 of BB100, suitable provisions should be made to prevent the unseen spread of fire and smoke through cavities or concealed spaces, by the use of cavity barriers.

As such, cavity barriers should generally be provided in any cavities greater than 20/40m in length in order to prevent the unseen spread of fire, in accordance with BB100 Table 10. These barriers should have a minimum fire resistance of 30-minutes (integrity) and 15-minutes (insulation).

All fire resistant walls (where possible) should be continued to the underside of the roof and adequately fire-stopped. Where this cannot be

achieved, for example where a false ceiling is used, cavity barriers should be provided as set out in BB100 Figure 30.

BB100 Section 6.5 states that all pipes, ductwork, and services passing through a fire-resisting element or barrier should be adequately protected by fire-sealing, fire-stopping, and/or fire dampers, so that fire resistance of the element is not compromised.

Thermally-activated automatic fire dampers (e.g. fusible link) should be fitted to all ductwork where it passes through compartment walls and/or floors. For ductwork on escape routes, please see the additional notes below.

Furthermore, BS 9999 Section 33.4.2 makes the following recommendations with regards to ductwork systems:

- Ventilation ducts, and their associated plant, supplying or extracting air directly to or from a protected escape route, should not also serve other areas. A separate ventilation system should be provided for each protected stairway.
- Where a ductwork system serves more than one part of a compartmented or fire separated protected escape route, smoke detector operated fire dampers should be provided where ductwork enters each fire separated or smoke separated section of the escape route.
- The smoke detector operated fire dampers should be caused to close if smoke is detected. Any ductwork passing through an accommodation space should be fire-resisting (i.e. fire-resisting ductwork or ductwork enclosed in fire-resisting material).
- Any ductwork passing through a protected stairway, lobby or corridor without an opening into that area should be fire-resisting (i.e. fire-resisting ductwork or ductwork enclosed in fire-resisting material).

## **5.0 External Fire Spread**

To ensure compliance with the functional requirements of the regulations, the potential for external fire spread from all building elevations must be assessed.

Each elevation of the building should be assessed using the guidance in BB100 and BRE 187, to determine the maximum unprotected areas of construction permitted within each elevation facade.

## 6.0 Fire Service Access

### 6.1 Requirements

On the basis that the building has no storey greater than 900m<sup>2</sup> that is higher than 7.5m, a fire-fighting shaft is not required in accordance with BB100 section 8.4.2.

### 6.2 Vehicle Access

In accordance with BB100 table 18 the total floor area of the building is between 2000 and 8000m<sup>2</sup> and has a top floor height of up to 11m above the ground. Therefore a pump fire service appliance should be provided with access to 15% of the building perimeter.

Any access route for Fire Service vehicles should satisfy the following specification for a pump appliance:

- Minimum width of road between kerbs – 3.7m
- Minimum width of gateways – 3.1m
- Minimum turning circle between kerbs – 16.8m
- Minimum turning circle between walls – 19.2m
- Minimum clearance height – 3.7m
- Minimum carrying capacity – 12.5 tonnes

**It should be noted that some fire appliances weigh in excess of 16 tonnes. The minimum requirements should therefore be checked with the local Fire and Rescue Service to ensure access routes and loading capacities are suitable.**

If any portion of the route is a 'dead-end', turning facilities will be required (e.g. turning circle, hammerhead, or other point at which vehicle can turn) so that Fire Service vehicles do not have to reverse more than 20m.

Any external electrical gates to the car park should be linked to the fire alarm system so the lock deactivates in a fire situation and allows the fire service clear access onto the site.

The most likely route for the fire service to the building entrance would be via Birchwood Grove Road from the nearest fire station.

We would recommend relevant documents, drawings, keys, etc. are kept in a Gerda box located adjacent the main entrance for out of hours access.

### 6.3 Alternative Power Supplies

In order to maintain power supplies to the life safety systems of the building (emergency lighting, fire alarm system and fire evacuation lifts), it is a requirement to provide alternative power supplies to the building.

## **6.4 Hydrants**

Details from the Riba stage 1 report indicate that a washout and fire hydrant located off the existing 6" PVCU main to the east of the existing School entrance.

As this is beyond the recommendation of being with 90m of an entry point to the new building we would advise a new private hydrant is included into this scheme.

The condition and delivery potential of the hydrant is yet to be determined.

## 7.0

### References

- The Building Regulations 2010, Approved Document B Volume 2 - Fire Safety; (2013); TSO;
- Regulatory Reform (Fire Safety) Order 2005 (HM Government);
- BR 187: 2014; External fire spread – building separation and boundary distances; BRE;
- BS EN 1838: 2013; Lighting Applications – Emergency Lighting; BSI;
- BS EN 12101: Part 1: 2006; Smoke and heat control systems. Specification for smoke barriers; BSI;
- BS EN 12101: Part 2: 2005; Smoke and heat control systems. Specification for natural smoke and heat exhaust ventilators; BSI;
- BS EN 12845: 2015; Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance; BSI;
- BS EN 15269: Part 10: 2011; Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies including their elements of building hardware. Fire resistance of steel rolling shutter assemblies; BSI;
- BS 4514: 2001; Un-plasticized PVC soil and ventilating pipes of 82.4 mm minimum mean outside diameter, and fittings and accessories of 82.4 mm and of other sizes; BSI;
- BS 5234: Part 2: 1992; Partitions (including matching linings). Code of practice for design and installation; BSI;
- BS 5255: 1989; Specification for thermoplastics waste pipe and fittings; BSI;
- BS 5266: Part 1: 2016; Emergency lighting – Part 1: Code of practice for the emergency lighting of premises; BSI;
- BS 5266: Part 8: 2004; Emergency Escape Lighting Systems; BSI;
- BS 5839: Part 1: 2013; Fire detection and alarm systems for buildings – Code of practice for system design, installation, commissioning and maintenance; BSI;
- BS 5839: Part 9: 2011; Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of emergency voice communication systems; BSI;
- BS 8300: 2010; Design of buildings and their approaches to meet the needs of disabled people; BSI;
- BS 9991: 2015; Fire safety in the design, management and use of residential buildings – Code of practice; BSI
- BS 9999: 2008; Code of practice for fire safety in the design, management and use of buildings; BSI;
- Technical Bulletin 221:2013:1; LPC Rules for Automatic Sprinkler Installations 2009



**Fire safety and fire protection survey and risk assessment - New Build**  
**College : Woodland Mead College**      **Project Ref: 14-24-18-1-1127**  
**Existing School Building**      **Date: 23/09/2020**

**Part 1 - Incidence of fire**

<b>Low Risk</b>	0	1	2	3	4	5 <b>High Risk</b>
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<b>1.1. Arson / deliberate fire (in the last 10 years)</b>						
No cases of arson / deliberate fire within school grounds	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Arson / deliberate fire common within school grounds						

<b>1.2. Vandalism (in the last 5 years)</b>						
No cases of vandalism within school grounds	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Vandalism common within school grounds						

<b>1.3. History of fires</b>						
No major fires in the school in the last 10 years	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
One or more major fires in last 10 years						

<b>1.4. Incidence of arson in the locality</b>						
Locality has low arson rate (as reported to police)	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Locality has high arson rate (as reported to police)						

<b>1.5. Fires in other schools in the locality (in the last 5 years)</b>						
Few cases of fire in other schools in the locality	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Frequent cases of fire in locality						

## Part 2 - Environment and buildings

Low Risk	0	1	2	3	4	5 High Risk
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### 2.1. Security measures - buildings

Good security measures provided for school building	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Few security measures						

### 2.2. Security measures – school grounds

Good security measures provided for school grounds	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
No security measures						

### 2.3. Opportunities for arson

Few opportunities for arson	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Many opportunities for arson						

### 2.4. Buildings state

Buildings well maintained with no damaged safety systems (e.g. fire doors)	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Buildings in disrepair and vandalised						

**2.5. Building height**

Single storey)	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High-rise
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**2.6. Building construction**

Traditional	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Lightweight
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**2.7. Building design and routes for fire spread**

Few	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Many
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**2.8. Building size (total floor area)**

Small building	<input type="radio"/> 0	<input type="radio"/> 1	<input checked="" type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very large building
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**2.9. Building distribution (separation)**

Distributed buildings	<input type="radio"/> 0	<input type="radio"/> 1	<input checked="" type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Single building
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**2.10. Risk of fire from school activity**

Low	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High
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**2.11. Out-of-hours use of school facilities (by the public)**

None or low out-of-hours use	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Frequent out-of-hours use
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**2.12. Building users at risk**

Low	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input checked="" type="radio"/> 5	High
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### Part 3 Fire safety and fire protection measures

Low Risk	0	1	2	3	4	5 High Risk
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#### 3.1. Passive fire protection measures

Buildings have adequate fire compartmentalisation and fire/smoke barriers and doors	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Overly large fire compartments and lack of fire/smoke barriers and doors
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#### 3.2. Design relaxations of passive measures (for education reasons)

None	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Atrium or open-plan areas
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#### 3.3. Fire detection and warning system

Automated and linked to central control room	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Human detection and hand bell
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#### 3.4. Means of escape (and emergency lighting and signage)

Many exits, short escape routes	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Few exits, long escape routes
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#### 3.5. Occupancy density

Few people, in small groups	<input type="radio"/> 0	<input type="radio"/> 1	<input checked="" type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Large numbers in a single compartment
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#### 3.6. Training and drills

Good training of staff, frequent drills	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	No training, no drills
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**3.7. Management (of fire safety)**

	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	
Good							Poor

**3.8. Fire Service notification**

	<input checked="" type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	
Automatic							None

**3.9. Fire Service location**

	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input checked="" type="radio"/> 5	
Very close							Very distant

**Part 4 Consequences/ impact of fire (Weight = 4)**

Low Risk	0	1	2	3	4	5 High Risk
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**4.1. Impact of fire on users (injury)**

Low	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High (risk of death)
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**4.2. Impact of fire on learning**

Low	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High
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**4.3. Impact on community**

Low	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High
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**4.4. Potential cost**

Low	<input type="radio"/> 0	<input type="radio"/> 1	<input checked="" type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High
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**4.5. Environmental impact**

Low	<input type="radio"/> 0	<input checked="" type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	High
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## SCORE

<b>Part 1</b>	Incidence of arson (fire)	0
<b>Part 2</b>	Environment and buildings	22
<b>Part 3</b>	Fire safety or fire protection measures	10
<b>Part 4</b>	Consequences of a fire	32
<b>TOTAL</b>		<b>64</b>

## Scoring

Proposed overall scoring	Proposed scoring Parts 1 and 2	Proposed scoring Parts 3 and 4
Low risk	0 – 20	0 – 20
Average risk	21 – 60	Average risk 21 – 50
High risk	61 – 85	High risk 51 – 145

### Overall score

#### Low risk

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk. Sprinklers may be beneficial.

#### Average risk

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk. A sprinkler system is recommended.

#### High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk. Sprinklers should be provided.

The tables below list the type of fire safety and fire protection measures that might be appropriate for your school.



## Fire safety or fire protection measures for consideration to reduce risk of fire (Parts 1 and 2)

### Low risk

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk with regard to the incidence of fire and environment and buildings.

Sprinklers may be beneficial. You may also wish to consider:

- Improved building security measures
- Improved site security measures
- Better building and equipment maintenance
- Further control of activities likely to cause a fire

### Average risk

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk with regard to the incidence of fire and environment and buildings.

A sprinkler system is recommended. You may also wish to consider:

- Improved building security measures
- Improved site security measures
- Better building and equipment maintenance
- Improved control of activities likely to cause a fire
- Improved procedures to ensure that buildings are cleared of materials that can be used for arson

(Note: a sprinkler system may act as a deterrent to arsonists, but primarily acts to prevent a small fire growing)

The fire safety and fire protection survey and risk assessment indicates your school is at a high level

### High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk with regard to the incidence of fire and environment and buildings.

Sprinklers should be provided. You may also wish to consider:

- More building security measures
- More site security measures
- Security measures include,
  - good window locks,
  - intruder detection
  - CCTV
- Security staff / guards
- good perimeter fencing
- Car parks well lit and overlooked etc
- Doors secure against all but the most determined intruders
- Windows and roof-lights protected against intruders etc
- Better building and equipment maintenance
- Control of activities likely to cause a fire
- Buildings cleared of materials that can be used for arson

(Note: a sprinkler system may act as a deterrent to arsonists, but primarily acts to prevent a small fire growing)

**Fire safety or fire protection measures for consideration to reduce risk of injury, damage,**

## **Fire safety or fire protection measures for consideration to reduce risk of injury, damage, and consequences (if a fire does occur) (Part 3 and 4)**

### **Low risk**

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

Sprinklers may be beneficial. You may also wish to consider:

- An improved automatic fire detection and alarm system
- Improved procedures to ensure doors are shut at night
- Secure storage (fire cupboards) for documents and coursework
- Better communications with local fire brigade
- Contingency plans, for example for use of alternative buildings
- Better planning, training and more frequent drills

### **Average risk**

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

A sprinkler system is recommended. You may also wish to consider:

- An improved automatic fire detection and alarm system
- Additional fire compartmentalization
- Procedures to ensure doors are shut at night
- Secure storage (fire cupboards) for documents and coursework
- Better communications with local fire brigade
- Contingency plans put in place for use of alternative buildings
- Better planning, training and more frequent drills

The fire safety and fire protection survey and risk assessment indicates your school is at a high level

### High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

Sprinklers should be provided. You should also consider:

- An automatic fire detection and alarm system
- Additional fire compartmentalization
- Procedures to ensure doors are shut at night
- Secure storage (fire cupboards) for documents and coursework
- Better communications with local fire brigade
- Contingency plans put in place for use of alternative buildings
- Better planning, training and more frequent drills
- Controls on the number of people using the building

For more information on types of fire safety and fire protection measures refer to BB100: 'Designing against the risk of fire in schools'

