Report

Project	200 Gray's Inn Road Roof Terrace, London
Report Title	Fire Strategy
Our Ref	GL8333/R1 Issue 4

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Issue No.	Issue 4
Issue Date.	30/05/2023

	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5	Issue 6
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By	OF	OF	OF	JL		
Checked	KS	KS	KS	KS		
Approved	BA	KS	KS	KS		

Contents

1.0 INTRODUCTION

1.1 Description of building /development

The Site comprises a 10-storey building including two basement levels.

The building is currently in use as an office (Class E) with a number of tenants.

The Site is bound by Coley Street to the north, Grays Inn Road to the west, Gough Street to the east and the Elm Yard to the south.

Description of Development ('the Proposed Development'):

'Erection of a single storey roof extension with associated landscaping."

Proposed Land Uses / Floor Areas

Use	Use Class	Proposed (NIA sqm)	Proposed (GIA sqm)	Proposed (GEA sqm)
Office	Class E	131	340	360
Total	-	131	340	360

Summary of Proposals

- Erection of a single storey rooftop pavilion providing multifunctional ancillary office accommodation (Class E);
- Creation of an external landscaped rooftop amenity space;
- Relocation of plant area and rationalisation of existing plant equipment.

Elsewhere the levels below roof will remain as existing. This implies that all existing fire safety precautions serving the levels below will be retained as per the 2019 existing fire strategy (see reference in Section 1.2).

Based on the survey information the existing building height is approximately 29m measured from ground to Level 7. The proposed works mean the roof level is now considered a storey meaning the top floor height of the building will exceed 30m above ground level at 34m high. This has significant bearing on several aspects of the existing fire strategy including structural fire resistance and the need for sprinklers throughout the building in accordance with the current Building Regulations guidance (the Approved Document B vol 2 2019 edition incorporating 2020 and 2022 amendments). Based on the discussions with Building Control, it is proposed that suitable risk assessment should be carried out to justify the non-compliance items and to demonstrate that the proposed roof terrace will not impact on the life safety of the occupants and firefighting operations in the building. This is discussed in more detail in the Sprinklers Section and the Structure and Compartmentation Section.

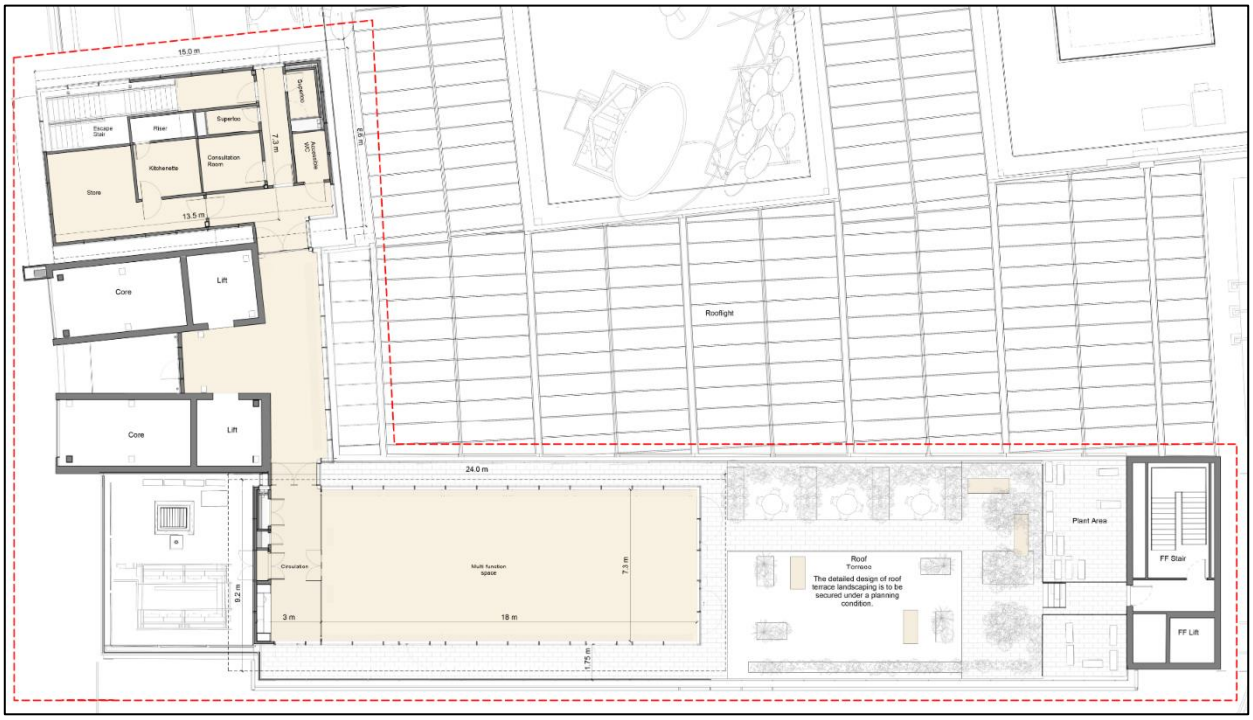

Figure 1: 200 Gray's Inn Rd - Roof Pavilion

1.2 Aim of report

This report primarily describes the fire strategy for the roof level containing the new roof pavilion however, it also covers some areas of the building below when relevant to the roof level fire strategy. This fire strategy is based on guidance in the Approved Document B vol 2 2019 edition incorporating 2020 and 2022 amendments.

This report also draws from the existing 2019 Fire Strategy report for the building by Norman Disney & Young which covers Basement to Level 7 (reference:*\ndy.group\lon\W\U131xx\U13174\030\FE\24_Report\ rp181107u0003).* The existing fire strategy was based primarily on guidance in the Approved Document B volume 2.

There are some areas where the proposals in this report do not meet the recommendations of current Building Regulations Guidance and alternative fire engineered solutions are proposed.

This report is intended for issue to the design team and client for design team information to support the planning application. The report will also be submitted to:

- the Camden Planning Authority as part of the planning application for the scheme;
- Building Control for their review in order to obtain approval in principle with regards to fire safety design for the building.

A detailed report will be prepared at the next design stage to support the Building Regulations application. The fire strategy will be prepared to demonstrate that the proposal complies with The London Policy D12 Fire Safety as follows:

Policy D12 Fire safety

A In the interests of fire safety and to ensure the safety of all building users, all development proposals must achieve the highest standards of fire safety and ensure that they:

1) identify suitably positioned unobstructed outside space:
   a) for fire appliances to be positioned on
   b) appropriate for use as an evacuation assembly point
2) are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire; including appropriate fire alarm systems and passive and active fire safety measures
3) are constructed in an appropriate way to minimise the risk of fire spread
4) provide suitable and convenient means of escape, and associated evacuation strategy for all building users
5) develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in
6) provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.

B All major development proposals should be submitted with a Fire Statement, which is an independent fire strategy, produced by a third party, suitably qualified assessor.

The statement should detail how the development proposal will function in terms of:

1) the building's construction: methods, products and materials used, including manufacturers' details
2) the means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach
3) features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans
4) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these
5) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building
6) ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

Note, discussions with the planning consultant for the project confirms that The London Plan requirement for a Fire Statement is only required for major developments; therefore, Policy D12 B would not be a requirement in this instance. It is also confirmed that the requirement of evacuation lifts in The London Plan policy D5 (B5) does not apply here given that the project only relates to an extension at roof level and not the whole building, particularly as there are existing lifts.

1.3 Declaration

Jensen Hughes are a highly experienced team of specialist fire engineers that have been operating in the UK and Ireland for nearly 29 years (predominantly under the name JGA). The qualifications of the authors of this report are given below:

Report By	Jack Lalor	MEng (Hons)
Checked by	Ken Seow	BSc (Hons), MSc, AIFireE
Approved by	Ben Atkinson	BSc (Hons), MSc, MIFireE, CPhys, MinstP

2.0 ACTIVE FIRE SAFETY SYSTEMS

2.1 Sprinklers

The building was originally built in the early 1990's with a sprinkler system provided throughout to meet Section 20 of the London Building Acts (Amendment) Act 1939 at that time. Sprinklers were later removed from some areas of the building following the repeal of Section 20 in 2013.

Existing non sprinklered areas include:

- ground reception;
- Level 1 office;
- Level 4 office (front);
- Level 6 office (front); and
- Level 7 office (front)

The proposals to provide accommodation at roof level means the roof level is now considered a storey and the top floor height will now exceed 30m above ground. Therefore, to meet current Building Regulations guidance the building should be sprinklered throughout. Whilst it is proposed to provide sprinklers in the roof pavilion as part of the works the existing non sprinklered areas will be retained. The existing non-sprinklered areas are currently occupied by various tenants and works in the proposed roof pavilion do not extend to these areas. For these reasons, it would be impracticable to reintroduce sprinklers in these areas.

When assessing the risk, the non-provision of sprinklers in the existing floor areas should not have implications to the life safety of occupants and firefighting operations in the building. The proposed new roof terrace is considered acceptable even if some of the existing floor areas remain unsprinklered. This is on the basis that:

- The roof floor plate is approx. 2600m^2. The proposal only occupies a small portion of the roof level i.e. 131m^2. There will only be limited occupants present on the roof terrace i.e. 110 people maximum.
- The roof area is largely outdoor space from which smoke can be dissipated to the atmosphere if a fire were to originate within the external space.
- The roof pavilion will be provided with sprinkler protection. This would significantly reduce the risk of fire spread. In a sprinklered condition it is unlikely that a fire in the roof pavilion would spread downward to affect the levels below.
- All unsprinklered areas are contained within fire resisting enclosures to prevent fire spread from the unsprinklered areas to other areas in the building.
- The worst case fire scenario would be that a fire starts directly below the roof pavilion within the unsprinklered office at Level 7. The unsprinklered office at Level 7 is contained within at least 60min fire resisting construction.
- Early means of warning/ample escape routes will be provided throughout the roof areas. The building adopts a simultaneous evacuation strategy. On this basis it is expected that occupants on the roof level would be able to complete their evacuation before a fire in the unsprinklered office space at Level 7 affects the roof pavilion.
- Firefighting will be available in multiple directions from Cores 2 and 5, ensuring effective firefighting operation for a fire in the roof level. As part of the scheme, it is proposed to improve the existing firefighting facilities by extending the firefighting lift of Core 2 to the roof level.
- There will be no high risk activities such as commercial kitchens including cooking hobs provided within the roof pavilion/terrace.
- For future proofing purposes, sprinklers will be provided in the existing non-sprinklered areas as when the tenant changes or the floors are unoccupied. This would improve the overall fire safety standards for the building.

The new sprinkler system serving the roof pavilion will be provided in accordance with BS EN 12845.

2.2 Automatic Detection and Alarm

The existing 2019 Fire Strategy states an addressable L1 standard system is provided in the building. To reduce disruption from false alarms it allows for an investigation time for members of staff to check and confirm

a real fire. It is proposed to retain the existing automatic fire detection and alarm and extend this system to also cover the new roof level accommodation.

The fire alarm system serving the roof pavilion will be provided in accordance with BS 5839-1.

2.3 Atrium Smoke Venting

The roof of the atrium is provided with mechanical smoke venting as described in the existing 2019 Fire Strategy report.

The atrium smoke extract fans should be relocated and replaced like for like as per the design criteria provided in the existing fire strategy for the building.

3.0 MEANS OF ESCAPE

3.1 Evacuation Strategy

The building (including the roof pavilion and the lower levels) will operate a simultaneous evacuation strategy, as per the existing 2019 fire strategy.

3.2 Travel Distance

Guidance recommends that after fit-out travel distances in the enclosed roof pavilion accommodation be limited to 18m in a single direction and 45m where there is a choice of escape.

Travel distances are up to a maximum 28m before fit-out where there is a choice of escape routes. The fit-out should be designed to stay within recommended limits.

Guidance recommends after fit-out travel distances in plant rooms be limited to 9m in a single direction and 35m where there is a choice of escape. Guidance also recommends the overall after fit-out travel distance from the furthest point in a plant room to a storey exit is limited to 18m and 45m where there is a choice of escape. Travel distances are within recommended limits.

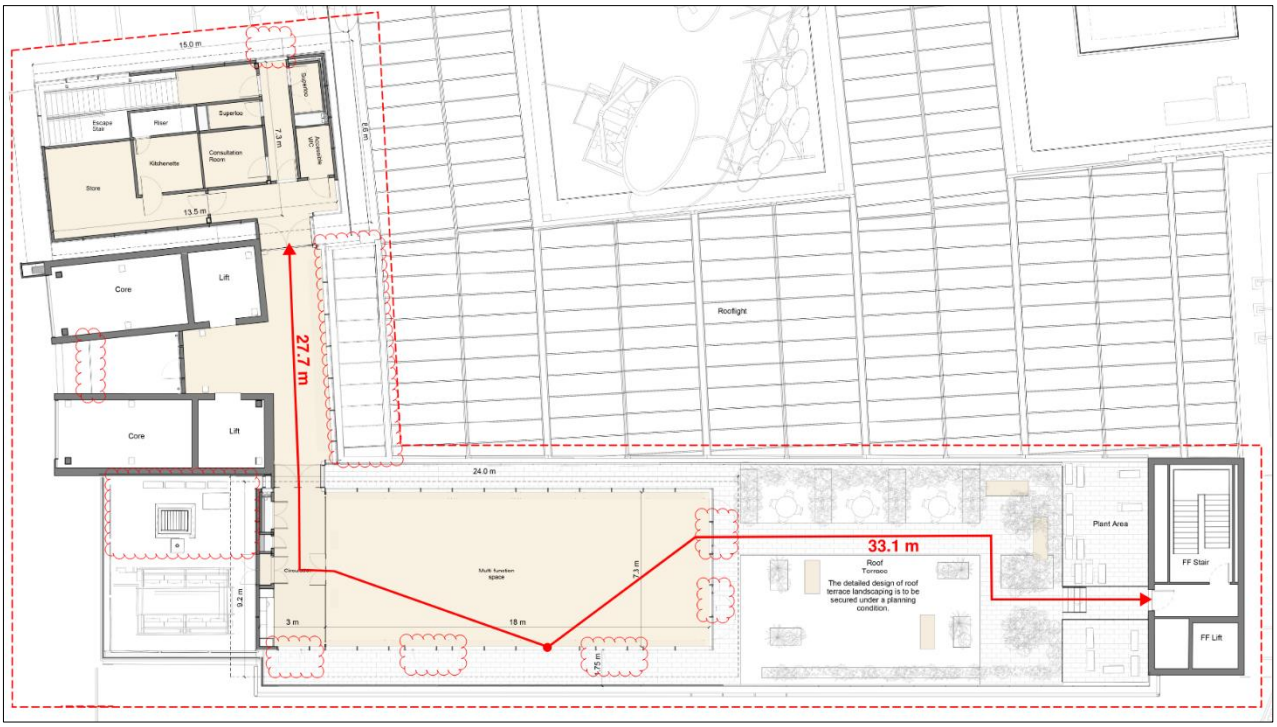

Figure 2: Travel Distances

Guidance recommends after fit-out travel distances in an unenclosed rooftop plant area be limited to 60m in a single direction and 100m where there is a choice of escape. Travel distances will be within recommended limits.

3.3 Occupancy

The occupancy of the new roof pavilion storey is proposed to be limited to 110 occupants.

The existing 2019 fire strategy describes the occupancy of Basement-Level 7 as shown in the Figure below. The occupancy of the lower levels will remain as existing.

Table 5-2 – Storey Exit Capacity

200 Grays Inn Road	Available Exits, mm	Maximum Allowed Occupancy, people (after discounting the largest exit)	Max. Expected Occupancy, people
Basement	5 x 850 1 x 1800 (discounted)	751 Note 1	687
Lower Ground	6 x 850	550	283
Ground: Reception/café	2 x 900 (pass doors - discounted) 2 x 850	220	136
Ground: Office (east/rear)	4 x 850	330	327
1st - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 110 330	 76 328
2nd - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 163 Note 1 330	 142 315
3rd - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 163 Note 1 330	 142 315
4th - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 163 Note 1 330	 137 315
5th - Office (west/front) - Office (northeast/rear) - Office (southeast/rear)	 2 x 850 2 x 850 2 x 850	 163 Note 1 163 Note 1 163 Note 1	 142 97 205 Note 2
6th - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 110 330	 73 217
7th - Office (west/front) - Office (east/rear)	 2 x 850 4 x 850	 110 330	 73 217
214 Grays Inn Road	**Available Exits, mm**	**Maximum Allowed Occupancy, people (after discounting the largest exit)**	**Max. Expected Occupancy, people**
Basement	1 x 1700 1 x 1800 (discounted)	340	53
Lower Carpark	1 x 1200 1 x 1400 (discounted)	240	120
Upper Carpark	1 x 1100 1 x 1200 (discounted)	220	48
Ground	1 x 850 1 x 900 (discounted)	110	78
Mezzanine	2 x 850	110	57

Note 1, maximum allowed occupancies have been calculated using the methodology set out in BS9999. The building has been considered to represent an A2 risk profile where occupants are expected to be awake and familiar with the premises and fire loading is representative of a medium growth rate fire. A 15% reduction in exit width factor (mm/person) has been applied where the proposed automatic fire detection and alarm system (L1) is considered to be an enhancement providing a clear benefit over the minimum required manual system specified by the standard. While the BS9999 guidance warns of the dangers of a 'pick and mix' approach it also recognises that where care is taken to ensure the package of fire precautions in a building are integrated that elements of the guidance can be used to provide a solution that meets functional objectives and provide an appropriate level of fire protection to the premises. In this case we consider the application of BS 9999 principals for means of escape to be acceptable on the basis that the design occupancy is conservatively high, the existing building is largely compliant with the prescriptive guidance given ADB for all other aspects of the design.

Note 2, the estimated occupancy on the southeast wing of 5th floor exceeds the maximum permitted. The extended occupancy level is considered acceptable on the basis that the office area has been divided into two separate compartments incorporating a storey exit in each compartment. Effectively, each compartment can be treated as a place of relative safety providing a period of time sufficient to enable the full evacuation without placing the people who would require queuing at the storey exit, at unacceptable risk from a fire.

Figure 3: Basement to Level 7 occupancy - Existing 2019 Fire Strategy

The total occupancy from Level 1-Level 7 given in the Figure above is 2794 occupants.

3.4 Storey Exit Capacity

The building is served by six escape stairs (Stairs 1-6) serving every level up to Level 7, as described in the existing 2019 Fire Strategy report.

The roof pavilion will be served by two escape stairs 2 (existing) and 6 (new extension). Doors to each core will be at least 850mm wide, providing capacity for up to 110 occupants in the pavilion.

3.5 Stairs

The building is served by six escape stairs (Stairs 1-6) serving every level up to Level 7, as described in the existing 2019 Fire Strategy report.

Stairs 2 and 5 are existing stairs that already serves the roof level. They will be retained and used to serve the new roof pavilion. As part of the works, Stair 6 will be extended up to the roof pavilion (see 3D drawing in Figure 4 below).

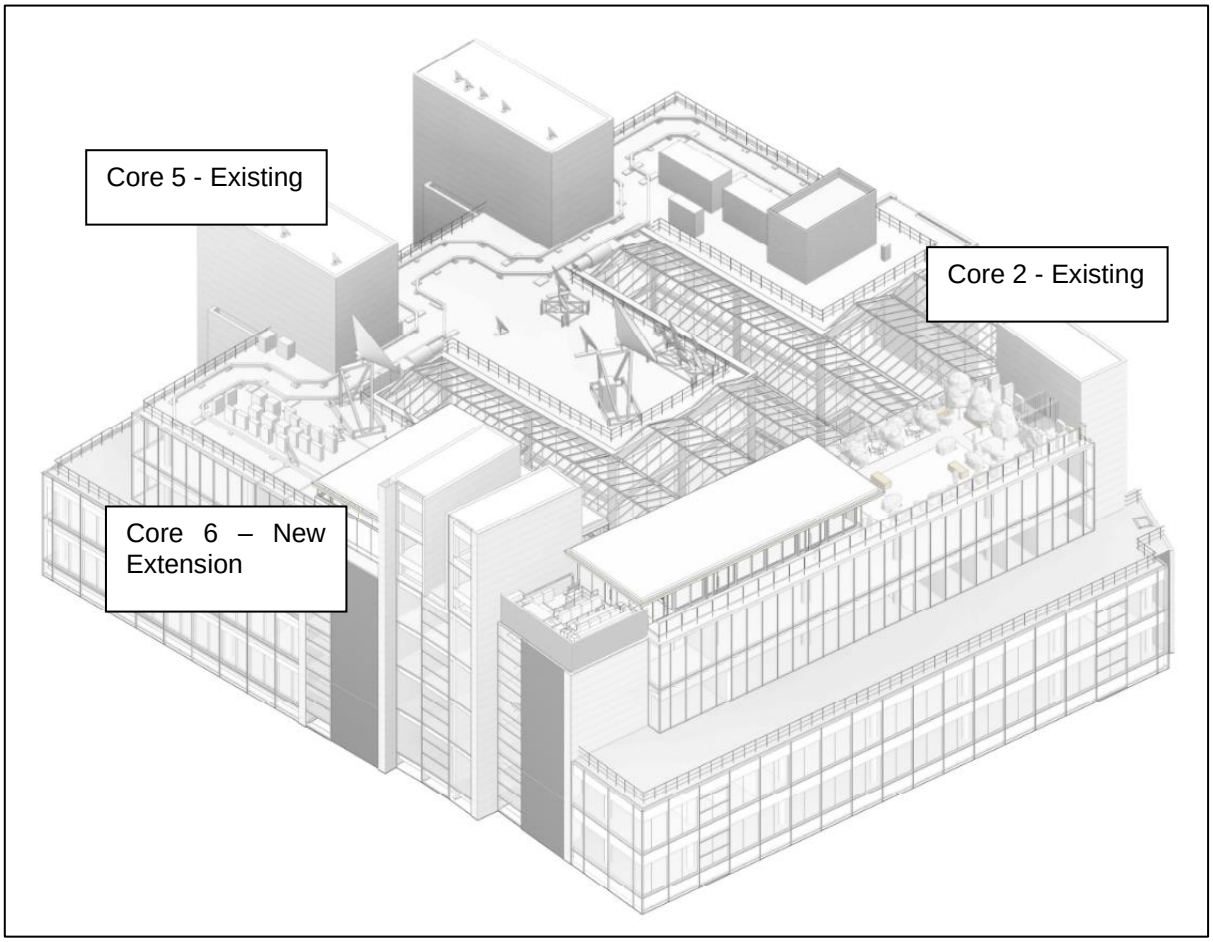

Figure 4: Stairs

Stairs 2 and 6 will be used for escape. Stair 5 will be used as an alternative firefighter access route and therefore has not been considered for escape capacity. See Section 4 for further discussion on firefighting.

Stairs 2 and 6 are each 1,100mm wide, lobbied at each level and discharge to outside at ground floor. It is proposed that the same stair width be provided for the Stair 6 extension at the roof level.

3.6 Stair Capacity

The overall occupancy above ground floor is limited by the capacity of the escape stairs. The existing 2019 Fire Strategy report gives a total stair capacity of 2860 occupants over Level 1-7. Based on the Approved Document B Vol 2, the extension of Stair 6 to roof level increases the overall stair capacity by 80 occupants. This gives a total stair capacity of 2940 occupants.

This is sufficient for the 110 occupants at roof level and 2794 occupants at Level 1-7 i.e. total 2904 occupants.

3.7 Occupants of Reduced Mobility

Each of Stair 2 and Stair 6 will be provided with refuges at roof level. The refuge in Stair 6 will be located in the stair or protected lobby adjoining the stair. The refuges in Stair 2 will be located either in the stair, protected stair lobby, or external roof area near stair entrance. Each refuge will achieve a width of 1,400mm by 900mm and have emergency voice communication (EVC) facilities.

3.8 Existing Atrium Design

The atrium needs to be enclosed in smoke-retarding construction as discussed in the existing 2019 Fire Strategy. This is achieved in all areas of the existing building and the non-sprinklered office areas are separated from the atrium with fire resisting construction.

There will be no changes made to the existing atrium design as part of the roof pavilion works.

4.0 FIREFIGHTING

4.1 Firefighting Shafts

The Approved Document B volume 2 recommends that a building with a storey more than 900m^2 in area and more than 18m above access level should be provided with at least two firefighting shafts. Each firefighting shaft should consist of:

- a 1.1m firefighting stair,
- a smoke vented firefighting lobby,
- a firefighting lift accessed from within the firefighting lobby,
- a 1m^2 AOV at the head of the stair,
- a dry fire main within the firefighting lobby.

Guidance also recommends that a firefighting shaft should serve every storey through which it passes, although the firefighting lift need not serve any storey on which there is no entrance to any accommodation, or the topmost storey if it consists exclusively of plant rooms.

200 GIR is provided with two existing firefighting shafts (Cores 2 and 5) serving all levels up to Level 7 and providing adequate hose cover. It is proposed to extend both firefighting stairs and dry fire mains up to the roof level. However, the firefighting lift in Core 5 will not be extended to roof level. This is proposed on the following basis:

- The floor area of the roof level accommodation is less than 900m^2. This means that it could be served by a single firefighting shaft if it weren't for the office levels below that exceed 900m^2.
- The roof level will be provided with two firefighting access routes each with a dry fire main. All areas of the roof accommodation will be within 45m of a dry riser outlet in Stair 2 and 5.
- Typical procedure is to take a lift to the floor below a fire and walk up the final flight of stairs.
- In the existing condition, the firefighting lift in Core 5 serves up to Level 7 meaning this lift could still in practice be used in for firefighting at roof level.

Therefore, the arrangement is considered to meet the functional requirements of the Building Regulations Requirement B5.

4.2 Vehicle Access

Fire vehicle access will be provided to within 18m of the fire main inlets near the entrance to the firefighting stairs. This will remain as discussed in the existing 2019 Fire Strategy.

The building also has good perimeter access via Grays Inn Road , Gough Street, and Coley providing at least 75% perimeter access. The existing provision will be retained as part of the project.

4.3 Hydrants

The development has access to existing hydrants as discussed in the existing 2019 Fire Strategy. The existing provision will be retained as part of the project.

5.0 STRUCTURE AND COMPARTMENTATION

5.1 Structure

The building was built in 1990 and had a top storey height of 29m. The applicable version of the Approved Document B at the time was the 1985 version which recommends that a building exceeding 28m in height (such as 200 Gray's Inn Rd) should achieve a structural fire resistance of 90 minutes. It is therefore assumed that the existing structure would originally have been designed to achieve at least 90 minutes fire resistance.

The current Approved Document B recommends buildings with a top storey height of between 18m and 30m should have 90 minutes structural fire resistance and 120 minutes for building over 30m. With the roof pavilion proposals, the building will now have a top storey height exceeding 30m above ground level. This means that to meet current guidance the structure should achieve 120 minutes fire resistance.

The building is primarily constructed of concrete construction. Whilst it is expected that it would have been designed in line with the fire requirements at that time it is not possible to confirm if it achieves 120 minutes as information on the fire rating of the existing structure is not available at the time of preparing this document. To reflect a worst-case scenario, it is assumed that it does not provide 120 minutes fire resistance.

The new proposals only affect the roof pavilion level with the exception of the atrium accommodation stair. Given the relatively minor changes in relation to the rest of the building it is considered disproportionately onerous to upgrade the entire structural fire resistance of the building because of the addition of a single storey at roof level. Therefore, it is proposed that an assessment be carried out to show that in the event of a fire attacking the structure of the roof pavilion this does not cause premature collapse of other elements of structure in the building. The new roof pavilion will not impact adversely on the fire performance of the existing structure. When assessing the building structure, the followings have been considered:

- The roof pavilion will be constructed of light weight construction.
- The existing roof slab will be retained and were subject to validation by the structure engineer that the existing roof slab achieves 120 minutes fire resistance. Based on the validation exercise, it is identified that most roof structure would achieve 120minutes fire resistance except for two small areas where it has not been possible to verify 120 minutes fire resistance due to the concrete ribs forming the existing roof are smaller and less densely reinforced than the rest of the structure. In this case, it is proposed to provide additional protection to this area to ensure it achieves 120 minutes fire resistance.
- The roof pavilion will be provided with sprinkler protection. If a fire were to originate within the roof level, it is unlikely that it would cause the premature collapse of the existing building. The existing floor structure is considered sufficient to withstand the effects of fire in the roof pavilion without loss of stability to the existing building.
- The existing structural elements are assumed to achieve at least 90min fire resistance. If a fire were to originate within the existing floor it is considered that the 30min reduction in fire resistance period would not have significant impact to the occupants or firefighting operations on the roof level.
- Guidance recommends higher fire resistance period of structure elements to be provided for a taller building. 90min for buildings between 18m and 30m and 120min if buildings are over 30m high. The building is only slightly over the 30m threshold at 33m.
- Early means of warning/ample escape routes will be provided throughout the roof areas. The building adopts a simultaneous evacuation strategy. On this basis it is expected that occupants on the roof level would be able to complete their evacuation prior to any impact from fire on the structure.
- Firefighting will be available in multiple directions from Cores 2 and 5, ensuring effective firefighting operation for a fire in the roof level and will be able to use the firefighting shafts that have been enclosed within 120 minutes fire resisting construction.
- The building is largely provided with sprinkler protection. For future proofing purposes, sprinklers will be provided within the unsprinklered areas as and when the tenant changes or the floors are unoccupied. This would improve the overall fire safety standards for the building.

Based on the above, the risk of premature collapse due to the proposed roof terrace is considered low and it is not considered necessary to upgrade the fire protection of the existing structure elements for the building to 120 minutes.

Structure supporting only the roof does not need to be fire resistant as per the recommendation of guidance. This does not apply to roof performing the function of a floor.

The roof slab that supports the existing external plant equipment on the northwest side of the roof pavilion will not be affected by the new pavilion work and. On this basis, it is considered reasonable to retain the existing roof structure beneath the plant.

5.2 Compartmentation

The existing 2019 Fire Strategy discusses that all floors are constructed as 90 minutes compartment floors. As discussed above in Section 5.1, the proposals mean the top floor exceeds 30m and so the roof pavilion floor should achieve 120 minutes fire resistance for compliance. However, it is proposed that the existing floors remain as 90 minutes compartment floors. It is proposed that penetrations through them also remain a 90 minutes protected on the same basis. Any new services risers passing through the 120 minutes compartment floor will be enclosed in 120 minutes protected shafts with FD60 doors (FD60S where they open into a protected lobby or corridor).

Where the firefighting shafts (Stair 2 and 5) are continued up to roof level will achieve 120 minutes fire resistance with FD60S doors. Firefighting lifts will achieve 120 minutes fire resistance with FD60 doors.

Where escape stairs are extended up to roof level they will be designed as protected shafts maintaining the fire resistance of the existing shaft, i.e. at least 90 minutes with FD60S doors.

Openings in the roof within 3m of the route to Core 5 should be at least 30 minutes fire resisting.

6.0 ELEVATIONS

6.1 External Fire Spread

The total relevant boundary distance measured from the new roof terrace elevation to the centre of Grays Inn Road is approximately 15m. The new roof terrace pavilion is set back approximately 5m from the building facade on the levels below, which is permitted 100% unprotected for external fire spread purposes. On this basis, the roof terrace pavilion can also have a 100% unprotected area.

6.2 External Wall build-up

The external wall construction for the new roof pavilion will be provided to meet current Approved Document B guidance.

External surfaces of walls will achieve at least Class B-s3, d2 or better. Any insulation product, filler material (such as the core materials of metal composite panels, sandwich panels and window spandrel panels but not including gaskets, sealants and similar) etc used in the construction of the external wall will be Class A2, s3,d2 or better.

6.3 Roof Covering

The floor covering of the roof terrace will achieve B_{roof} (t4) classification in accordance with clause Table 14.1 of Approved Document B.

7.0 FIRE SAFETY MANAGEMENT

7.1 General

Once the building is occupied, it is the responsibility of the management to ensure that all fire safety systems are tested and maintained to ensure their continuous effectiveness. The management should: -

- Be aware of all the fire safety features provided and their purpose
- Ensure a competent person is present in the building during all occupied times
- Liaise with and seek the advice of the fire authority

7.2 Staff

Staff should be trained by competent persons. The training should be at regular intervals and should ensure that all staff know what to do if a fire is discovered; the correct response on hearing a fire alarm, and the correct escape procedures from every part of the building.

A management structure should be provided to ensure that in the case of fire staff are aware of their responsibilities, which should be clearly defined. A chain of command should be provided with clear lines of responsibility, authority and accountability.

7.3 Fire Safety Manual

Before a building is occupied, a fire safety manual should be completed. The purpose of the manual is to clearly define the nature of the fire safety systems provided for the building. It should include: -

- An explanation of the overall fire safety strategy
- Evacuation procedures
- Design documentation to describe the use of each fire safety system
- Staff roles in the event of a fire: their responsibility, authority and accountability
- A detailed maintenance routine

The Fire Safety Manual should be reviewed periodically and when any alterations are made to the building. Details of the suggested contents of the fire safety manual are provided in Section 19 of the Approved Document B and Annex H of BS 9999 Code of practice for fire safety in the design management and use of buildings.

7.4 Maintenance and Housekeeping

It is the role of management to ensure that maintenance is carried out in accordance with the relevant British Standards, so that all fire safety systems are operational in the event of a fire. It is also important that good housekeeping practices are followed. The building management should be aware of any hazardous substances or practices within the building, which increase the risk of fire.

7.5 The Regulatory Reform (Fire Safety) Order 2005

This Order places a duty on the 'responsible person' to ensure, 'as far as is reasonably practical' the safety of their employees and to take such general fire precautions as may be reasonably required to ensure that the premises are safe [i.e. for non-employees].

Under the Order, there is a requirement to carry out and continually update an assessment of the risk of fire to people in and around the premises/building, and to assess and maintain the measures to reduce those risks to an acceptable level. Where there are five or more employees, the risk assessment must be recorded.

A Fire Risk Assessment should be carried out:-

1. On completion of the building fit out, and strictly before first occupation of the building.
2. Regularly, particularly where any changes occur such as changes in the use of the building, the number or nature of occupants, or building works.
3. We would recommend that a fire risk assessment is carried out at least annually.

Other legal duties include: -

1. Keeping a record of the Fire Safety Arrangements. These are the preventative and protective measures for the building.
2. A person must be nominated for any special role identified in an emergency plan.
3. Employees must be consulted about nominations to perform special roles, and about any proposals for improving the fire precautions.
4. Other employers in the building must be informed about any significant risks, which might affect the safety of their employees, and there must be co-operation with them in measures to reduce the risk.
5. Those having control over the workplace have a responsibility to ensure compliance with the regulations in those parts of the building over which they have control.
6. A suitable and readily available method of calling the emergency services must be established.
7. Employees are required to co-operate in ensuring that the workplace is safe from fire.

The order also adopts 'Principles of Prevention'. These include:-

- Avoiding risks;
- Evaluating the risks which cannot be avoided;
- Combating the risks at source;
- Adapting to technical progress;
- Replacing the dangerous by the non-dangerous or less dangerous [particularly with respect to hazardous substances];
- Developing a coherent overall prevention policy which covers technology, organisation of work and the influence of factors relating to the working environment, and;
- Giving appropriate instructions to employees.

8.0 INFORMATION, LIMITATIONS AND ASSUMPTIONS

The information limitations and assumptions used in the preparation of this report are noted below: -

Drawings

This report is based on drawings issued to us. Dimensions have been taken from these drawings. The following drawings were used: -

- GIR-BA-20-R-DP-A-0 - Roof pavilion level
- GIR-BA-20-RxT1-DP-A-0 - Roof pavilion level
- GIR-BA-14-ANW-DP-A-0 – 3D drawing

Information

The following information was used for the preparation of this report: -

- Existing Fire Strategy Report 'Fire Strategy Report 200 GRAYS INN ROAD' 5th Issue, 7 January 2019 by Norman Disney & Young

Survey (Existing Building)

This building has not been surveyed by Jeremy Gardner Associates Limited.

Building Regulations

This report considers building regulations, which deal with life safety. Property protection and insurance issues are not addressed in this report. Guidance on property protection and insurance requirements can be found in the document *Approved Document B: Fire Safety (Volume 2) – Buildings other than dwellinghouses Incorporating Insurers' Requirements for Property Protection,* RIBA Publishing 2015.

Other Limitations

Complying with the recommendations of this report will not guarantee that a fire will not occur.

Unless otherwise described in this report, the fire strategy assumes that the building design, the mechanical and electrical systems, construction methods and materials specifications will comply with current Building Regulations guidance, and relevant British Standards and Codes of Practice. The design of mechanical and electrical systems such as fire alarm and sprinklers is a specialist area. Fire Strategy recommendations are given in this report, however, the design and specifications need to be developed at the appropriate stage in consultation with the specialist designers of these systems.

This report has been prepared for the sole benefit, use and information of Great Portland Estates and the liability of Jeremy Gardner Associates Limited, its directors and employees in respect of the information contained in the report will not extend to any third party.

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