



Independent Fire Risk Assessor & Fire Safety Advisor

Fire Safety doesn't happen by accident

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Pre-Occupancy Fire Risk Assessment

Date 13th September 2022

Marjon Studio School



FIRE ALARM SYSTEM

The existing fire alarm system coverage appears to have been designed to comply to;
BS 5839 Part 1 Category L2

Areas of Concern Noted During the Inspection Survey

Issue 1. A smoke detector should be installed within Room 10

Issue 2. The smoke detector within the server room is sited too close to the air conditioning unit, and therefore, should be re-located to a new position ideally at least 400mm away from the airflow created from the air conditioning system, to ensure that the smoke is not blown away from the alarm, which could hamper detection.

Issue 3. The smoke detection x 2 installed within the Lab is sited directly above the air conditioning units, and therefore, should be re-located to a new position ideally at least 400mm away from the airflow created from the air conditioning system, to ensure that the smoke is not blown away from the alarm, which could hamper detection.

Issue 4. To avoid discriminating against disabled people, and to comply with the Equality Act, Building Regulations, and the recommendations of codes of practice such as BS 5839-1 and BS 8300. BS EN 54-23 compliant Visual Alarm Devices (VADs) should be installed in all sanitary accommodation, and anywhere where people with impaired hearing are likely to be alone. The purpose of a VAD within a building is to visually alert people of a fire emergency to enable them to take appropriate measures.

Issue 5. The smoke detector within the sports store is sited within 300mm of a wall and needs to be re-located

The above is not necessarily a comprehensive list and therefore used as a guide only

Fire Alarm Sound levels

To be confirmed prior to occupation.

BS 5839:1 recommends a minimum sound pressure level of 65dB(A) should be achieved throughout all accessible areas of the premises (relaxed to 60dB(A) in small rooms, stairwells, or areas less than 60m²). Where sound levels are not being achieved additional sounders are to be installed within these areas (it is preferable to install a greater number of quieter sounders, rather than a few very loud sounders).

EMERGENCY LIGHTING SYSTEM

In the UK, legislation stipulates that all business premises must have emergency lighting. Emergency lighting is required in premises to allow occupants to escape safely in an emergency situation. The requirements under BS 5266: 2016 state that a building must have adequate illumination for escape and to identify firefighting equipment. The emergency lighting system must allow for safe movement of occupants walking out of a building, whether during a power cut or evacuation designed to prevent panic during evacuation. All escape routes must be illuminated, which includes rooms, corridors, and emergency exit route signage, firefighting equipment such as fire alarm call points and portable fire extinguishers, either on escape routes or elsewhere within the building, allowing the safe use and operation of such equipment to escape the building or fight the fire.

Although there appears to be an adequate emergency lighting system installed within the premises, without a full site test i.e., turning the mains power supply off and doing a physical check of all areas, it is impossible to ascertain if there would be adequate illumination from the emergency lighting system, to provide enough light to illuminate emergency equipment and all escape routes to aid egress from all areas of the building.

It would, therefore, be beneficial to check the emergency lighting system and coverage in the hours of darkness (without mains power) to ascertain if there are any other areas that would benefit from additional emergency lighting being installed.

COMPARTMENTATION – FIRE DOORS

All fire doors should adhere to the following fire door standards.

- Doors to be hung on 3 hinges of 100mm pressed steel butt hinges. To meet BS1935
- Doors must be positively self-closing in action with the self-closing device capable of closing and latching the door firmly against the rebate. The exception to this is cupboard fire doors which are normally locked when not in use.
- Self-closer to be of the hydraulic overhead type to meet BS6459: Part 1 and BS EN1154
- Latches and locks shall meet the performance requirements of BS5872.
- An Intumescent strip and smoke seal must be fitted to the top and both sides of the door or corresponding sections of the frame. Do not paint or varnish over the smoke seals when decorating the doors as this will render them ineffective.
- The gap between the door and the frame should not exceed 4mm and you must ensure the smoke seal makes continuous contact with the door lining.
- The gap between the door and the finished threshold must be kept to a minimum and should not exceed 10mm.
- The architrave on the room side should have any gaps between the frame and exposed wall 'fire stopped' using a proprietary fire-stopping and sealing system.
- Any fire-resistant glazing used (vision panel or transom light) shall be 6mm safety GWPP for doors requiring 30 minutes fire resistance.
- Fire Doors should never be wedged open

Areas of Concern Noted During the Inspection Survey

Issue 1. Kitchen fire door does not auto-close fully

Issue 2. Fire door at the top of the stairway o/s Room 09 does not auto-close correctly as it catches on the top of the thumb-turn lock and there are no cold smoke seals fitted to the top and hinged edge of the door.

Issue 3. Double fire doors opposite Room 09 have damaged cold smoke seals (rubber fin) and there is a gap over 4mm between the lower half of the doors when closed.

Issue 4. The observation window of the office fire door behind reception is completely missing.

A certified fire door specialist should be used to decide if the door can be repaired or needs to be replaced, as any damage caused to a fire door can compromise its integrity.

FINAL EXIT DOORS

Fire exit doors must not be locked or fastened in a way that they cannot be easily and immediately opened by any person in an emergency situation.

Areas of Concern Noted During the Inspection Survey

Issue 1. The Kitchen fire exit door is fitted with a key-lock, ideally this should be replaced for a thumb-turn lock.

The above is not necessarily a comprehensive list and therefore used as a guide only

COMPARTMENTATION – PASSIVE FIRE PROTECTION

Fire compartmentation is an important element of 'passive fire protection' and is achieved by dividing the premises into 'fire compartments'. Compartmentation is a way to keep a fire contained in one place, preventing fire and smoke from spreading quickly and taking over the building. By creating these fire-resistant compartments, fire can be suppressed for a specific time, to create a safe, protected means of escape for the building occupants. Good compartmentation reduces the danger to staff, fire and rescue services and people in the vicinity of the building.

A major threat from fire in most building structures occur where concealed cavities between fire separating walls and floors are interlinked. It is therefore essential that all openings and gaps are fire-stopped to restrict lateral and vertical fire spread and to achieve the required degree of compartmentation. Failure to do so may cause fire to spread uninterrupted in cavities and penetrations in a building.

For the integrity of fire rated construction to be maintained every joint, imperfection of fit or opening to allow services to pass through the element, should be adequately protected by sealing or fire stopping so that the fire resistance of the element is not impaired. All holes that breach compartment walls, ceilings, floors irrelevant of their size should be adequately fire stopped ideally by a competent third-party service provider.

Areas of Concern Noted During the Inspection Survey

Issue 1. Kitchen – there is a ceiling tile missing above the fire roller shutter and there are several holes around brass water pipes breaching the ceiling tiles.

Issue 2. There are several breaches in the compartment walls above the ceiling tiles of the main ground floor passageway opposite the toilet area.

Issue 3. Server Room – There are IT cables breaching the ceiling

Issue 4. There are breaches in the flooring of the electrical cupboard in Classroom S1

Issue 5. The filled holes/gaps in the COSHH cupboard/room needs to be adequately and competently fire stopped.

Continued below

Issue 6. The room adjacent to the Sports Store has breaches in the compartment wall above the electrical distribution panel and above the red notice board need to be adequately and competently fire stopped.

Issue 7. Passageway outside Room 09 above the ceiling tile the Batt and sealant used needs to be replaced due to shrinkage and cracking.

Issue 8. Room adjacent to the double fire doors outside Room 09 needs to be adequately and competently fire stopped above the ceiling tiles between the void and the passageway.

Issue 9. There are holes/gaps in the Switch Room that need to be adequately and competently fire stopped.

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ADDITIONAL SIGNAGE REQUIREMENTS

Legislation states that everyone within the workplace (including visitors) must be provided with relevant fire safety information. Regarding fire safety signs, this means that everyone must be aware of the location of fire alarms and emergency equipment, as well as understand where the fire exits and fire assembly point(s) are located and how to access them safely.

To avoid confusion, all escape, and mandatory signs within buildings, should be of similar style, design, size, and format, in compliance with the 'Code of practice for escape route signage BS5499-4:2013'

Areas of Concern Noted During the Inspection Survey

Issue 1. 'Fire action' notices should be displayed adjacent to all fire alarm call point positions throughout the premises. It is important that everybody knows what they need to do in a fire emergency. These simple 'Fire action' notices are your evacuation process in its simplest format.



Issue 2. 'Fire exit keep clear' signs should be mounted on both sides of all fire exit doors.



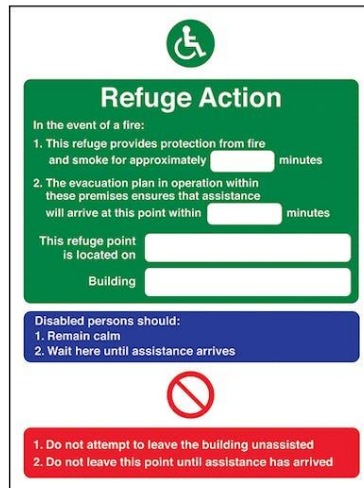
Examples

Issue 3. Sign as shown below should be mounted on top of all stairways and stairway levels



Continued below

Issue 4. Sign as shown below should be mounted at both disabled refuges. It is vitally important that users understand what they need to do in the event of a fire emergency



The sign is a vertical rectangular template for a disabled refuge. At the top is a green circle with a white wheelchair icon. Below this is a green rectangular box with the title 'Refuge Action' in white. Inside the green box, the text reads: 'In the event of a fire:', followed by two numbered instructions: '1. This refuge provides protection from fire and smoke for approximately [] minutes' and '2. The evacuation plan in operation within these premises ensures that assistance will arrive at this point within [] minutes'. Below the green box is a white rectangular box with the text 'This refuge point is located on' followed by a line for 'Building'. Below this is a blue rectangular box with the text 'Disabled persons should:' followed by two numbered instructions: '1. Remain calm' and '2. Wait here until assistance arrives'. Below the blue box is a red circle with a white diagonal line through it. At the bottom is a red rectangular box with two numbered instructions: '1. Do not attempt to leave the building unassisted' and '2. Do not leave this point until assistance has arrived'.

EXTERNAL CLADDING

A detailed assessment of the fire risks of the external walls and any cladding are excluded from this assessment as this is extremely difficult to assess without an intrusive inspection (i.e. cutting out a section of wall or cladding construction). Such destructive exposure is beyond the scope of this Fire Risk Assessment, and advice on the detailed design of the construction is beyond our expertise and that of most competent fire risk assessors. Even the nature of visible cladding might not be possible to determine without cutting out a sample for laboratory examination or test.

Please do not hesitate to contact me if you need any further advice or assistance.

Kind regards

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