Regulatory Reform (Fire Safety) Order 2005 Fire Risk Assessment

Brook Primary School,

George Street,

Wordsley,

DY8 5YN.

Date of assessment21st November 2019

Assessment review date

By the school November 2020

By a Fire Safety Advisor November 2021

Assessment by
Elite Safety in Education
01543 574824

Section 1

Introduction

Brook Primary School is a single storey building of traditional construction built in 1936. It consists of two long corridors off which the majority of classrooms are accessed. The school hall and kitchen is located at the junction of the corridors and there is also a small detached 'Environmental Building' which was built in 2006. The school boilers are located in a small basement which is accessed via some external steps at the front of the school.

There are approximately 54 staff employed to work at the school and 384 children currently attending. There are also 54 children attending in the 'Butterflies' pre school.

The building is opened in the morning at 6.00am and closed in the evening at 6.30pm. Teaching staff are in attendance at varying times during these hours. The school day runs from 8.50am until 3.30pm. A before school club is held from 8am and an after school until 5.45pm. The before and after school clubs are held in the Environmental Building.

The kitchen staff are employed by Dudley Metropolitan Borough Council whilst the cleaners and site manager are employed by the school.

The school is accessed via George Street with a playground and playing fields at the rear and side of the school.

This fire risk assessment covers all relevant persons likely to be lawfully on the premises including visitors and contractors.

Disclaimer

The assessor believes that the information contained within this fire risk assessment to be correct at the time that the assessment was carried out. The assessor does not accept responsibility for any consequences arising from the use of the information herein. The report is based upon matters that were observed or information that came to the assessor's attention during the assessment and should not be relied upon as an exhaustive record of all possible risks or hazards that may exist or potential improvements that can be made.

NB: In carrying out this fire risk assessment the assessor has made certain assumptions that any building and structural work has been carried out correctly, and that the fire safety systems in place such as the fire alarm and emergency lighting, have been installed in accordance with standards and guidance in force at that time. No suspended ceiling tiles were lifted during the assessment. It is assumed that any fire protection in the form of fire resisting construction has been installed correctly. That is to say, it must extend beyond any suspended ceiling to 'true' ceiling level. Any breaches in the fire resisting construction, for example for the passage of services, must also have been carried out correctly with no holes left for the passage of fire or smoke. If the school are in any doubt as to whether this has been done, then it is recommended that a survey is carried out to ascertain the integrity of any fire resistance provided to corridors, staircases and other relevant areas.

Section 2

Contact details

Head Teacher: Marie Fellows

Chairs of Governors: Peter Simpson

School Phone Number: 01384 817643

The responsible person(s) named above must ensure that the action plan forming part of this fire risk assessment is completed and that this is within the timescales stipulated.

Section 3

Building Plans

Plans showing fire safety provisions were not available at the time of assessment.

Section 4

Means of escape from fire

Significant findings

The school is built as two long wings of approximately the same length in an 'L' shape. At the junction of the two wings are the school hall and kitchens. Extensions to the original building have been added over the years and certain works have been carried out following previous fire risk assessments.

There are several doors within the school which are electronically locked. All electronically locked doors should open upon fire alarm actuation and power failure. The green box over rides which are provided adjacent to these doors must be tested monthly using a test key and the results recorded for audit purposes.

The two main corridors provide two way travel for means of escape purposes in most areas. There are no areas of 'dead end' as such. Smoke detection for early warning of fire is provided on all the corridors plus smoke stop doors to sub divide the corridors in accordance with current guidance. The classrooms in the extensions to the school are provided with own fire exits direct to fresh air.

The main entrance doors into the school, which are located at the junction of the two wings, are electronically locked and give access to a reception area where visitors are electronically 'signed in'. A digital keypad is used to enter the school and a simple push button to leave. These doors are not linked into the fire alarm system because they do not form part of the school's main fire escape strategy. This is because they discharge directly onto the street and not a secure area. The doors are however provided with an emergency green box over ride which may be used by parents or visitors waiting in the reception area.

The reception area, which is staffed during the school day, provides access to the following parts of the school:-

- 1. The school admin offices including site manager's office, business manager's office, head teacher's office, deputy head's office, staff room and a small meeting room.
- 2. The long corridor which leads down to the Reception and Nursery Classrooms.
- 3. The long corridor which leads down to the Annexe.
- 4. The rear of the stage

With the exception of the meeting room, the occupants of the rooms detailed in 1 above may use the reception area for means of escape purposes or a set of inter connecting doors into the corridor on the other side of the smoke stop doors. Occupants of the meeting room may exit via the front entrance doors or pass into the corridor. The meeting room may be viewed as an inner room off the reception area. The provision of smoke detection in the reception area renders the situation satisfactory.

The following rooms use the corridors for means of escape purposes:-

- Classrooms 20, 21, 25, 26, 38, 39, 40, 41, 42, 43,
- Toilets, 8, 9, 10, 22, 23, 30, 31, 52,
- Hall and the stage

This is considered satisfactory for the following reasons:-

- The corridors provide a choice of escape routes
- Smoke detection for early warning of fire is provided on the corridors
- The corridors are sub divided by smoke stop doors
- The final exits are within current travel distance guidelines
- The corridors are busy with pedestrian traffic throughout the school day

The following rooms are provided with their own exit direct to fresh air:-

- Kitchen (room 40)
- Classrooms 29, 34/35, 36/37, 54, 61,
- SEN room 11,
- Meeting room 63
- Cloakrooms, 60, 64, 65,

The following rooms are classed as 'inner' rooms where occupants must pass through an 'outer' room for escape purposes:-

- Meeting room 16,
- Office off classroom 29,
- Withdrawal room off room 54,
- Kiln room off room 54,
- Kitchen in the Environmental Building.

In all cases above, smoke detection is provided in the outer room which renders the situation satisfactory.

Rooms 44 to 49 are a series of small inter connected rooms which have a choice of escape routes via the corridor or a final exit off room 49. In addition, all rooms are provided with smoke detection for early warning of fire.

The main boiler room is accessed externally. It is provided with an emergency shut off, fire alarm call point and sounder and a fire extinguisher.

Capacity of the Hall and Stage

The hall is provided with four double door exits onto two separate corridors. One of the corridors widens out to form the library.

To calculate the maximum number allowed in the hall we must discount the largest exit as being lost due to fire. In this case, as the exits are located in pairs on the corridors, a fire in either corridor or the library could render two exits untenable.

The remaining two double door exits have a capacity of 220 persons each in a standard evacuation time of two and a half minutes. Therefore the maximum number that should be allowed in the hall, base on means of escape capacity only, is 220 persons.

As stated above, this maximum number is based on escape capacity only. Obviously the floor space available is a determining factor and it is understood that the school voluntarily limits the numbers of a seated audience to 100 persons for school productions. Further advice on is matter is available if necessary.

Guidelines for using school halls:

The following guidance should be used when chairs are used in the hall for events:

- Chairs should be fixed together in rows so that they do not scatter in an emergency evacuation. Clips or cable ties can be used unless the chairs have an interlocking feature.
- The maximum number in any one row is 14 seats
- If there are more than 14 seats in a row, then a centre aisle of one metre must be created
- The seating should have side aisles of at least one metre width for means of escape purposes.
- Persons should be no more than 7 seats from an aisle.
- Ensure that the space between the back of the seats and the front of the seat in the row behind is approx 300mm 350mm minimum.

The Environmental Building

The Environmental Building was built in 2006 and as such complies with modern building regulations. It is used for the before and after school club. It consists of one main room, a small kitchen, toilets and a conservatory. In addition to the entrance door there is a final exit provided off the conservatory.

General

All exit doors have door furniture fitted which is suitable for means of escape purposes.

The assembly point is located on the school's rear playground. Registers are used to carry out a roll call of the children, plus a print out of visitors and staff on site.

In addition to the roll call, a 'sweep' of the building is undertaken by fire marshals to ensure that all persons have vacated the building.

Further evacuation from the school is available via gates. An adequate number of staff hold keys to the padlocks on the gates.

Evacuation drills are carried out every term and the results recorded.

Deficiencies:

1. Self closing fire resisting door to room 60 not quite closing fully.

Section 5

Fire alarm and detection

Significant findings:

An electrical fire alarm system is provided in the school with the main indicator panel located in the main entrance area and a repeater panel by room 44.

A zone plan is not provided as the panel states which device in which room has activated.

Smoke detection is provided in certain areas of the school to provide early warning of fire for the following reasons:-

- 1. To protect 'inner' rooms
- 2. To provide early warning of fire.

Fire alarm call points are provided adjacent to the final exits with the exception of room 36.

The Environmental Building is provided with its own fire alarm system with the indicator panel located in the main room. The two systems are not linked - however either building would be aware of a fire alarm actuation due to the high fire alarm sounder levels. In the event of an evacuation in the main school building, a fire marshal is sent over to the Environmental Building to check that they are evacuating.

An adequate number of sounders are provided to produce an acceptable level of sound. External sounders are also provided.

The alarm is tested on a weekly basis using a different call point each week. The tests are recorded in a log book.

A contract exists with Whittakers Ltd for quarterly servicing and maintenance of the fire alarm system.

The fire alarm system is not monitored by a call centre.

Deficiencies.

1. No smoke detection in the server room.

Section 6

Emergency Lighting

Significant findings

Emergency lighting is provided on the escape routes of the school.

The system is tested on a monthly basis by on site staff.

It is serviced and maintained by Whittakers Ltd on a quarterly basis which includes battery checks and replacements when necessary.

NB: In the summer of 2016 the British Standard for emergency lighting (BS 5266) was revised. As the school is not used extensively in the evenings (i.e. lettings), the duration of the emergency lighting may be reduced from 3 hours to 1 hour.

Deficiencies

Section 7

Fire Compartmentation

Significant findings

Schools are particularly vulnerable to fire when they are unoccupied such as weekends or school holidays. It is therefore desirable, in order to reduce fire spread and for property protection purposes, to sub divide such buildings into fire resistant 'compartments'.

A line of fire resistance must begin and end on an outside wall or be self contained within itself (ie a box). It should be constructed of materials which give a minimum of 30 minutes fire resistance including any glazing (usually Georgian wired glass). Any doors in the line of fire resistance must be positively self closing and fire resisting and fitted with intumescent seals and smoke brushes.

There are several lines of fire resistant structure in the school which appear to divide the school up into compartments of adequate size. However it could not be ascertained during the assessment whether the roof void has been provided with fire breaks to prevent the spread of fire.

It is recommended that as part of the locking up procedure for the school that all doors are closed at night and over weekends.

Further advice on compartmentation to reduce the consequences of fire and smoke is available upon request.

Deficiencies

Section 8

Fire fighting equipment

Significant findings

An adequate number of fire extinguishers are provided throughout the school in accordance with BS 5306 Pt 8.

In general, persons would not have to travel an excessive distance to find a suitable extinguisher.

The extinguishers are clearly visible.

Misuse of fire extinguishers by pupils is highly unlikely and has not proved to be an issue in the past. Should interference with extinguishers become prevalent, then it is recommended that covers for the extinguishers are used.

The extinguishers are serviced on an annual basis by approved contractors Kingswinford Fire Protection Ltd to BS 5306 Pt 3. At the time of assessment the last service date was March 2017.

All extinguishers are mounted on wall brackets or stands for ease of use.

Only those staff who have received practical training in their use should operate fire extinguishers.

Deficiencies

Section 9

Notices and signs

Significant findings

Fire exit signs are provided in appropriate positions throughout the building in accordance with BS 5499 Part 1. Where necessary they incorporate directional arrows.

All fire alarm call points should be provided with fire routine notices along side them.

All members of staff are aware of the fire evacuation emergency plan. Copies of the fire routine notice are positioned in appropriate locations.

Fire fighting equipment is correctly and appropriately identified.

An emergency procedure plan is available and is displayed as appropriate.

<u>Deficiencies</u>

1. No 'Push Bar to Open' sign on exit from room 49.

Section 10

Staff training

Significant findings

Staff receive fire safety training every 2 years. At the time of assessment this had been last carried out on 19th September 2018.

The school has been divided into 7 zones and 15 fire marshals appointed to sweep those zones in an emergency evacuation. The marshals have received training in their roles which included the 'live' use of fire extinguishers – this training should be refreshed every 3 years.

The kitchen supervisor received 'live' extinguisher training in 2017.

An emergency action plan for fire is in place.

A full fire drill and evacuation is carried out once every term. The results of all fire drills and evacuations must be recorded for audit purposes.

Deficiencies:

Section 11

Sources of Ignition and Flammable Materials

Significant findings

The amount and distribution of flammable materials and sources of ignition throughout the building is consistent with a medium (normal) risk school.

There is a small production kitchen with meals being served to the children in the school hall. The main cooking equipment in the kitchen is as follows:-

- 12 gas rings
- Ovens
- Deep fat fryer

The kitchen is also provided with:-

- heat detection
- gas shut off
- fire alarm call point
- fire exit
- two fire extinguishers (one carbon dioxide and one foam) and a fire blanket

The kitchen filters are deep cleaned annually and an electrically operated roller shutter, which closes on fire alarm actuation, separates the kitchen from the hall.

PAT testing is carried out on a rolling programme by the site manager. It is recommended that a register of all electrical appliances is drawn up to ensure that all equipment receives a test.

A 5 year fixed electrical wiring check was carried out in March 2015. The next 5 year electrical wiring check will be required in March 2020.

The main boiler room for the school (gas fired) is located in the basement below room 25 and is accessed externally. It is provided with an emergency shut off switch, smoke detection, fire alarm call point, fire alarm sounder and a carbon dioxide extinguisher. The site manager's store room is located at the side of the boiler room – the provision of smoke detection in the boiler room renders the situation satisfactory.

If laptop charging trolleys are used it is recommended that they are not left switched for long periods overnight – timers should be used.

The server room is not provided with smoke detection.

A kiln is provided in a small room adjacent to room 54. It is serviced annually but at the time of assessment was not in regular use.

Deficiencies:

1. Display fitted to the wall below a convector heater outside room 54.

<u>Section 12: Waste Control – significant findings</u>

The waste bins are currently not secured to an immovable object to prevent vandals from

pushing them against the building and setting fire to their contents.

It is understood that this situation will shortly change as a secure compound is due to be

built.

Deficiencies: Nil

<u>Section 13: Supervision of contractors – significant findings</u>

It is strongly recommended that a permit to work system for 'hot work' carried out by contractors is implemented and rigorously supervised by on site staff whenever such work is

carried out.

Deficiencies: Nil

Section 14: Extended out of hours use - significant findings.

It must be ensured that should the school be used outside 'normal' school hours then an adequate means of escape and emergency lighting are provided in the areas used for such

activities. At the time of assessment the school was not used for lettings.

Deficiencies: Nil.

<u>Section 15: Arson prevention – significant findings</u>

There is a substantial perimeter fence which would deter all but the most persistent intruder. Should the fence become damaged in any way, affording access to the property,

then repairs must be carried out immediately.

External lighting is provided around the whole building.

Deficiencies: Nil

<u>Section 16: Storage arrangements – significant findings</u>

Storage cupboards throughout the school are kept locked shut and appropriate signs provided. It is particularly important that storage cupboards on escape routes are always locked shut unless in use.

Deficiencies: Nil

Section 17: People with disabilities – significant findings

The school completes Personal Emergency Evacuation Plans (PEEPs) for disabled staff and pupils and reasonable adjustments are made.

Deficiencies: Nil

Section 18: Additional control measures – significant findings

None

Section 19: Emergency action plan - significant findings

Full evacuation of the building is carried out once every term and recorded in the log book.

Deficiencies: Nil

Section 20: Employment of Young Persons (below 18 years)

Should young persons be employed they will be notified of the significant findings of the fire risk assessment and the protective and preventative measures put in place to reduce those risks. This will be carried out upon induction plus the letter in Appendix 'A' will be sent to the parents or guardian.

Deficiencies: Nil

Section 21: Co operation - significant findings

The kitchen staff are employed by Dudley MBC. Where outside employees, including contractors, are employed to work within the school, their employer will be notified of the significant findings of the fire risk assessment and the protective and preventative measures put in place to reduce those risks. See appendix 'B' for a copy of a letter to outside employers who may be employed to work within the school.

<u>Deficiencies:</u> Nil

<u>Section 22: Fire service liaison – significant findings</u>

None

Section 23: Fire Risk Assessment

Moderate harm

Extreme harm

Extreme harm

The following simple risk level estimator is based on a more general health and safety risk level estimator of the type contained in BS 8800:

Slight harm

Potential consequences

Likelihood of fire

of fire \Rightarrow

↓				
Low		Trivial risk	Tolerable risk	Moderate risk
Medium		Tolerable risk	Moderate risk	Substantial risk
High	High		Substantial risk	Intolerable risk
Taking into account the fire prevention measures observed at the time of this risk assessment, it is considered that the hazard from fire (likelihood of fire) at these premises is: Low Medium X High In this context, a definition of the above terms is as follows:				
Low:	Unusually low likelihood of fire as a result of negligible potential sources of ignition.			
Medium:	Normal fire hazards (e.g. potential ignition sources) for this type of occupancy, with fire hazards generally subject to appropriate controls (other than minor shortcomings).			
High:	Lack of adequate controls applied to one or more significant fire hazards, such as to result in significant increase in likelihood of fire.			
Taking into account the nature of the building and the occupants, as well as the fire protection and procedural arrangements observed at the time of this fire risk assessment, it is considered that the consequences for life safety in the event of fire would be:				

In this context, a definition of the above terms is as follows:

Slight harm X

Slight harm: Outbreak of fire unlikely to result in serious injury or death of any occupant

Moderate harm

(other than an occupant sleeping in a room in which a fire occurs).

Moderate Outbreak of fire could foreseeably result in injury (including serious injury) of

harm: one or more occupants, but it is unlikely to involve multiple fatalities.

Extreme Significant potential for serious injury or death of one or more occupants. harm:

Accordingly, it is considered that the risk to life from fire at these premises is:				
Trivial	Tolerable X	Moderate	Substantial	Intolerable
Comments:				

A suitable risk-based control plan should involve effort and urgency that is proportional to risk. The following risk-based control plan is based on one advocated by BS 8800 for general health and safety risks:

Risk level	Action and timescale
Trivial	No action is required and no detailed records need be kept.
Tolerable	No major additional controls required. However, there might be a need for improvements that involve minor or limited cost.
Moderate	It is essential that efforts are made to reduce the risk. Risk reduction measures should be implemented within a defined time period.
	Where moderate risk is associated with consequences that constitute extreme harm, further assessment might be required to establish more precisely the likelihood of harm as a basis for determining the priority for improved control measures.
Substantial	Considerable resources might have to be allocated to reduce the risk. If the building is unoccupied, it should not be occupied until the risk has been reduced. If the building is occupied, urgent action should be taken.
Intolerable	Building (or relevant area) should not be occupied until the risk is reduced.

(Note that, although the purpose of this section is to place the fire risk in context, the above approach to fire risk assessment is subjective and for guidance only. All hazards and deficiencies identified in this report should be addressed by implementing all recommendations contained in the following action plan. The fire risk assessment should be reviewed regularly.)

Section 24 Fire Risk Assessment Action Plan

Deficiency	Action Required	Priority	Completion date and sign
Self closing fire resisting door to room 60 not quite closing fully.	Attend to door so that it closes fully.	By the end of December 2019	
No smoke detection in the server room.	Fit smoke detection	Advice only	
No 'Push Bar to Open' sign on exit from room 49.	Provide sign	By the end of December 2019	
Display fitted to the wall below a convector heater outside room 54.	Remove display	By the end of December 2019	

Appendix A

Employment of Young Persons

Dear Parent/Guardian,

In accordance with Article 19(2) of the above Order and as a potential employer of your child, we have a duty to inform you of any risks to your child, identified in the fire risk assessment for our workplace and the preventative and protective measures employed within the building in respect of fire safety, prior to employing them.

Please find presented below the preventative and protective measures employed at the school to protect all relevant persons in the event of fire in the building.

Means of escape in case of fire

Due to nature of the premises, the travel distances involved and the number of children and staff the means of escape from the building is considered acceptable. The assembly point is on the playground. A palisade fence secures the perimeter of the premises. All staff are aware of the evacuation procedure and fire drills are carried out once every term.

Fire alarm and detection

The school has an electrical fire alarm system fitted with partial smoke detection. The Indicator Panel is located in the entrance lobby. The fire alarm is tested on a weekly basis using a different call point each week.

Emergency Lighting

Emergency lighting is provided on the escape routes of the school.

Fire fighting equipment

An adequate number of fire extinguishers, appropriate to the risk, are provided and serviced annually. All extinguishers are mounted on wall brackets for ease of use. Only those staff that have received practical training in their use, will operate fire extinguishers. Sprinklers are provided in the new building

Notices and signs

All members of staff are aware of the fire evacuation emergency plan. Copies of the fire routine notice are positioned in appropriate locations. Fire fighting equipment is correctly and appropriately identified. The emergency procedure plan is available and displayed as appropriate.

Staff training

All staff are aware of the emergency action plan and a full fire drill and evacuation are carried out once per term. The results of this fire drill are recorded in the log book.

Sources of ignition

There is a production kitchen from which meals are served into the school hall. PAT testing is carried out annually. The boiler room for the school is provided with emergency shut off switch, smoke detection, fire alarm call point and sounder and a fire extinguisher.

Waste Control

The waste bins are located within the school grounds.

<u>Supervision of contractors</u>

A permit to work system for 'hot work' carried out by contractors is in use. This system will be rigorously supervised by on site staff whenever such work is carried out.

Arson prevention

The school has a substantial palisade perimeter fence which would deter all but the most persistent intruder.

Storage arrangements

Storage cupboards throughout the school are kept locked shut and appropriate signs provided.

People with disabilities

Should a disabled person be employed attend or a disabled child attend then a Personal Emergency Evacuation Plan (PEEP) for that person will be devised.

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Signed	Hand	Toachor
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<u>Appendix B</u>

Provision of information to employers and the self employed from outside undertakings

In accordance with Article 20 of the above order, we have a duty to inform you of any risks to you or your employees, identified in the fire risk assessment for our workplace and the preventative and protective measures employed within the building in respect of fire safety.

Please find presented below the preventative and protective measures employed at the school to protect all relevant persons in the event of fire in the building.

Means of escape in case of fire

Due to nature of the premises, the travel distances involved and the number of children and staff the means of escape from the building is considered acceptable. The assembly point is on the playground. A palisade fence secures the perimeter of the premises. All staff are aware of the evacuation procedure and fire drills are carried out once every term.

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Signed	