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FIRE PROTECTION ENGINEERING CONSULTANTS

NEW ENGLAND HOUSE
SHORT TERM MITIGATION REPORT

New England House
New England Street
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Prepared for:

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EXECUTIVE SUMMARY

BRIEF INTRODUCTION ABOUT WHY THIS DOCUMENT IS REQUIRED

Firenta Ltd has been commissioned to create a summary document for New England House (NEH). This report is designed to ensure that all stakeholders are equipped with the necessary knowledge to make informed decisions. It provides a clear explanation of the fire safety issues, detailing their implications and how they pose a risk to life safety. Understanding that those reading this document may not have prior fire safety experience, it has been written in clear, straightforward language to ensure that all stakeholders can comprehend the risks to life safety so they can make well informed decisions.

Brighton & Hove City Council are dedicated to supporting the tenants of New England House and are actively exploring all possible options to keep the building operational. However, life safety is, and always will be, their primary concern. While the impact on SMEs and their livelihoods is acknowledged, the safety and well-being of people will always come first.

As readers of this document will vary in both fire safety knowledge and history of the building, it is important to clarify that this is neither a fire risk assessment nor a fire engineering report. Over recent years, New England House has been subject to multiple assessments, inspections, and remedial works. However, it is apparent that several significant findings and recommendations are still be implemented. This document aims to provide a conclusive overview, drawing upon the insights and shortcomings of previous reports to explain how these accumulated failures have now resulted in what can only be concluded as an **intolerable risk** to New England House.

Fire safety is of paramount importance, as fires can lead to severe consequences, including loss of life, injuries, and extensive property damage. While Brighton & Hove City Council has received various reports over the years, it is acknowledged that interpreting these documents can be challenging, particularly when distinguishing between non-compliance and actual risk levels. Therefore, to fully appreciate the assessment of risk, the following paragraphs should be reviewed, as they offer critical context to supporting judgments and reasoning outlined later in this document.

COMPLIANCE VS RISK

The distinction between “compliance and risk” has been a recurring question throughout this process. In fire safety inspections, significant findings are often presented in terms of compliance—i.e., whether something meets a given standard or not. However, this binary "pass or fail" approach offers little insight into the actual level of risk involved. The fire safety aspects of Building Regulations are designed to establish reasonable standards for life safety, which is usually achieved through the application of prescriptive, code-compliant measures. In both new construction and upgrading existing buildings, the various aspects of fire precautions are interrelated and weaknesses in some areas can be compensated for by strengths in others. This is not to suggest that any remedial works should not meet the relevant standards but simply that minor non-compliances or shortcomings can often be compensated for by using other control measures. **[NOTE:** It should be explicitly stated that any deviation should be subject to review by a competent fire engineer and that use of such assessments should be the exception and not the rule]. The level of risk resulting from non-compliances is dependent on several factors which include (but not limited to):

- The number and extent of shortcomings.
- The extent of deviation from a tested detail.
- The risk profile and complexity of the building
- The holistic package of other control measures which may be used to compensate for short comings.

Ultimately, the existence of an unsafe situation should not be allowed to persist if it is practicable to provide remedy. Unfortunately, many of the findings within New England House are too significant to be adequately compensated for through existing control measures. While additional controls, such as sprinklers and enhanced fire detection systems, can sometimes help mitigate compartmentation issues, the existing provision of automatic fire detection (AFD) is insufficient to offer this level of support. Further details on this will be discussed later in this document.

QUALITATIVE VS QUANTITATIVE ASSESSMENT

Fire risk assessments are primarily a qualitative assessment which relies upon the assessor's expertise, experience, and judgment. In contrast, fire engineering typically involves numerical analysis to determine the outcomes in comparative, absolute, or probabilistic terms. Fire safety engineering can offer an alternative approach to prescriptive fire safety measures and, in some cases, may be the only feasible way to achieve an acceptable standard of fire safety in complex or existing buildings. However, fire is an extremely complex phenomenon, and gaps exist in the available knowledge and technology. While advanced analysis is necessary for assessing the fire performance of the composite floor plates, fire engineering methods have

not been applied elsewhere in the building. Due to the severity of the combined deficiencies, it was deemed inappropriate to pursue compliance through fire engineering given that exact conditions would be impossible to model. Any fire engineering solution would require a substantial inherent safety margin to account for these uncertainties, which cannot be confidently assured in the current context.

A SUMMARY LIST OF THE MAIN FAILINGS WITHIN THE BUILDING.

REDUCED FIRE-PERFORMANCE OF THE FLOOR SLABS: The building's most significant defect is the inadequate fire protection of its floor slabs. According to the 2017 Cluttons report titled ***"Review of Condition of New England House Business Centre"*** (1) asbestos was extensively used for fireproofing throughout New England House. Initially, suspended ceilings made of asbestos insulation board provided fire protection to the underside of the floors however, these ceilings were inadvertently removed during an asbestos survey which resulted in a reduced fire performance of the floors. In March 2024, HOP Consulting Limited produced the document **"Appraisal of concrete structure for fire"** (2) which was an elemental review of the structure using historic drawings. Using tabulated methods, they concluded that the in-situ floor deck is only provided with 13mm cover from the underside which, under CP114 & CP115, only provides 30 minutes fire protection. For reference, the requirement is 90-minutes. It should be noted that tabulated approaches are usually "conservative", meaning they should under-estimate performance to allow a degree of safety margin.

Given that New England House is a complex historic structure, an advanced assessment undertaken by specialists should be able to evaluate the hybrid decks in greater detail, offering insights into the actual performance of the composition beyond the estimated 30-minute fire protection. As this is the most significant risk within New England House, an advanced assessment is critical before further comment. In the absence of any further assessment or definitive conclusion, the worst-case scenario of 30-minute fire performance would result in an "intolerable" risk **[see the example timeline in the next section].** This assessment needs to be commissioned immediately.

- **COMPARTMENTATION IS EXTENSIVELY COMPROMISED:** Through a combination of site visits, review of previous inspections and a full recent survey by fire stopping specialists, the compartmentation in New England House is extensively compromised. In summary, this includes the following:

    - **Concern there are no cavity barriers at floor level –** The fire stopping between floors to the service risers was formed of fibre glass insulation packed between the slab and glazing. While this is not a significant issue as the riser does not require fire slopping at floor level, it does raise concerns regarding the remainder of the perimeter of the building and how fire stopping was achieved at the floor level. This was echoed within the Cluttons LLP Report. **[Page 14, Paragraph 3 & 4].**
    - **Fire breaks removed and replaced with non-fire rated materials** - It was referenced in the last condition report from Cluttons LLP report that some of the green panels to the curtain walling were replaced. It was thought at the time that these were painted glass but in reality, they were asbestos cement sheeting boards designed to act as a fire break between floors. It is suggested that these panels were replaced with powder coated steel and other laminate panels, and there was at least one known instance when it was replaced with timber. This, in conjunction with the fire stopping observed behind the service risers, leads this consultant to assume there may be no adequate vertical fire stopping at the floor level. **[Page 13, Paragraph 2, Cluttons LLP Report].**
    - **Compartmentation between the tenant units and common areas is sub-standard, and there are instances where fire resisting walls are not carried full height -** In the worst cases, many of the units have overhead panels built above door sets - these are either covered with a single layer of plasterboard and in some cases even plywood. This would not be expected to provide the required fire separation. **[See Golden Thread Fire Delay Report 'C23-221– 14/07/23', page 34].** (3)
    - The compartmentation report documents over 1000 instances of where the compartmentation is inadequate. While this can be reviewed by the reader, the summary states **"the survey establishes that the current state of fire doors and fire compartmentation in the building is inadequate".** This refers to inadequate:
        - Fire Stopping and Linear Gap Seals:
        - Fire Rated Ceilings and Soffits:
        - Fire Resistant Glazing Systems
        - Electrical cables, Data Cables, & pipework penetrating fire resisting construction.

- **THERE IS NO PROTECTION TO THE EXTERNAL STAIRS:** There is currently no fire protection to the staircases. New England House is somewhat unique in that the upper floors are only served by external staircases. While this is not necessarily a problem, this would be

prohibited under current guidance and would need at least 1 internal staircase which is protected to a level which is equal to that of the main elements of structure (which in this case is 90-minutes). [NOTE: While 30-minute fire resistance would suffice for external stairs under current guidance, this is not acceptable for New England House]. The wall immediately adjacent to the stair is constructed largely of single pane glass which would not provide any fire resistance. Furthermore, the spandrel panels at floor level may be aluminium or even (in at least 1 case) timber. This presents a significant risk for 2 reasons:

1. If the façade were to fail while the staircase is occupied by evacuating individuals, a plume of smoke and hot gases would likely engulf the stair, resulting in serious risk of injuries from burns and smoke inhalation.
2. In the event this stair is inaccessible to fire and rescue service, the fire service would need to use the east stair which has no dry riser. This would mean fire service would need 4 – 6 lengths of 45mm hose which is very difficult to manoeuvre and would seriously impact tactical operations. ***[NOTE:*** *Conventionally the fire service would connect to the dry riser on a lower level and then proceed up using the protection of the stair. However, this is not possible on the west stair as it is external and there is no internal route].*

- **AFD IS LIMITED IN SOME AREAS:** Automatic fire detection (AFD) is a critical control measure for providing early warning and maximizing the available safe escape time (ASET). The only drawings indicating AFD device locations are from 2012, and while there's no certainty that these details are still accurate, the AFD coverage seems adequate in most areas. However, internal layout modifications that have created additional enclosed spaces, along with obstructions from partitions and other barriers, and compartmentation issues that may slow the movement of smoke into adjacent areas, could delay the activation of fire alarms (A clear example of this issue is in the southeast corner of Level 7). This delayed activation would result in a delayed evacuation. Given these concerns, the current extent of fire detection cannot be deemed a sufficient compensatory measure unless it is expanded to cover all necessary areas.

- **NO PROVISION FOR THE EVACUATION OF DISABLED PERSONNEL –** It is believed there are no evac chairs onsite within the building. While some may consider this a minor issue due to the current absence of disabled personnel in the building, the building's accessibility—facilitated by lifts—means disabled visitors could be present. Even if visitors are accompanied during a fire, the common areas are not equipped with appropriate evacuation aids (such as evac chairs) & we have a strong assumption this is also true for the tenants. In the worst-case scenario, the building lacks disabled refuges or safe waiting areas where individuals could signal for assistance- especially given the severe compartmentation previously discussed.

- **ELECTRICITY SUPPLY [MAIN INTAKE AND UNIT DISTRIBUTION BOARDS] BEYOND ITS USEFUL LIFE:** Following a recent letter from Paine Manwaring, it was determined that the electrical installation has exceeded its useful life, raising concerns about the safety of the main intake. Observations in tenant areas showed that many distribution boards within individual units were left exposed, with combustible materials stored underneath. In some instances, combustible items like papers and instruction manuals were even stored behind the meters.

- **FIREFIGHTING PROVISIONS ARE UNSUITABLE IN CONTEXT TO THE CURRENT FAILINGS:** While a single dry riser would have been sufficient if the staircase were adequately protected and the compartmentation met high standards, the current setup could easily be compromised. This could force fire service personnel to use the rear staircase, relying on the deployment of 45mm hose from ground level up to and including Level 8. This would be very difficult to manage.

- **FAÇADE IS BEYOND ITS USEFUL LIFE:** Although the lack of potential fire stopping at floor level was discussed earlier in the report, the only long-term solution of addressing this along with the fire protection to the stair is to replace the façade. As this is beyond its useful life, it should equally be factored in.

A SUMMARY LIST OF THE FAILINGS WITHIN TENANT AREAS:

While it's understandable that smaller businesses may lack awareness regarding fire safety provisions, compliance with fire safety regulations is not just a statutory duty; it is essential for ensuring the safety of all occupants. During several visits to the building, it became evident that tenants were not suitably managing fire safety, and some of the findings were concerning. The following list, while not exhaustive, highlights some of the most significant issues observed:

- **PRESENCE OF DANGEROUS SUBSTANCES** – Some tenants require the use of propane in their business operations. With a flashpoint of -104˚C, Propane is classified as a 'dangerous substance' which requires strict controls to protect employees, and anyone potentially affected by its use. Extremely flammable and heavier than air, propane can create an explosive atmosphere in enclosed spaces. Its vapours can travel significant distances to a source of ignition, where they may ignite, flash back, or explode. Additionally, propane cylinders exposed to heat can rupture and explode, posing a serious risk to both evacuating occupants and responding fire service personnel. The storage of LPG cylinders is strictly prohibited within multi-storey buildings which are not purposely designed for this use. (4) (5) (6) Small cartridges may be used; however, must meet the following (as an absolute minimum):

    - The maximum stored quantity should meet prescriptive requirements listed in guidance for the storage of cartridges.
    - Be stored in fire-rated cabinets with at least 30-minute fire resistance.
    - The cabinet must be ventilated at both high and low levels to a safe area outside the building.
    - If the internal volume of the cabinet exceeds 0.5m³, it should also be fitted with explosion relief.
    - Hazardous area classification may be required which would require ATEX rated electrical equipment within these zones.

  Dangerous substances in the workplace are subject to stringent regulations under both the **Regulatory Reform (Fire Safety) Order 2005** and the **Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002**. Any assessment where dangerous substances are used must demonstrate that the matters set out in '*Part 1 of Schedule 1 - Matters to be considered in risk assessment in respect of dangerous substances"* and *'Part 4 of Schedule 1 - Measures to be taken in respect of dangerous substances'* of the Regulatory Reform (Fire Safety) Order 2005 have, where necessary, been suitably applied. These conditions had not been met.

- **EXCESSIVE FIRE LOADING** – Following site visits conducted in July 24, some of the fire loading present within the units was 'excessive'. The fire loading generally comprised of combustible materials. Fire loading represents the total potential fuel available in a space that can sustain and intensify a fire. High fire loading increases the amount of heat, smoke, and toxic gases produced during a fire, making it more challenging to control and posing significant risks to occupants, firefighters, and the structure itself. High fire loading can lead to a faster development, increasing the chances of flashover which can reach temperatures over 1,000°C. This intense heat can weaken structural elements and lead to partial or complete collapse, further endangering lives.

- **LACK OF, OR INSUFFICIENT, FIRE RISK ASSESSMENTS BEING PRODUCED BY THE TENANTS** – Overall, most tenants could not produce a fire risk assessment when requested. The responsible person *(i.e., the employer, if the workplace is to any extent under his control, or the person who has control of the premises as occupier or otherwise)* must undertake a fire risk assessment to identify the general fire precautions required to, so far as is reasonably practicable, ensure the safety of any of his employees, and anyone who may be effected by their work activities. The Fire Risk Assessment must record the prescribed information which includes, as a minimum, findings of the assessment, the measures which have been, or will be, taken by the responsible person pursuant to the Order; and any group of persons identified by the assessment as being especially at risk. At the point of writing this report, Ligtas consultancy had reviewed 30 fire risk assessment from a total of 99 tenants. Of the 30 received review, 24 where deemed neither suitable nor sufficient.

- **LACK OF FIRE EXTINGUISHING APPLIANCES IS COMMON** – Many tenants did not have any fire extinguishers where they would be expected (due to the activities carried out and the hazard which are present). This may be a result of no fire risk assessment identifying when they would be needed.

WHAT DOES THIS ALL MEAN? A COMPARISON OF A TYPICAL FIRE SCENARIO BETWEEN A COMPLIANT BUILDING AND NEW ENGLAND HOUSE

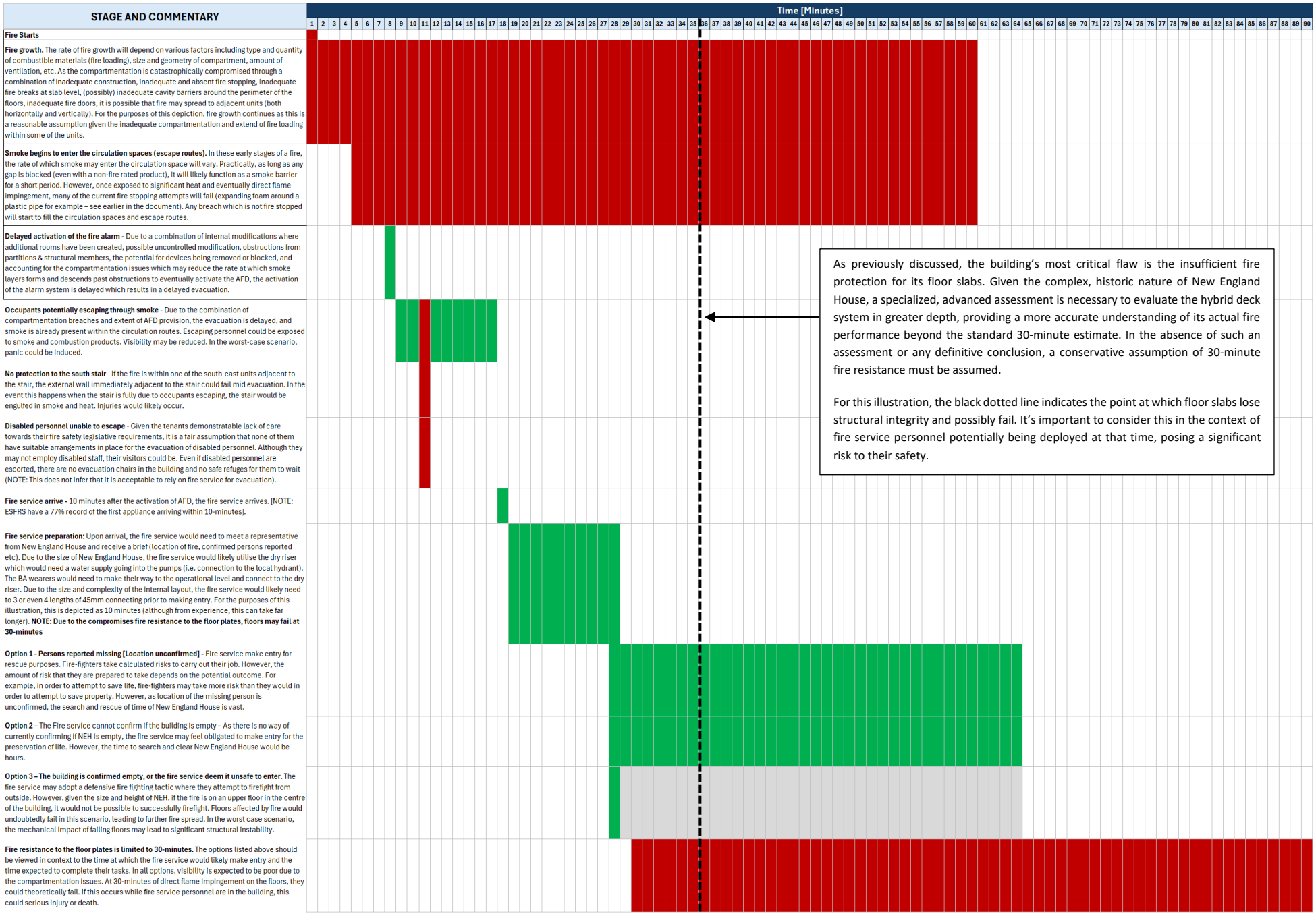
This consultant recognizes that for those without fire safety experience, understanding the real-world impact of these failures can be challenging. Therefore, this section includes a visual representation to illustrate the difference between how a well-designed building should facilitate a safe evacuation and how the deficiencies at New England House could compromise life safety during an evacuation. For clarity, "life safety" is often mistakenly thought to involve only the safe evacuation of occupants; however, it also includes measures to ensure the safety of responding fire service personnel. Firefighters take calculated risks in their work, but the extent of the risk they are prepared to accept depends on the potential outcomes.

PLEASE NOTE: THIS IS A REPRESENTATION INTENDED SOLELY TO ILLUSTRATE KEY SEQUENCES OF EVENTS AND THE EXPECTED PERFORMANCE OF EACH CONTROL MEASURE. SUPPORTING COMMENTARY IS PROVIDED TO EXPLAIN HOW EACH CONTROL MEASURE AIDS EVACUATION AND HOW ANY FAILURES MAY IMPEDE IT. THE TIMES SHOWN ARE APPROXIMATE AND MEANT FOR ILLUSTRATION PURPOSES ONLY; THEY SHOULD NOT BE INTERPRETED AS CALCULATED RESULTS FROM METHODS SUCH AS BS 7974. THE FIRE SERVICE RESPONSE TIMES ARE BASED UPON EAST SUSSEX FIRE AND RESCUE'S 2023 PERFORMANCE DATA, WHERE THE FIRE APPLIANCE ARRIVES WITHIN 10 MINUTES 77% OF THE TIME. HOWEVER, IN 23% OF CASES, THE RESPONSE TAKES LONGER. FOR THIS ILLUSTRATION, A 10-MINUTE RESPONSE TIME FROM THE MOMENT OF THE CALL HAS BEEN ASSUMED. PLEASE KEEP IN MIND THAT THIS ILLUSTRATION AIMS TO DEMONSTRATE THE ORDER OF EVENTS RATHER THAN EXACT DURATIONS. MANY OF THE TIMES AND DURATIONS SHOWN COULD, IN REALITY, BE SIGNIFICANTLY LONGER.

EXAMPLE OF HOW A BUILDING WHICH MEETS CURRENT STANDARDS SHOULD RESPOND IN A FIRE SITUATION:

STAGE AND COMMENTARY	Time [Minutes]
Fire begins within the building.	
Fire growth. The rate of fire growth will depend on various factors including type and quantity of combustible materials (fire loading), size and geometry of compartment, amount of ventilation, etc. However, in a building such as New England House where every unit is a fire compartment, the fire would stay contained within the enclosure of origin, it would not spread in to adjacent compartments and the escape routes should remain clear of smoke. For the purposes of this illustration, growth halts at 10 minutes to signify it stays contained (although fire growth within the compartment itself may still be ongoing).	
Activation of Automatic Fire Detection [AFD]. When a building has an extensive provision of AFD, a device should activate at the earliest opportunity and initiate an evacuation.	
Evacuation initiates: Due to the combination of early warning and good standard of compartmentation, the escape routes are clear from smoke which allows the occupants to escape in safe conditions. As there are no visible signs of smoke in the escape routes, occupants do not panic and safely evacuate the building.	
Disabled personnel safely evacuated. Disabled personnel who may be waiting in refuges are who may require assistance are safely evacuated due to the presence of disabled refuges, the presence of evacuation chairs and personnel assigned to assist being correctly trained in their use.	
Arrival of the fire service	
Fire service preparation: Upon arrival, the fire service would need to meet a representative from New England House and receive a brief (location of fire, confirmed persons reported etc). Due to the size of New England House, the fire service would likely utilise the dry riser which would need a water supply going into the pumps (i.e. connection to the local hydrant). The BA wearers would need to make their way to the operational level and connect to the dry riser. Due to the size and complexity of the internal layout, the fire service would likely need to 3 or even 4 lengths of 45mm connecting prior to making entry. For the purposes of this illustration, this is depicted as 10 minutes (although from experience, this can take far longer).	
Fire service make entry and firefight. Due to the effectiveness of the compartmentation, visibility is still of a reasonable standard which allows the fire service to arrive at the unit of origin. As the fire is contained to a single unit, fire fighting operations are still tenable and fire service proceed to extinguish the fire. Search and rescue operations can proceed safely if required.	
End of incident	

EXAMPLE OF HOW NEW ENGLAND HOUSE MAY ACTUALLY RESPOND GIVEN THE SHORT-COMINGS:



SHORT TERM CONTROL RISK MITIGATION TO SUPPORT THE TENANTS BUSINESS CONTINUITY:

Establishing the short-term control measures is not an easy or prescriptive solution. Therefore, the following should be acknowledged by the design team at Brighton & Hove City Council.

Firstly, it must be explicitly recognized that if the floor plates are confirmed to provide only 30 minutes of fire resistance before instability could occur, there are very limited control measures available to adequately mitigate this risk in the short term. Apart from having firefighting personnel onsite during occupied hours or implementing an active suppression system, no level of AFD (Automatic Fire Detection) or temporary compartmentation would eliminate this risk in a building of this size and complexity. As this instability of the floor would coincide with fire service intervention, it would be impractical to keep the building operational in its current condition.

Therefore, while short-term control measures are explored to maintain business continuity, addressing this instability risk—if confirmed—presents significant challenges that cannot be fully resolved with temporary solutions alone. Potential alterations to the building's operation, such as partial occupation and tenant restructuring, could be viable options. However, it would be more effective if all possible business continuity options were first identified and then reviewed by a fire engineer to determine the specific control measures needed to achieve them.

Finally, the intended plan, sequence and timeline for their implementation are key factors when determining appropriate control measures.

SHORT TERM MEASURES:

- **Increase the level of Automatic Fire Detection to cover all areas [AFD].** The priority is to expand the AFD system to ensure comprehensive coverage across all areas. Enhancing the extent of Automatic Fire Detection will reduce detection times, trigger early evacuation, and significantly increase the Available Safe Escape Time (ASET). Additionally, because the alarm system is linked to an autodial function that alerts the local fire service, this expansion will reduce the time to intervention. Automatic fire detection can also help offset deficiencies in compartmentation (however, it should be noted that extensive AFD coverage alone is not sufficient to fully address these issues). This should be enacted immediately. Provided the existing system matches the original 2012 drawings, it may be possible to simply add additional devices. In the event the current system is at capacity & cannot accommodate additional devices, a replacement system will be necessary.

- **Initiate the Installation of sprinklers immediately.** Sprinkler systems offer substantial benefits for fire safety and property protection. Critically, in the context of New England House, sprinklers can significantly reduce the impact on the structure, provide early fire suppression and increase the time provided to escape. By controlling fires at an early stage, sprinklers help limit the spread and intensity of fire, which has two key advantages: (A) it reduces the risks faced by firefighters, and (B) it prevents the fire from compromising the structure's fire resistance. To achieve this in the context of New England House, the sprinklers system would need to be a life safety system where the reliability is increased above the 99%. While large amounts of water could pose a risk to the High alumina cement (HAC) concrete structure, the controlled application of water from sprinklers is likely to mitigate this issue *(i.e., the water applied from sprinklers is likely far less than would be applied by fire service).* Overall, implementing a sprinkler system in New England House could provide critical fire protection, balancing both life safety and structural considerations.

- **Consider reducing occupancy hours and deploying onsite fire service personnel.** As the installation of a sprinkler system will likely take up to 12 months to complete, the danger from floor slabs which may only have 30-minute fire protection remains. To mitigate fire risk, consider reducing building occupancy hours and arranging for onsite fire service personnel *(to undertake a building wide fire marshal role).* Having dedicated personnel onsite to undertake initial firefighting activities would allow for rapid intervention in the early stages of a fire. This proactive measure could mitigate the risk while sprinklers are installed.

- **Install access control so building occupancy can be monitored.** This should be done immediately. Installing access control which continuously tracks occupancy numbers in the building would provide the fire service with invaluable information upon attending an incident. If the building is confirmed as empty during an incident, the fire service may take a defensive approach and fight the fire externally (where possible). Alternatively, if personnel are missing, this could narrow down the search parameters.

- **Increase protection to the staircase.** Suitable protection is required to the stair and no control measure would remove the need for this. The means of escape (especially the vertical section) must be provided with suitable protection to facilitate a life safety evacuation. This should be done immediately.

- **Initiate further analysis of the fire resistance to the floor plate –** The expected performance of the floor plates is a significant part in deciding on the risk to the building. A specialized, advanced assessment should be commissioned immediately to fully understand expected performance in a fire. In the absence of such an assessment, a conservative assumption of 30-minute fire resistance must be assumed.

- **Increase the management of high-risk tenants -** Regardless of any short-term control measures in place, the excessive fire loading and potential presence of dangerous substances presents a substantial and immediate risk to the building. High fire loading amplifies the amount of heat, smoke, and toxic gases produced in the event of a fire, making it more challenging to control and posing severe risks to occupants, firefighters, and the structural integrity of the building itself. Excessive fire loading accelerates fire development, increasing the likelihood of flashover—a phenomenon where temperatures can exceed 1,000°C. This extreme heat can compromise structural elements, leading to partial or total collapse, thereby endangering lives. Due to these hazards, a review of tenants should be conducted to assess compliance and risk levels. Additionally, the presence of any dangerous substances, such as liquefied petroleum gas (LPG), should be grounds for immediate action. Given that tenants were previously informed about safe LPG handling practices, any evidence of continued misuse should lead to immediate action to ensure overall safety.

- **Continue to collect and Review Fire Risk Assessments from All Tenants –** All tenants must comply with their legislative duties by undertaking a suitable and sufficient fire risk assessment (FRA) for their occupied space. Regular collection and review of these assessments are essential to ensure compliance and maintain safety standards. Failure to supply an adequate FRA within a specified timeframe, after multiple requests, should be grounds for immediate action due to health and safety concerns. Continued diligence in gathering these assessments will enable proactive identification of risks, helping to safeguard the building and its occupants effectively.

- **Fully consider plans to consolidate risk by depopulating and changing activities within the building.**

- **Reinstate fire resistance to the floor slabs.** Initiate the process of enhancing the fire resistance of floor slabs in New England House. While the specific approach will depend on the building's long-term plan, improvements can be implemented in phases if necessary. Developing a comprehensive plan is essential, outlining the methods and timeline for increasing fire resistance in each area. This phased approach allows for gradual reinforcement while aligning with broader renovation or safety goals for the building.

CONCLUSION:

Advanced assessment is necessary to evaluate the floor slab hybrid deck system in greater depth, providing a more accurate understanding of its actual fire performance beyond the standard 30-minute estimate. In the absence of such an assessment or arriving at a definite conclusion, 30-minute fire resistance must be assumed. This would conclude the building as an **INTOLERABLE RISK.**

Beyond concerns over slab performance, multiple inspections by various consultants have revealed numerous deficiencies across various control measures - from all parties - resulting in intolerable safety risks. The only reasonable conclusion is that there is a significant risk of serious injury or fatality, primarily for fire service personnel who may feel obligated to enter the building to conduct life-saving operations. This risk also extends to occupants attempting to evacuate, especially individuals who may require additional time, such as those with disabilities.

The measures in this document should begin immediately. While short-term control measures are explored to maintain business continuity, addressing the floors instability risk—if confirmed—presents significant challenges that cannot be fully resolved with temporary solutions alone. Potential alterations to the building's operation, such as partial occupation and tenant restructuring, could be viable options. However, it would be more effective if all possible business continuity options were first identified and then reviewed by a fire engineer to determine the specific control measures needed to achieve them.

Significant works are required to address critical issues within the building, including (but not limited to) the external façade, internal compartmentation, floor slab performance, active fire protection systems, and electrical infrastructure. Decisions must be made in relation to the current risk and appropriate control measures need to be implemented promptly.

If the intention is to keep the building operational, it is strongly recommended that a sprinkler system be commissioned immediately. While risks would still need to be managed in the short term, a sprinkler system would provide the most substantial impact across a range of existing deficiencies, enhancing overall safety significantly. A sprinkler system also addresses any residual, unquantified risks that are likely to persist in a building of this age and construction.

Failing to address the critical deficiencies within the building would lead to significant and potentially devastating consequences. The immediate cost of inaction includes heightened risk of serious injury or fatality to occupants and emergency responders due to inadequate fire safety measures. The floors structural integrity and resilience could remain compromised, increasing the likelihood of rapid fire spread and failure during an emergency.

Ultimately, the cost of taking no action far outweigh the investment required for immediate safety improvements and long-term planning, both in terms of financial outlay and the responsibility to protect lives.

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