



Radcliffe Market Chambers

Fire Strategy

Client Details:

Vinci Construction UK Limited
Ditton Road
Widnes
Cheshire
WA8 0PG

24 January 2023

Revision 01

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1 Introduction

Bespoke Fire Safety Design Ltd (BFSD) has been appointed by Vinci Construction UK Limited (Vinci) to develop and coordinate the fire strategy for the proposed refurbishment of the Radcliffe Market Chambers building and Market Hall building, located in the centre of Radcliffe, Greater Manchester.

This document describes the fire strategy for the building and is intended to be used for communication and coordination of the fire safety measures and also for submission to the Approving Authorities, in support of a Building Regulations application.

The Market Chambers and Market Hall building is divided into three primary uses, as follows:

- Market Hall – to be retained in its current condition, with limited building works (limited to assessment of means of escape, provision or upgrade of detection & alarm system and compartmentation separating adjacent refurbishment works).
- Market Hall Basement – existing basement storage and fallow space (for market hall above) redeveloped to provide two event spaces, with greater connection to Ground Floor entrance via new link building.
- Market Chambers – refurbish existing basement and ground floor retail units and two office floors above.

The scope of this report is to describe the general arrangement and performance specification of passive and active fire safety measures for the building as a whole. As the building comprises redevelopment, refurbishment and new build portions, it is intended that existing measures are surveyed and upgraded (where possible) to meet the recommendations of this document.

The detailed design of specific products and systems is expected to be undertaken by approved and competent designers and contractors, whilst meeting the recommendations of this fire strategy.

This report should be read in conjunction with indicative fire strategy drawings, located in Appendix A and detailed drawings produced by Pozzoni Architects.

It is noted that this document does not represent the fire risk assessment for the building, which is to be produced by others, using this strategy for reference.

1.1 Legislative Requirements & Basis of Design

This fire strategy is intended as a record of the fire safety design and management recommendations for the building as a whole, in its final refurbished condition.

1.1.1 Refurbishment and Redevelopment (building) Works

The fire safety design for the Building Works associated with the refurbishment and redevelopment is to achieve the minimum standard required by Part B of Schedule 1 to the Building Regulations 2010 (with 2020 amendments) (hereafter referred to as Part B) (1).

Bury Council Building Control has confirmed that only works directly associated with the refurbishment require consideration under the Building Regulations application. i.e. The works result in a condition that is no more unsatisfactory than it was previously.

BS9999 (2) has been used as the primary design guidance for to demonstrate compliance with the Building Regulations. BS9999 provides generic guidance for typical building arrangements based upon an understanding of the risk profile of the building. The risk profile of the Market Chambers and Market Hall building is identified as 'B2' in recognition of the following:

- Occupancy Characteristic B: Occupants are awake and unfamiliar with the building.
- Fire Growth rate 2: Medium fire growth rate associated with offices, lounges, seating, galleries.

All associated measures in regard to means of escape and fire protection will be developed in consideration of Risk Profile B2. Note that permissible variations (extended travel distances and increased capacity) have not been adopted, to ensure the fire strategy retains flexibility.

1.1.2 Existing Construction

The basis of design for the existing portions of the building has not been recorded and fire safety information for specific measures (fire performance of walls, fire doors etc.) has not been provided or is considered to be of unsatisfactory condition/quality.

Notwithstanding the limited application of the Building Regulations, noted in Section 1.1.1, it has been deemed necessary and appropriate to ensure that the building provides a benchmark level of fire safety for its continued use and offers due consideration of the life safety of its occupants (and the attending fire service); therefore a holistic approach to fire safety in the building is adopted, beyond the remit of the Building Regulations.

Consideration of the existing building elements is based on compliance with the Regulatory Reform (Fire Safety) Order (FSO) (3). Under the control of the FSO, it is necessary to demonstrate that the building adopts a suitable and sufficient approach to fire safety. Consequently, the intention is to improve and upgrade the existing wherever possible and the adopted approach to fire safety draws on the following references:

- Existing fire strategy information for the building.
- Relevant Fire Safety Risk Assessment guidance provided by HM Government.
- BS9999 general provisions and consideration of Risk Profile B2.

Where building works are not being undertaken (due to acceptable condition or limited by the existing envelope), it is not expected that existing buildings are brought up to the same standard as that recommended in contemporary guidance. As the majority of the building was developed prior to the adoption of the general provisions of BS9999, the existing performance will be reviewed and retained where relevant.

However, where existing measures/construction are not suitable and require remediation, it is recommended that remediation works are undertaken in accordance with contemporary guidance and therefore BS9999 is considered as best practice for these works in addition to guidance provided by manufacturer tested details and installation instructions. Remediation works do not automatically require a Building Regulations application to be made unless it meets the definition of 'building work' and will therefore be intended to demonstrate that the existing condition is made no less compliant.

1.2 Insurance Requirements

The fire strategy has been developed to consider life safety of occupants and the Fire Service only. Property protection and business continuity requirements have not been communicated by Bury Council or their insurers and have therefore not been considered.

1.3 Approvals Status

Discussion has taken place between BFSD, Pozzoni, Vinci and Bury Council Building Control; however, a formal application has not been submitted. At the time of writing, formal consultation has not been undertaken with Greater Manchester Fire Service.

It is intended that this report forms a part of the Building Regulations application and will be submitted to Bury Council for their review and consultation with the Fire Service.

2 Building Description

2.1 Building Arrangement & Use

The proposed Market Chambers and Market Hall building is an existing 2-storey (basement and Ground Floor) market hall building and an adjacent 4-storey (basement, Ground Floor, 1st Floor, 2nd Floor) market chambers building comprising retail units and offices.

The market hall is currently in use and is to be retained, with works limited to a survey of existing means of escape and fire safety measures necessary to support the wider building refurbishment. The market hall basement is to be redeveloped to provide two event spaces with supporting facilities. The market chambers building is to be refurbished with retail and food & beverage units reinstated and contemporary office accommodation provided above.

The top floor height of the building is 7.96m from adjacent access level. The market hall basement is to be served by three stairs: Stair 1, Stair 2, Stair 3. Stair 1 and Stair 2 extend to the 2nd Floor of the market chambers building. Two retail units include stairs serving their own unit, but offering alternative exit into the external terrace and Stair 1 at Ground Floor.

The building is constructed with a mixture of traditional steel, concrete and masonry structure, with concrete slab to ground floor and traditional timber joist and floor to majority of upper floors. All construction is in varying (and generally poor) condition. Internal walls are a mix of stud-partition and masonry walls of varying condition. The external façade is an existing masonry construction, which is to be retained. The link building is to be constructed with steel frame and glazed curtain walling and metal cladding.

The building arrangement is as shown in Pozzoni architectural drawings and indicative fire strategy drawings provided in Appendix A. A summary of the proposed arrangement and use is outlined in **Table 1**.

In general, the building will be for use by members of the public in retail areas, with some managed spaces in the upper floors of the market chambers. The event space will be for privately booked events with potential for food & beverage and serving of alcohol. It is proposed that a single operator is responsible for the overall management of the building, with individual management provisions for each retail tenant and the event space.

Table 1: Identification of uses in the building

Floor	Use	Drawing Reference
Basement	Separated fallow area Event spaces with bar and toilets Plant rooms, cellar and stores 2x Retail unit basements (separated)	RADHUB-POZ-ZZ-B1-DR-A-2000
Ground Floor	Market hall with toilets and facilities Event space main entrance (link building) External terrace 4x Retail units (connected to link building)	RADHUB-POZ-ZZ-00-DR-A-2001
First Floor	5x office and studio tenant units	RADHUB-POZ-ZZ-01-DR-A-2002
Second Floor	Open plan office External plant space	RADHUB-POZ-ZZ-02-DR-A-2003
Roof	No access. Roof only.	RADHUB-POZ-ZZ-04-DR-A-2004

2.2 Extent of Refurbishment

The building is in varying degrees of poor condition, including dated and unsuitable walls, doors and services. With exception of the market hall, it is intended to strip-back and refurbish all areas of the building and improve fire safety measures throughout, where possible.

Where in reasonable condition, the existing performance of structure and construction is retained throughout the refurbishment. Notwithstanding, any new construction or necessary upgrade of existing structure, walls, floors, doors etc. is to be made good to contemporary standards as described in this report. The external envelope of the building is retained as existing, with exception of the link building and replacement of windows. The building is not vertically or laterally extended.

The key fire safety measures to be refurbished are summarised in **Table 2**. This is not an exhaustive list and relevant detailed information is provided in subsequent sections.

Table 2: Relevant fire safety measure refurbishment

Item	Refurbishment Improvement/Upgrade Measures
Detection & Alarm	Remove existing system and replace with new system throughout in accordance with simultaneous evacuation strategy. Retain market hall system where possible, provide connection to whole building system.
Means of Escape	Survey existing escape routes in Market Hall. Provide new escape routes to Market Hall basement and rationalise with Ground Floor link building and Market Chambers building with new/upgraded fire protection to existing escape routes as needed. Formalise protected stairs and refuge areas to upper floors of Market Chambers. Formalise protected stairs and exit routes from existing Market Chambers retail units. Provide fire protection to proposed external terrace and balcony escape routes. Formalisation of building capacity based on existing restrictions. Existing narrow exits to be increased in width to minimum standards where possible. Replacement of emergency lighting throughout (including Market Hall if necessary). Provision of contemporary escape signage throughout (including Market Hall if necessary). Improved/replaced escape doors throughout to meet contemporary standards (including Market Hall if necessary).
Internal Linings	With exception of the Market Hall, replace/upgrade interior linings throughout using appropriately classified products.
Internal Structure	Identify condition of existing structural elements and remediate/make good where in poor state of repair. Provide contemporary protection to Market Hall basement. Replace or provide new fire protection to underside of all upper floors to remediate existing poor condition.

Item	Refurbishment Improvement/Upgrade Measures
Compartmentation	Improvement to escape routes and exits as above. Improvement to floor fire protection as above. Identification of required fire doors, replacement of fire doors throughout. Provision of protection to all service risers throughout. Identification of required cavity barrier locations in existing/new construction, and introduction/replacement throughout. Identification of required fire stopping locations in existing/new construction and introduction/replacement throughout.
External Wall	Building envelope as existing. Replacement of all windows (with cavity closers as necessary). The introduction of fire protection to all upper floors (noted above) improves the existing condition.
Fire Service Access	Existing access provision. Provision of smoke ventilation to the new large basement event space (due to area greater than 200m ²). Improvements/upgrades provided to all other items (identified above) represents overall improvement in condition compared to existing.

2.3 Occupant Load

The maximum occupant load limitations for the building are based upon measured survey of the existing stairs/exits and the associated capacity limitations, when discounting of a whole stair or exit. The maximum occupant load, driven by the availability and clear width of exits (refer to Section 3.4) is identified in **Table 3**. Note that the likely occupant load in the building will be significantly less than the maximum on a day to day basis (with the exception of the event spaces).

The roof, stores and plant rooms are unlikely to be regularly occupied and only by a nominal number of maintenance staff at any one time. Therefore, this is not included within the design occupant load.

Table 3: Maximum occupant load

Floor	Market Hall	Event Spaces	Market Chambers
2 nd Floor	-	-	150 persons
1 st Floor	-	-	150 persons
Ground Floor	547 persons including 120 persons on balcony/terrace	-	60 persons (per retail unit) *
Basement	-	270 persons (main event) 77 persons (small event)	60 persons (per retail unit) **
Total	547 persons	347 persons	600 persons

Notes:

* Three individual retail units at Ground Floor, with escape possible toward Stair 1.

** Two individual retail units at Basement, with escape possible toward Stair 1.

3 Means of Escape

3.1 Evacuation Strategy

Upon detection anywhere in the building, the fire alarm will activate throughout the building, including Market Hall, Event spaces and Market Chambers retail units and offices and external areas.

Activation of the fire alarm is to result in all occupants of the building simultaneously evacuating to the nearest available exit. Occupants should continue their escape to outside and be met by staff at predefined muster points.

3.1.1 Mobility Impaired Persons

Mobility impaired persons should evacuate to an exit as above. Should assistance be required, occupants are to advise the main point of contact (for booked events or where attending Market Chambers areas) and in an evacuation:

- Wait at a protected refuge area and communicate with management to receive further instruction, and/or;
- Follow the guidance of their agreed Personal Emergency Evacuation Plan (PEEP).

In support of the above, a protected refuge is provided within each protected stair (such that they do not obstruct the general means of escape) and specific policy for individual needs (PEEP) is to be implemented by the building management (preferably prior to the individuals attendance).

Further details of the measures provided to support escape for mobility impaired persons is outlined in Section 3.9

3.1.2 Muster Points

The determination of appropriate muster points and their ongoing suitability is the responsibility of the landlord/operator for each area.

For the purposes of this fire strategy, it is recommended that muster points are located outside the main entrance (Blackburn Street Square) and outside the retail units (Church Street). Notwithstanding, it is recommended that in evacuation, staff are posted at each exit and each muster point.

It is recommended that emergency lighting is provided to ensure these areas and the route to them remain well lit.

3.1.3 Evacuation Management

Those responsible for evacuation management should ensure that they are within a safe environment and undertake the specific instructions provided for their role e.g. fire warden, building management, duty manager, etc. Should the immediate area be compromised by fire, it is recommended that those responsible for each area provide a sweep of the floor prior to evacuating themselves and reporting to the duty manager.

Further recommendations regarding fire safety management are provided in Section 7. However, detailed instructions and guidance must be developed separately by the operator to fulfil their responsibilities under the RRO (3).

3.2 Detection & Alarm

Detail of the automatic detection and alarm system is provided in Section 6.1.

The system will operate on a single-stage basis, whereby activation of a smoke/fire detector, manual call point or staff intervention will result in the following:

- Fire alarm activates throughout the building.
- House lights (associated with event spaces) are raised.
- Music systems (associated with event spaces) are turned off.
- Automatic fire and smoke dampers activate (refer to Section 4.1).
- Other systems shut down/deactivate (door hold-opens, door security, gas supply etc.).
- All staff to undertake specific evacuation responsibilities.

3.3 General Means of Escape Provisions

Escape routes from each floor of the building and the associated travel distance, are identified in the fire strategy drawings provided in Appendix A. The building is arranged to comply with the general means of escape provisions, compliant with BS9999, as identified in **Table 4**.

Table 4: General means of escape provisions

Provision		≤ 60 persons	> 60 persons & ≤ 121 persons *	> 121 persons
Number of exits		≥ 1	≥ 2	
Door swing		Any direction **	In the direction of escape only	
Minimum Storey exit width		≥ 800mm	≥ 800mm	4.1mm/person and ≥ 1050mm
Minimum stair width		≥ 1000mm and as per Table 7		
Travel Distance	Single Direction	General: 20m (considering furniture layout) Plant areas and rooms of special fire hazard: 18m ***		
	> Two directions	General: 50m (considering furniture layout) Plant areas and rooms of special fire hazard: 45m ***		

Notes:

- * Occupant load limit of 121 persons for doors less than 1050mm is based on 500/door width per person (4.1mm/person) as outlined in Section 16.6.1 of BS9999.
- ** Where the door swings against the direction of escape, the occupant load in the area served is limited to 60 persons. Refer to Appendix A.
- *** Plant areas and rooms of special fire hazard are considered separately as Risk Profile A3 for the purposes of travel distance limits.

3.4 Escape Width and Capacity Assessment

This section outlines the escape capacity for each area of the building. The escape assessment is based on the following principles:

- Clear storey exit widths are as measured in Appendix A. Clear stair and storey exit widths must be constructed with the clear width as identified (clear of obstructions and door hardware).
- Stairs are not accessed via protected lobbies/corridors and therefore, for each area served, the largest whole stair is discounted.
- On Ground Floor, the largest storey exit is discounted to determine available capacity.

Refer to Appendix A for details on individual stair and exit capacity provisions.

3.4.1 Market Hall

The Market Hall area is limited to the Ground Floor, with capacity for basement event spaces considered separately. The Market Hall connects to Stair 1 of the event space and Market Chambers building, which is considered as part of the capacity of that stair for Market Chambers.

Capacity of storey exits used by the Market Hall is identified in **Table 5** and should be read in conjunction with fire strategy drawings in Appendix A.

Table 5: Escape capacity assessment – Market Hall

Exits	Clear Width *	Exit Capacity **	Floor Capacity
Exit MH.1	2000mm	487 persons	547 persons (Exit MH.2 discounted)
Exit MH.2 (including toward Stair 1)	2000mm 2000mm	487 persons 60 persons ***	
Exit MH.3	950mm	60 persons	
Exit Terr.1 (to Market Hall)	2500mm	60 persons ****	120 persons ***** (Exit Terr.1 discounted)
Exit Terr.2 (toward Stair 1)	2200mm	60 persons ****	

Notes:

* Based on full opening width. Half-leaves must not be bolted, refer to Section 3.7.

** Based on 4.1mm/person, as identified in Table 12 of BS9999.

*** Based on stair limitation, as noted in **Table 7**.

**** Included within Exit MH.3 capacity.

***** Includes any use by adjacent retail unit (to max. 60 persons) and consideration of Market Hall being closed whilst chambers are in operation.

3.4.2 Market Hall Basement Event Space

The basement event spaces may be booked at times that the remainder of the building is also full. Consequently, exit via Stair 1 and Stair 2 is assumed to be shared with occupants of the Market Chambers building at the maximum capacity of those areas. It is therefore noted that the capacity of the basement may be increased at times when the remainder of the building is closed.

Capacity of storey exits used by the Market Hall basement event spaces is identified in **Table 6** and should be read in conjunction with fire strategy drawings in Appendix A.

Table 6: Escape capacity assessment – Basement Event Space

Exits	Clear Width *	Exit Capacity **	Floor Capacity
Exit ME.1 (toward Stair 3 @1300mm)	1050mm	208 persons **	Main event - 270 persons (limited by Stair 3) Small event - 77 persons (Stair 1 discounted)
Exit ME.2 (toward Stair 3 @1300mm)	800mm	121 persons **	
Stair 1	1300mm	270 persons	
Stair 2	1200mm	77 persons ***	

Notes:

- * Based on full opening width. Half-leaves must not be bolted, refer to Section 3.7.
- ** Based on 4.1mm/person, or maximum for door less than 1050mm as identified in Table 12 of BS9999.
- *** Based on stair limitation, as noted in Table 7
- **** Limited by remaining capacity of Stair 2 final exit door where upper floors are at full capacity. Capacity could be increased up to a maximum 250 persons where upper floors and main event space is not in use.

3.4.3 Market Chambers

The Market Chambers building comprises individual retail units at Ground Floor and basement, with office and tenanted spaces on 1st and 2nd Floor.

Due to the limited size of the retail units, and their shared use of Stair 1 (directly and via the external terrace), each retail unit is limited to 60 persons (shared between Ground Floor and basement in each unit).

Two stairs are provided to serve 1st and 2nd Floor of the Market Chambers building, but also serve basement (event space) and ground floor (Market Hall and terrace). Capacity of stairs and final exits is identified in **Table 7**. Storey exits leading to the stairs each have a clear width of 1050mm.

On the basis of the capacity outlined in **Table 7**, the 1st and 2nd Floor of Market Chambers have a maximum capacity of 300 persons (conservatively assumed as 150 persons per floor).

Table 7: Escape capacity assessment – Market Chambers

	Stair 1	Stair 2
Clear Width (min)	1300mm	1200mm
Floors Served	2	2
Stair Capacity	325 persons	300 persons
Final Exit Width	2575mm	1215mm
Final Exit Capacity *	715 persons (2 nd Floor – 162 persons) (1 st Floor – 163 persons) (Ground Floor – 120 persons) (basement – 270 persons)	377 persons (2 nd Floor – 150 persons) (1 st Floor – 150 persons) (Ground Floor – 0 persons) (basement – 77 persons)

Notes:

- * Assumes upper floor capacity is divided evenly on upper floors. Final exit capacity is based upon calculation of merging flows from basement, ground and upper floors as per Figure 6 of BS9999.

3.4.4 Capacity Assessment Conclusion

The assessment outlined in Section 3.4.1, Section 3.4.2 and Section 3.4.3 demonstrates the following:

- Maximum occupant capacity in the Market Hall and associated spaces = 547 persons.
- Maximum occupant capacity on the external terrace and balcony = 120 persons.
- Maximum occupant capacity in basement main event space = 270 persons.
- Maximum occupant capacity in basement (smaller) event space = 77 persons (could be increased up to 250 persons where operating in isolation).
- Maximum occupant capacity of Market Chambers retail units = 60 persons per unit.

- Maximum occupant capacity on the 1st Floor = 150 persons.
- Maximum occupant capacity on the 2nd Floor = 150 persons.

Additional limitations will exist in individual rooms (for example maximum capacity of individual rooms with a single escape door is 60 persons, as per **Table 4**).

3.5 Inner-rooms

Inner-rooms are located throughout the building. Inner rooms are acceptable on the basis of the following:

- Occupant load in the inner-room does not exceed 60 persons.
- Inner room is accessed directly from the access room, not via a corridor.
- The escape route from the inner-room does not pass through more than one access room.
- Travel distances comply with **Table 4**.
- Access room is not a boiler room, contains flammable materials or oil-filled switchgear etc.
- The building has an automatic detection & alarm system throughout.

3.6 Use of Space in Protected Exits

Protected stairs, protected lobbies and protected corridors will not contain furnishings and are not used for storage of any materials. Store rooms, cleaners stores etc., and service risers are not accessed directly from within stairs.

The provision of advertising boards or notices in the main entrance (Stair 1) may be acceptable on the basis if isolated and/or enclosed in glazed/sealed displays. The main entrance may contain a reception desk (or similar) up to 10m², subject to risk assessment.

3.7 Door Fastening & Ironmongery

Doors on escape routes are to be provided with suitable ironmongery such that the door can be opened easily and without requirement for a separate key.

The fastening of any door used as an exit during a fire, which is to be locked during normal operation, is to comprise panic hardware in accordance with BS EN 1125 (4). The hardware will be located on the side approached by escaping persons.

Where doors located on escape routes include a half-leaf, the half-leaf portion is not be provided with manual bolts, so as to ensure that both leafs can be opened easily for escape. Alternatively, the half-leaf can be provided with manual bolts where the remaining openable leaf provides the full door capacity (refer to Section 3.4).

3.7.1 Existing & New Doors

It is recommended that all fire doors within the building are upgraded or replaced in order to ensure that they are suitably installed and certified fire doors.

Details in regard to construction and performance of fire doors is provided in Section 5.2.4.

Where existing doors are to be retained in the Market Hall, it is recommended that such doors are surveyed prior to completion of the refurbishment works and/or reviewed on an annual basis to ensure their efficacy.

3.8 Escape Signage

Escape signage is to be provided within all areas in accordance with BS ISO 3864: Part 1 (5) and BS 5499: Part 4 (6). In general, escape signage is to be located to direct occupants to the nearest exit and in the following locations:

- At every choice of direction.
- At every change in level.
- At storey exits.
- At 30m intervals along the route.
- To identify key hazards (such as plant room and storeroom 'fire door keep locked' signage' and 'fire action notice').

Escape signage will be supported by emergency lighting, as outlined in Section 6.3, which is to include external routes to the agreed muster point.

3.9 Occupants Requiring Assistance

The following physical measures are provided within the building to assist with protection of evacuation for mobility impaired persons:

- Basement – Two refuge spaces located in Stair 1 and Stair 3 (or associated lobby). One refuge space to Stair 2.
- Ground Floor – Step-free access to external from all areas (limited steps on main routes elsewhere).
- Retail units – Refuge space available in protected stairs and step-free egress from Ground Floor. Note that it is unnecessary for each refuge to have a communications point in each retail unit or linked to fire alarm panel. It will be the responsibility of individual operator to manage escape.
- 1st Floor – One refuge space per stair.
- 2nd Floor – One refuge space per stair.

Each protected refuge provides a clear space of 1400mm x 900mm and located so that it does not prejudice the escape width. A two-way communication point is connected to the fire alarm control panel from each refuge, with exception of the retail units (for details refer to Section 6.2).

The building adopts a single-stage detection and alarm system, with recommended provision of beacons and sounders. Therefore, use of pagers is not deemed necessary.

The provision of evacuation chairs is not a prescriptive requirement and carry-down may be considered as appropriate by the operator. However, should appropriate training be feasible, it is recommended that one evacuation chair per stair is provided, to enable more efficient evacuation.

3.9.1 Evacuation Management for Mobility Impaired Persons

The responsible person (building landlord) must provide an evacuation plan to cater for mobility impaired occupants. This plan must consider the intended use of spaces and policy for access and egress of persons using all areas in the building and the measures and responsibilities taken by staff to assist in evacuation.

It is the responsibility of the operator to ensure that all people can make a safe evacuation; the evacuation plan should not rely on the assistance of the fire and rescue service. Due to the variety of spaces within the building, it may be necessary for a responsible person to be defined for each use in

the building (i.e. Market Hall, Basement event space, Market Chambers and each individual retail unit).

It is recommended that the plan is regularly reviewed in conjunction with this report and considers the evacuation of disabled visitors as well as developing a Personal Emergency Evacuation Plan (PEEP) for mobility impaired employees or specific building users, in detail.

Further guidance on developing an evacuation plan for mobility impaired persons has been provided by the government and can be downloaded free of charge from:

<http://www.communities.gov.uk/publications/fire/firesafetyassessmentmeans>

General fire safety management recommendations are provided in Section 7.

4 Fire Fighting Access & Facilities

Firefighting access and facilities to the building are unchanged from existing. The following summarises the measures provided:

- Sitewide access is provided via Church Street and the route between the Civic Hub and Market Hall.
- Existing hydrants are located on Church Street and within 100m of the building.
- Internal access is provided via the existing Market Hall entrances, retail entrances and the existing Stair 2 route (with upgraded fire protection).
- A new access point to upper floors in the Market Chambers and the basement is provided via the new Stair 1.
- Due to an area in excess of 200m², a new smoke ventilation system is provided in the main event space, to provide immediate smoke ventilation on detection in the basement. This exceeds minimum recommendations for basement smoke ventilation in accordance with contemporary guidance.
- New compartmentation is provided within the basement to restrict smaller compartments to a maximum area of 200m²; thus representing compliant approach without natural ventilation compared to existing.
- Whilst hose-length distances from Ground Floor level are extended no individual upper floor or basement has an area that is more than 45m from a protected stair, as existing.
- A new fire alarm panel is to be located on Ground Floor main entrance at Stair 1.
- It is recommended that plans for fire service information are provided adjacent to the fire alarm panel. Refer to Section 4.1.

In addition to the above, it is noted that the general upgrade of passive and active fire safety measures in the building represent a significant improvement in fire service safety, compared to existing.

4.1 Basement Smoke Ventilation

The basement event space represents a change of use from existing and, whilst the likelihood of fire is more limited than that of the existing uncontrolled storage, it is necessary to incorporate smoke ventilation that is compliant with contemporary prescriptive guidance.

Each of the smaller spaces in the basement are to be enclosed in fire resisting construction to limit these areas to a maximum of 200m² (including the smaller event space). As the depth of the basement is less than 3m, these areas will not be ventilated. Ductwork serving the individual areas will be protected as per

The main event space has a compartment area of 456m² and cannot be subdivided. In accordance with prescriptive guidance, smoke vent should be provided as follows:

- a. be not less than 2.5% of the floor area (11.4m² free area);
- b. be sited at high level, either in the ceiling or in the wall of the space they serve;
- c. be as evenly distributed as possible around the perimeter of the building with no less than half the total vent area provided on two opposing walls, with the remaining half provided equally wherever possible, to discharge into the open air outside the building;
- d. not be placed where they would prevent the use of escape routes from the building.

Smoke ventilation is provided in accordance with the above, with exception to item c). Due to the existing nature of the building, it is not possible to provide smoke ventilation evenly to the perimeter of the compartment. Consequently, the following is provided:

- Ventilation of 8.43m² free area via 4x pavement lights (manual opening) to the route between Civic Hub and Market Hall.
- Ventilation of 2.97m² free area via 3x automatic opening vents leading to the river Irwell side of the building. The vents will be separated from the Market Hall with 60 minute fire resisting construction and discharges to the balcony/terrace (not obstructing means of escape from each end of the balcony).

Although the perimeter distribution of ventilation is not possible, it is proposed that the provision of cross ventilation will provide adequate smoke ventilation to the existing basement, compared to the current condition. Furthermore, it is proposed that the provision of AOV will enable smoke ventilation early in the fire, rather than solely for post-firefighting operations, to the benefit of the attending fire service.

The main event space will be enclosed in fire resisting construction and day-to-day ventilation ductwork will be provided with automatic closing fire and smoke dampers, closing on detection in the main event space, to avoid smoke spread throughout the remainder of the building.

The location of ventilation and associated details, are provided as part of the fire strategy drawings in Appendix A.

4.2 Fire Service Plans Box

Although not a requirement under prescriptive guidance, it is recommended that plans are provided for the benefit of fire service use. These should be laminated plans that can be taken by the fire service to support operations (i.e. not mounted to the wall).

The plans should be stored in a metal plans box with other key building information and contact numbers and located next to the fire alarm panels and the main reception. It is recommended that as-built plans identify the following information (not exhaustive):

- Escape routes.
- Location of fire-separating elements (including cavity barriers in walk-in spaces).
- Fire door sets, fitted with a self-closing device and other doors equipped with relevant hardware.
- Locations of smoke detector heads, alarm call points, detection/alarm, fire panel, alarm sounders, fire safety signage, emergency lighting, fire extinguishers, dry mains and other firefighting equipment, and hydrants outside the building.
- Sprinkler systems, including isolating valves and control equipment.
- Smoke ventilation systems including mode of operation and control systems.
- Any high risk areas (e.g. heating machinery, boilers, laundry).

5 Passive Fire Safety Measures

5.1 Internal Wall & Ceiling Linings

Where new wall and ceiling linings are applied, or where existing walls and ceilings are repainted, upgraded or refurbished, the linings are to meet the provisions outlined in **Table 8**.

Table 8: Minimum performance requirements for internal wall & ceiling linings

Location	Performance
Escape corridors, circulation routes & escape stairs	Class B-s3, d2
Rooms with area $\geq 30\text{m}^2$	Class C-s3, d2
Rooms with an area $< 30\text{m}^2$	Class D-s3, d2

Performance identified in **Table 8** is to be demonstrated in accordance with BS EN 13501: Part 1 (7).

5.2 Internal Fire Resisting Construction

5.2.1 Performance Requirements

Where fire resistance standards are stated, they are to be tested to and demonstrated in accordance with BS EN 1363: Part 1 (8) or BS476: Part 20 (9). Performance is stated as follows:

- R – loadbearing capacity
- E – integrity
- I – insulation

Unless otherwise stated:

- Loadbearing elements are required to demonstrate performance for loadbearing capacity (R),
- Separating elements (e.g. compartmentation) are required to demonstrate performance for integrity and insulation (EI),
- Elements that are both loadbearing and separating (e.g. loadbearing compartment walls) are required to demonstrate performance for loadbearing capacity, integrity and insulation (REI).

5.2.2 Elements of Structure

Elements of structure are considered to be the structural frame of the building, including beams, columns, loadbearing walls, all floors and galleries.

The existing building structure is varied, with steel beams/columns, blockwork, timber joists and concrete forming the primary structural elements.

Basement Event Space

The introduction of event space in the basement of the Market Hall represents a change of use and therefore all structure supporting the basement and separation of the Ground Floor will be upgraded to achieve a 60 minutes period of fire resistance (REI). This is to be provided via provision of encapsulation to beams and columns and under-drawing the soffit, with boards that provide the entirety of the required performance.

Existing Structure

Due to the existing nature of the remainder of the building, it is not possible to guarantee that the structure meets contemporary guidance of 60 minutes (R) in all areas. In order to meet Building Regulations, it is only necessary to ensure that the proposed works should not make the condition less compliant than existing. However, the intent of the fire strategy is to ensure that the existing condition of structure is maintained and upgraded where feasible. Where existing elements of structure are found to be damaged or of poor condition, remediation works will be undertaken to achieve at least a 60 minute period of fire resistance (REI) in accordance with Section 5.2.1.

All new structure proposed in the building will be protected to achieve a 60 minute period of fire resistance (REI) in accordance with Section 5.2.1. Protection is required to all exposed surfaces of elements of structure, where they would otherwise be affected by fire.

New External Balcony

A new external balcony is to be provided overlooking the river Irwell. Typically, the structure and floor of the balcony would be protected to at least a 30minute period of fire resistance (to support means of escape). However, it is proposed that the balcony structure and floor is not provided with applied protection in this instance due to the following:

- The existing external wall is constructed of substantial masonry/blockwork, which will protect the external structure from an internal fire.
- There are no openings beneath or surrounding the external balcony structure that would otherwise provide a route for fire to impact the structure.
- Balcony structure located internally will be encapsulated within fire resisting board offering a 60 minute period of fire resistance (REI).

Roof Structure

Elements of structure supporting the roof is not required, except in areas where the plant equipment is substantial or if rooftop means of escape is required. The roof of the Market Hall and Market Chambers is of a traditional rafter and tiled construction, and it is not expected to support plant equipment. Consequently, structural protection to the roof is not required.

5.2.3 Compartmentation

Compartmentation within the building is illustrated in the fire strategy drawings provided in Appendix A. For avoidance of doubt, compartmentation is also identified in **Table 9** and should be referenced in conjunction with drawings.

As noted in Section 5.2.2, in the locations identified, where existing partitions/structure are to be relied upon, its performance is to be reviewed and made good to the performance identified, if required.

Compartment floors are required only between the Market Hall and basement event space.

Table 9: Compartmentation provisions

Location	Performance **	Application
Compartment floor (Basement to floor above)	60 minutes (REI)	From underside
Sub-division of basement compartments	60 minutes (REI)	Each side separately
Enclosure of all service risers *	60 minutes (REI)	Each side separately
Enclosure of stairs	60 minutes (REI)	Each side separately

Location	Performance **	Application
Enclosure of protected lobbies/corridors	30 minutes (REI)	Each side separately
Protection to within 1800mm of external routes	30 minutes (REI)	From inside
Enclosure of rooms of special fire hazard ***	30 minutes (REI)	Each side separately
Enclosure of store rooms	30 minutes (EI)	Each side separately
Enclosure of electrical rooms	60 minutes (EI)	Each side separately

Notes:

- * All risers may not have been identified on fire strategy drawings. Where they exist, they are to be enclosed throughout their full height.
- ** REI is stated to ensure that any loadbearing walls forming a compartment wall are also captured. REI should be considered as outlined in Section 5.2.1. Where glazing forms a part of a compartment wall, this should also provide a radiative performance (W).
- *** Rooms of special fire hazard include those that house boilers, storage of flammable substances, oil filled transformer and switchgear, fixed internal combustion engines or rooms with open heat sources (including commercial kitchens).

5.2.4 Fire Doors

In order to support the compartmentation outlined in Section 5.2.3, fire doors are to be provided as illustrated in Appendix A. For avoidance of doubt, fire doors are also identified in **Table 10** and should be referenced in conjunction with drawings.

Table 10: Fire door recommendations

Location	Performance	Fire Door
Sub-division of basement compartments	60 minutes (REI)	FD60S
Enclosure of Stairs	60 minutes (REI)	FD30S
Enclosure of all service risers *	60 minutes (REI)	FD30(S)**
Enclosure of protected lobbies/corridors	30 minutes (REI)	FD30S
Protection to within 1800mm of escape routes	30 minutes (REI)	FD30S
Stores and rooms of special fire hazard ***	30 minutes (REI)	FD30(S)**
Enclosure of electrical rooms	60 minutes (REI)	FD30(S)**

Notes:

- * All risers may not have been identified on fire strategy drawings. Where they exist, they are to be enclosed throughout their full height.
- ** Cross-corridor doors should be supported by 30minute full-height fire resisting construction separating the corridor.
- *** Rooms of special fire hazard include those that house boilers, storage of flammable substances, oil filled transformer and switchgear, fixed internal combustion engines or rooms with open heat sources.

Fire door assemblies are to be those tested to achieve the required performance from both sides of the door, in accordance with BS476: Part 22 (10) or BS EN 1634: Part 1 (11).

Fire doors denoted with the suffix 'S' require 'smoke seals'. Where cold smoke seals are required, they are to comply with BS 476: Part 31 (12) or BS EN 1634: Part 3 (13).

Note that smoke seals and intumescent strips are not normally required along the threshold of a door. However, the gap between the floor surface finish at the threshold and the base of the door must not exceed that associated with the tested door assembly.

5.2.5 Fire Stopping

All penetrations through the identified compartment walls or floors are to be fire stopped with proprietary products having performance equal to that of the fire resisting floor or wall through which it passes.

It is unlikely that existing fire stopping is of suitable performance, and it should not be assumed that existing penetrations are protected to a suitable and certifiable standard. Therefore it is recommended that all penetrations are stripped and new fire stopping products/dampers are applied throughout.

Fire Stopping Materials Performance

Proprietary fire-stopping and sealing systems are to achieve the appropriate level of fire performance (refer to **Table 9**) when tested in accordance with BS 476-22 (10), BS EN 1366-3 (14) or BS EN 13501-2 (15).

To maintain the physical integrity of fire-stopping, the fire-stopping product is to be reinforced with Class A1 materials or Class A2-s3,d2 materials in the following conditions:

- Where the gap is greater than 100mm; and
- Where non-rigid or flexible materials are used.

Proprietary fire stopping products are to be selected and installed in accordance with manufacturers tested details and within the limits of the identified field of application. All fire-stopping details are to be identified by the lead designer/principal contractor in comparison with product manufactures and the installation reviewed by a competent and qualified third party (beyond the scope of this report).

Fire Stopping of Pipes

The following pipes of a restricted diameter can be provided with fire stopping in the floor or wall around the pipe:

- Non-combustible material with a melting point of 800°C (cast iron, copper or steel) having a nominal internal diameter of $\leq 160\text{mm}$.
- Lead, aluminium, aluminium alloy, uPVC (complying with BS 4514 or BS 5255) and fibre cement having a nominal internal diameter of $\leq 40\text{mm}$, and
- Any other material not stated above having a nominal internal diameter of $\leq 40\text{mm}$.

All other penetrations through fire resisting construction must be adequately fire stopped using either a suitable proprietary product, or a sleeve where appropriate, to maintain the period of fire resistance.

Fire Stopping of Ductwork

Ductwork systems used for air or smoke transfer provide a route for smoke and heat transmission. Where ductwork is installed, the following measures are to be adopted:

- Ventilation ducts, and their associated plant supplying or extracting air directly to or from a protected escape route, will not also serve other areas.
- Ductwork passing through fire resisting separating elements will be:
 - Fire rated ductwork (EI) or,
 - Enclosed within fire resisting construction (EI)

- Automatic fire and smoke dampers (closing on automatic detection) are to be provided where non-rated ductwork passes through fire resisting construction, e.g. at the boundary of the basement event space.

Protection to Flues

Where a flue, or duct containing flues or appliance ventilation duct(s), passes through a compartment wall or compartment floor or is built into a compartment wall, each wall of the flue or duct is to have a fire resistance of at least half that of the wall or floor i.e. 30minutes (EI).

Protection to Flues

Where a new flue, or duct containing flues or appliance ventilation duct(s), passes through a compartment wall or compartment floor or is built into a compartment wall, each wall of the flue enclosure or duct is to have a fire resistance of at least 30 minutes (EI).

It is recommended that existing flues are reviewed to determine their location passes any existing or new fire resisting walls and thus if remediation works can be undertaken to bring the standard of protection to best practice, in compliance with the above.

5.2.6 Cavity Barriers

Due to the existing nature of the building, there are multiple concealed spaces (cavities) throughout and it is not feasible to locate and to sub-divide all cavities; however, the locations identified in this section are to be reviewed and cavity barriers installed where defined.

Cavity barriers are to achieve at least a 30 minutes period of fire resistance (E) and 15 minutes period of fire resistance (I) and be installed in accordance with manufactures guidelines.

It is unlikely that existing proprietary cavity barriers are of suitable performance. Therefore it is proposed that all cavities are provided with new cavity barriers.

Extensive Cavities

Cavity barriers are to be installed to sub-divide extensive cavities (including floor and ceiling voids) with any dimension greater than 20m.

The maximum dimension of any other cavity (not between the roof and a ceiling) is 20m where the exposed surfaces are Class A1, Class A2, Class B or Class C (in accordance with BS EN 13501: Part 1) (7) and 10m where materials are of a lower performance.

Junctions with Compartment Walls & Floors

Cavity barriers are to be provided at the following junctions:

- At the junction between an external cavity wall and every floor and every compartment wall (unless the external wall is not solely brick/masonry). Where this is not possible, cavity barriers around openings in the wall may be acceptable.
- At the junction between an internal cavity and every floor and every fire resisting wall (including ceiling and floor voids running over fire resisting walls).

Protected Escape Routes

Any cavity that exists above or below any fire-resisting construction (because the construction is not carried to full storey height or to the underside of the roof covering), are to be either:

- Fitted with cavity barriers on the line of the fire resisting construction beneath; or

- For cavities above the fire-resisting construction, be enclosed on the lower side by a fire-resisting ceiling tested to the applicable parts of BS 476 for exposure above and below the ceiling, and which extends throughout the compartment.

External Wall Openings (doors, vents & openable windows)

Suitable cavity barriers are to be provided around all openings in the external cavity wall, including windows, doors and ventilation openings. Acceptable alternatives to a tested cavity barrier system used around openings include the following:

- Imperforate steel with a thickness of not less than 0.5mm, or
- Imperforate timber with a thickness of not less than 38mm, or
- Polythene-sleeved mineral wool or mineral wool slab (installed under compression in the cavity), or Calcium silicate, cement-based or gypsum-based boards at least 12mm thick.

5.3 External Wall Construction

The majority of the existing wall construction, external surface and degree of openings is unchanged from existing and therefore presents a condition no less compliant than existing. Notwithstanding, the following summarises the construction:

- External wall construction is primarily masonry/brickwork cavity wall, with curtain wall to the enclosure of Stair 1 (protected stair) and steel cladding to the upper portion of the Market Hall.
- Surface materials are masonry/brickwork/painted steel and are likely to inherently meet recommendations of ADB. Additional treatment of external surfaces is to achieve Class C-s3,d2 in accordance with BSEN 13501-1.
- Windows, doors and ventilation openings will be as existing and present no greater risk of external fire spread than existing. Notwithstanding, the upgrade of fire resisting construction to floors and internal partitions, will improve the current condition.

5.4 Roof Construction

It is not necessary to provide fire resisting protection to the roof construction or any supporting structure, unless that roof is used as a floor. The existing roof is a pitched roof with steel rafters and as such will not be used for plant or access. Consequently, structural protection is not required.

The Market Chambers building will be provided with a new roof. As the roof of the building is located at least 6m from the notional boundary to adjacent buildings, the roof covering material should typically achieve a performance of Class BA/BB/BC, when tested to BS476: Part 3 (16).

As an alternative to compliance with the above, the roof can be constructed in accordance with the EU commission decision on appropriate construction. In general, the following are deemed appropriate:

- Natural or stone slates.
- Stone, concrete, clay, ceramic or steel roof tiles.
- Profiled or flat metal sheets with thickness greater than 0.4mm (coatings to have gross calorific value less than 4.0MJ/m² or mass less than 200g/m²).

As the existing Market Hall roof is constructed as above, it is deemed to comply as existing.

6 Active Fire Safety Systems

6.1 Automatic Detection & Alarm System

The refurbished areas are to be provided with an analogue addressable L2 automatic detection and alarm system, designed in accordance with BS 5839: Part1 (17).

The Market Hall is currently provided with an automatic detection and alarm system, which is to be surveyed to determine its suitability for connection with the new system installed in refurbished areas. Should survey determine that the existing system cannot be connected, it is to be replaced with coverage of the Market Hall to be included in the new system.

Coverage for all areas of the building will be via smoke detectors in all escape routes and rooms leading to escape routes. In addition, smoke detectors should be provided in all store rooms and plant rooms. It is proposed that the following areas can be excluded from the required coverage:

- Toilets, shower rooms and bathrooms,
- Toilet lobbies,
- Small cupboards with area < 1m² (including risers separated at floor and ceiling),
- Shallow voids/cavities <800mm

Type A manual call points are to be provided at all storey exits. It is recommended that these are provided with a protective cover to avoid accidental activation.

Fire alarm is to be provided via sounders and beacons throughout the building. External sounders and beacons should be provided to the flat roof.

The detection and alarm system is to be served by a fire alarm panel, located at the main entrance/reception at Stair 1.

An automatic signal to the Fire Service call centre (Redcare or similar) is not to be provided.

The system is to be signed-off as an L2 system by the specialist designer.

Principle Cause & Effect

The system will operate on a single-stage basis, whereby activation of a smoke/fire detector, manual call point or staff intervention will result in the following:

- Fire alarm activates throughout the building, including individual retail units.
- House lights (associated with the event space) are raised.
- Music systems (associated with the event space) are turned off.
- Automatic fire and smoke dampers activate (refer to Section 5.2.5).
- Other systems shut down/deactivate (door hold-opens, door security, gas supply etc.).
- Upon smoke detection in the basement main event space, automatic opening vents will activate, as described in Section 4.1.
- All staff to undertake specific evacuation responsibilities.

6.2 Refuge Communication

A two-way communication system is to be provided at each protected refuge in the building to allow mobility impaired occupants to communicate with the operator at the fire alarm panel.

Communication points are to be Type B outstations, designed in accordance with BS 5839: Part 9 (18). Master stations for the two-way communication system are provided at the fire alarm panel.

6.3 Emergency Lighting

New emergency lighting will be provided to all escape routes in accordance with BS 5266: Part 1 (19), and any other relevant parts of BS 5266 necessary for the chosen system. This includes escape routes, rooms leading to escape routes, plant areas and routes providing continued escape external from the building.

A minimum duration of 1 hours would be appropriate as occupants are unlikely to remain in the building during mains failure.

The existing provision in the Market Hall is to be surveyed to determine the existing condition. Where the existing system is found to be of unsatisfactory condition, it will be upgraded or replaced to comply with the above.

6.4 Electrically Powered Doors/Locks on Escape Routes

Electrically powered locks to doors on escape routes should be tested to ensure that they return to the unlocked position on each of the following:

- On operation of the fire alarm system, and
- On activation of a manual door release unit (green break-glass box), and
- On loss of power or system error.

6.5 Smoke Ventilation

Smoke ventilation is provided in the basement main event space, as described in Section 4.1. Three automatic smoke vents are provided, each with a free area of 0.99m² (i.e. total 2.97m²).

Each of the smoke vents will be designed and installed in accordance with BS EN 12101-2 (20).

An override switch is to be provided at the base of the stair and/or at the fire alarm panel for fire service control.

6.6 Emergency Power Supplies

All systems, i.e. communications, emergency lighting, detection and alarm etc. are activated upon local battery back-up, in accordance with the relevant manufacturers guidance and the recommendations of BS 8519 (21).

6.6.1 Emergency Power Circuits

Essential services cable will be wired in fire resistant cable. Cables will have a minimum category rating specified in BS 8519 (when tested to BS EN 50200) according to the type of fire safety measure, the electrical circuit is connected to. Confirmation to be provided by MEP designer for each system type.

7 Fire Safety Management Recommendations

7.1 Building Recommendations

The Regulatory Reform (Fire Safety) Order (3) requires the responsible person to take responsibility for ongoing health and safety within the completed building as a whole.

Typically, this will require the landlord/operator to develop and implement a fire safety management plan, conduct a preliminary risk assessment upon or prior to building occupation and undertake regular fire risk assessments. This report and associated fire strategy drawings can be used as part of the preliminary fire risk assessment.

It may be necessary for the landlord/operator to assign additional individual responsibilities to the manager of the basement even space, Market Hall, Market Chambers and individual retail units and take overall responsibility for these arrangements.

A list of non-exhaustive items from the fire safety design, that need to be considered by the responsible person(s), is provided below:

- Assisted Evacuation: the operator must provide adequate assistance to those who need it for vertical evacuation, as identified by PEEPs (or other policy) and provide adequate staff to assist.
- Occupancy limits: The fire strategy is based on specific occupant loads as outlined in Section 2.3. the landlord/operator is to ensure these occupant loads are not exceeded and adopt measures to control this load for any given use (either leased areas or members of public).
- All Life Safety Systems: The fire strategy relies on all the life safety systems. The landlord/operator must ensure adequate maintenance regimes are put in place to ensure all systems will operate and perform as required in the event of fire.
- Fire Load Control: Furnishings must not be provided in any of the protected escape routes. Loading/unloading and refuse collection must be transported directly to outside with no storage in any escape routes.
- Fit-out regime: where bar/restaurant or other spaces are to be fitted-out or re-fitted, the landlord/operator must incorporate the fire safety system requirements from this fire strategy as part of any necessary tender or leasing documents.
- Provide the following information, or have the following information readily available:
 - This fire safety strategy.
 - Assumptions regarding the management of the building.
 - The evacuation strategy / regime and high level cause and effect.
 - Escape routes and muster points.
 - Details of compartmentation, cavity barriers, fire doors, fire stopping and opening protectives.
 - Smoke detector heads, alarm call points, alarm panels, emergency communication systems, fire safety signage, emergency lighting, fire extinguishers.
 - As-built plans showing the above.

Note that the above is provided for information only and does not represent the entirety of information that may be required to support a successful management policy.

7.2 General Management Recommendations

It is recommended that at least a Level 2 Management regime should be adopted as a minimum. This includes the following responsibilities for the building manager/responsible person:

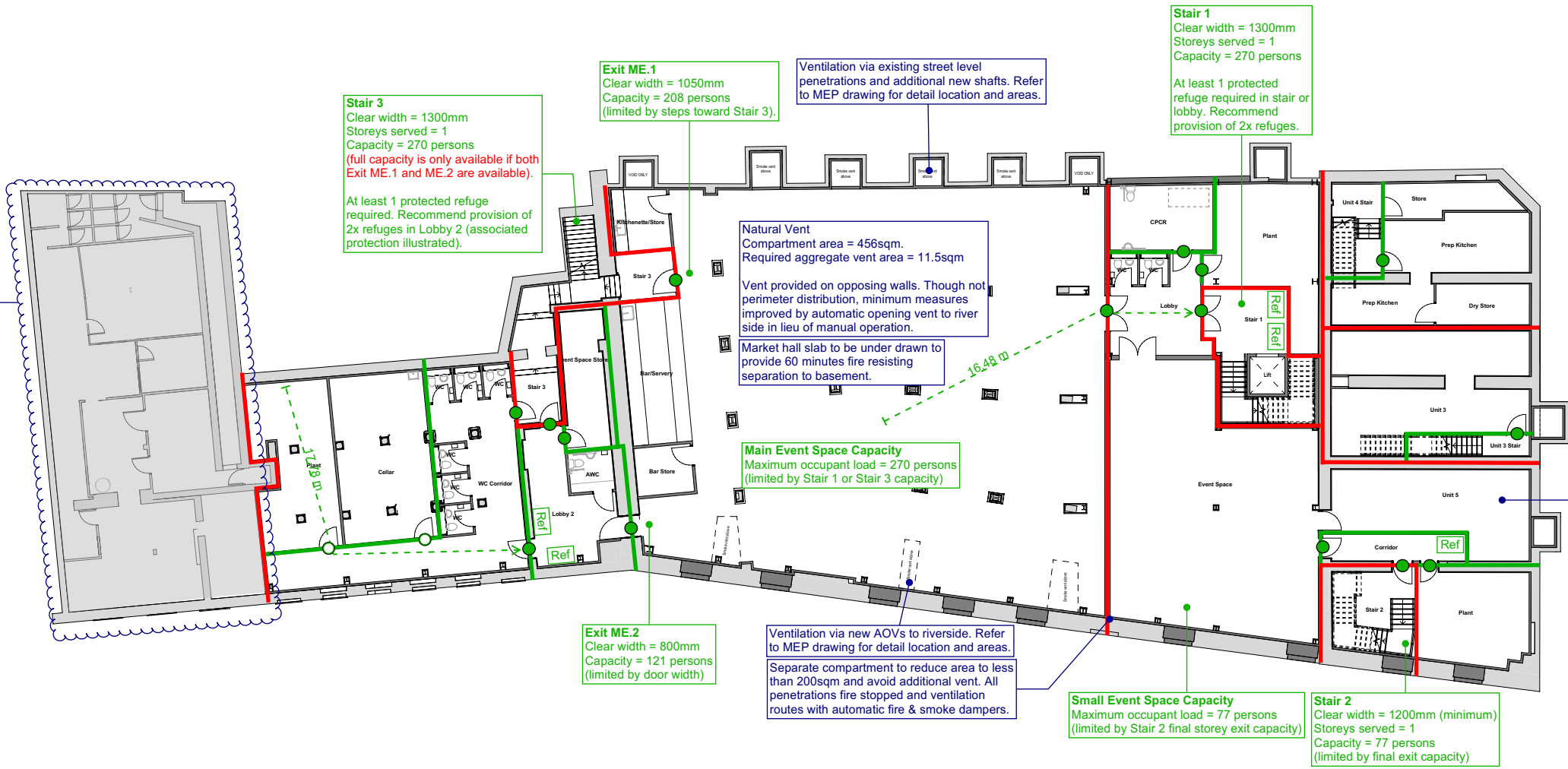
- Reacts to the impact of proposed changes to the building, identifies alternative protection and management measures required and ensures implementation.
- Responsibility for the management of fire safety may be divided over several different individuals, departments or even companies, and the implementation of changes may require approval of those not directly responsible for management of fire safety within the premises.
- Staffing level specific to the building considering the use of the building and nature of the occupants. Includes sufficient trained personnel to ensure all less able-bodied occupants are assisted out of the building effectively in an emergency. Contingency for sickness or holiday is not required as a minimum.
- Ensures sufficient staff numbers are trained in fire safety and evacuation procedures and provision of fire wardens to assist evacuation. This is particularly important for evacuation of occupants from within the swimming pool area and management of those persons at muster points, with appropriate measures to keep those occupants warm and protected from external conditions.
- Work control is developed reactively with clear lines of responsibility with a permit system and logging and audit processes.
- Communications ensure that those involved are informed of relevant fire safety information. Contingency for systems failure is not required as a minimum.
- Fire safety equipment is functional at all times when the building is in use. Alternative procedures for times when equipment is unavailable are determined reactively.
- Liaison with the building management is proactive, including notification of changes in Risk Profile and other key factors. Routine meetings are not required as a minimum.
- Contingency planning takes account of a narrow range of possible emergency incidents.
- Maintenance and testing – policy to identify appropriate regime for testing/maintenance/cleaning of service routes and plant. In addition, regular testing and maintenance logs to be provided for active fire protection systems.
- Occupant load – adequate control of occupant load per floor and in sensitive areas such as inner rooms.
- Evacuation Strategy – policy for receipt of alert signals, alarm and communication of alarm to staff and fire wardens located throughout the respective buildings. Particularly in regard to mobility impaired persons.

The above reflects a well-managed building, and further guidance can be found in Section 4 of BS 9999. Alternative measures may be equally appropriate, subject to the use and management capabilities.

Appendix A – Fire Strategy Review Drawings

The following pages illustrate the fire strategy recommendations made in this document. These drawings should be reviewed in conjunction with the other sections of this report.

Outside of scope. 60 minute fire resisting construction to party wall. Blocked up doors and fire stopping as necessary.



Fire Strategy Key

Compartmentation

60 minutes (EI) *

30 minutes (EI) *

(R = Load-bearing capacity, E = Integrity, I = Insulation)

Notes:
* Also (R) where the wall is an element of structure.

Fire Doors

● / ○

FD60S / FD60

● / ○

FD30S / FD30

(S = Smoke control to resist leakage at ambient temperature)

Ref

Protected refuge (indicative)

FP

Fire alarm panel (indicative)

Notes

The Contractor is to check all dimensions and conditions on site before commencing. Do not scale from this drawing.
This drawing remains the copyright of POZZONI Architecture Ltd.

Scale Bars

TO BE USED ONLY AS GUIDANCE

1:100	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
1:200	0m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m
1:500	0m	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m
1:1000	0m	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m

KEYPLAN

PO9	Stage 3 Issue	AT	14.10.22
PO8	General Layout Updates	AT	09.09.22
PO7	Sanitaryware Indicated	DAS	17.08.22
PO6	General updates to comments	LM	12.08.22
PO5	Updated - new sections added	LM	29.07.22
PO4	Updated to suit fire strategy - Stair 1 width reduced. Sliding door to mirror event space changed for side hinged. New door width between main event space and WC widened.	DAS	13.06.22
PO3	Stair 3 lobby width increased. Stair 1 lobby layout revised	SS	09.06.22
PO2	Smoke vents redistributed.	DAS	16.02.22
PO1	Additional WCs and bar/servery shown	DAS	15.02.22

Rev	Description	By	Date
1	Vinci Construction		
2	Radcliffe Market Chambers & Basement		
3	Proposed Basement Level		

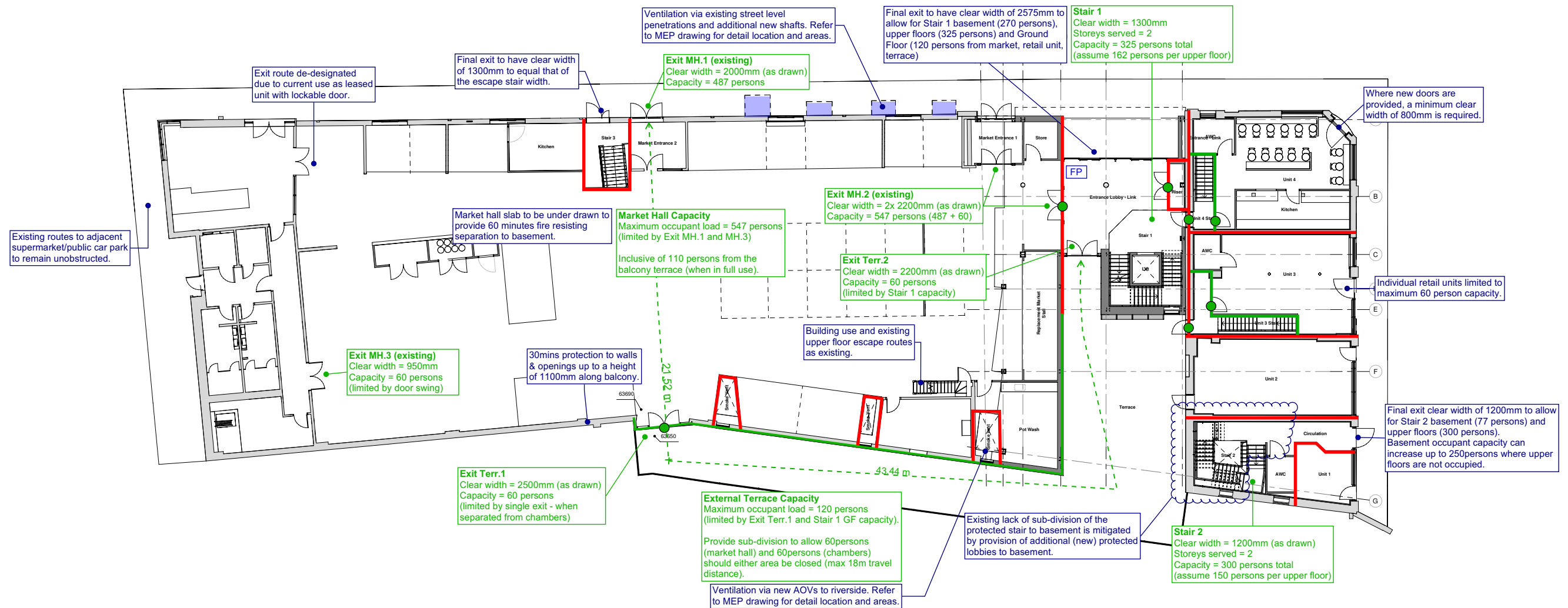
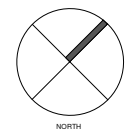
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02/10/22	1 : 100	@ A0
DAS	DAS	DAS
Planning	Tender	Construction
Design	Contract	As Built

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Viewpoint Status: S4 / Viewpoint Status: S4



Level 00 WIP
1:100

Fire Strategy Key

Compartmentation

— 60 minutes (EI) *

— 30 minutes (EI) *

(R = Load-bearing capacity, E = Integrity, I = Insulation)

Notes:
* Also (R) where the wall is an element of structure.

Fire Doors

● / ○ FD60S / FD60

● / ○ FD30S / FD30

(S = Smoke control to resist leakage at ambient temperature)

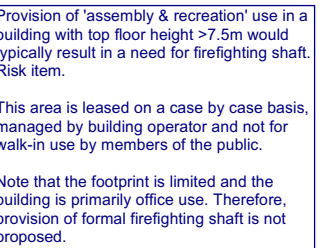
Other

Ref Protected refuge (indicative)

FP Fire alarm panel (indicative)

Viewpoint Status: S4 / Viewpoint Status: S4

P11	Updated to suit client comment - Balcony length reduced - alternative escape route and associated provisions to Market accommodation omitted.	DAS	10.01.23
P10	Stage 3 issue	AT	14.10.22
P09	General Layout Updates	AT	08.09.23
P08	Sanitaryware indicated	DAS	17.08.22
P07	General updates to comments	LM	12.08.22
P06	Updated - new sections added	LM	29.07.22
P05	Updated to suit fire strategy. Final exit to stair 2 widened and lobby floor omitted	DAS	23.06.22
P04	Market Hall: External doors & lobby added. Link door swing handed	SS	09.06.22
P03	Updated following client comment. Unit 3 and 4 updated. Over window unit temp ceiling added to Market Hall	DAS	29.04.22
P02	Smoke vents redistributed - Put Wash repositioned - Market Stairs indicated	DAS	16.02.22
P01	Smoke vent routes indicated.	DAS	15.02.22
Rev	Description	By	Date
Vinci Construction			
As	Radcliffe Market Chambers & Basement		
Proposed Ground Floor Plan			
Rev	5860_2_2001	By	P11
Rev	RADHUB-PAL-ZZ-00-DR-A-2001	By	@ A0
Rev	02/10/22	By	1:100
Rev	DAS	By	DAS
Rev	Planning	Design	Construction
Rev	Design	Contract	As Built
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P06	Updated to suit client comment. Balcony reduced in length.	DAS	10.01.23
P05	Stage 3 issue	AT	14.10.22
P04	General Layout Updates	AT	09.09.22
P03	General updates to comments	LM	12.08.22
P02	Updated - new sections added	LM	29.07.22
P01	Doors shown double swing	SS	09.06.22
Rev	Description	By	Date

Client	Vinci Construction		
Site	Radcliffe Market Chambers & Basement		
Contract	Proposed First Floor Plan		
Ref	5860 2 2002	Ref	P06
Ref	RADHUB- PAL- ZZ- 01- DR- A-2002		
Date	02/10/22	Scale	1 : 100
Author		Checked	@ A0
Reviewed	DAS	Approved	DAS
Planning	Tender	Construction	
Design	Contract	As Built	

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for more information

Fire Strategy Key

Compartmentation

60 minutes (EI) *

30 minutes (EI) *

Notes:
* Also (R) where the wall is an element of structure.

Fire Doors

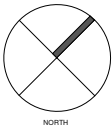
 / FD60S / FD60
 / FD30S / FD30

(S = Smoke control to resist leakage at ambient temperature)

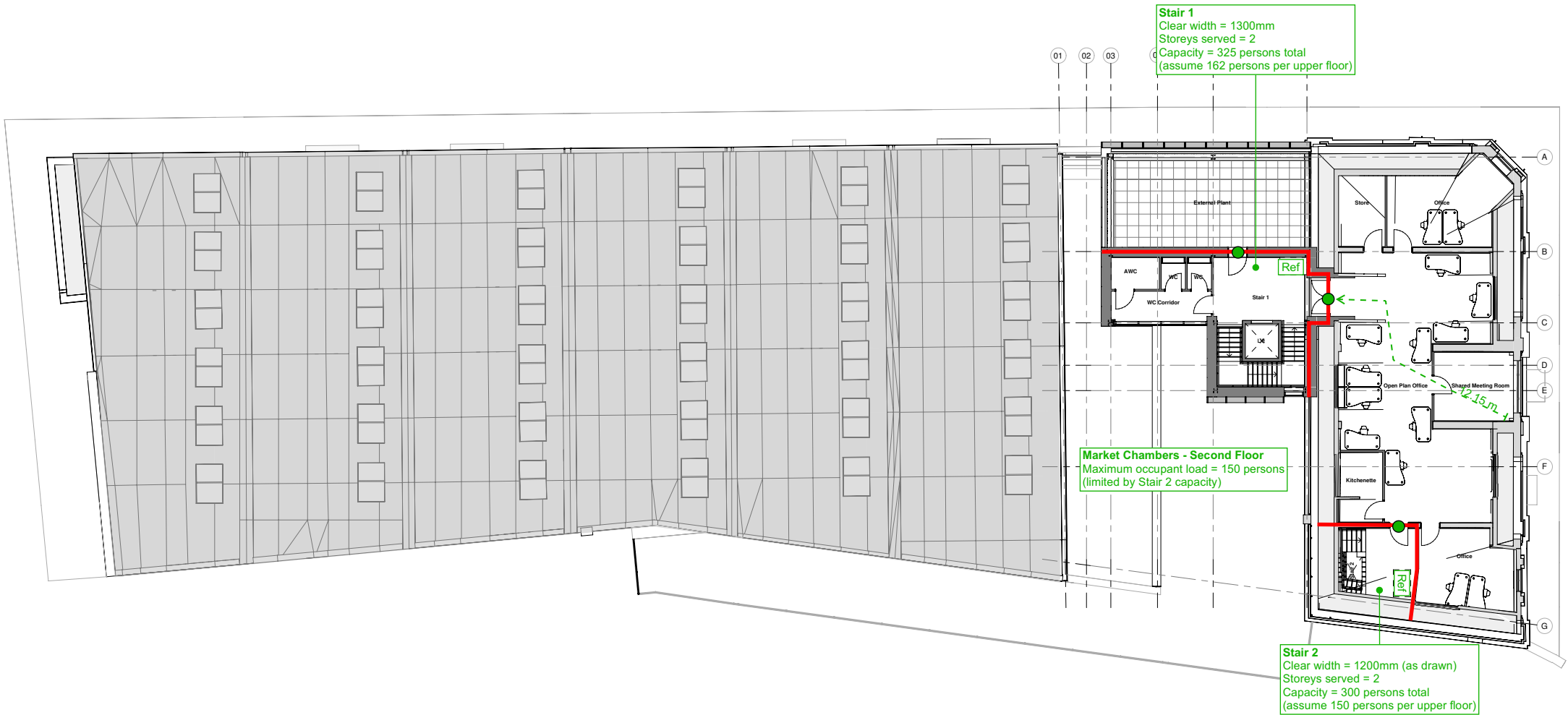
Other

Ref Protected refuge (indicative)
FP Fire alarm panel (indicative)

Viewpoint Status: S4 ~~Viewpoint Status: S~~



Notes	
The Contractor is to check all dimensions and conditions on site before commencing. Do not scale from this drawing. This drawing remains the copyright of POZZONI Architecture Ltd.	
Scale Bars	TO BE USED ONLY AS GUIDANCE
1:100	0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
1:200	0m 2m 4m 6m 8m 10m 12m 14m 16m 18m 20m
1:500	0m 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m
1:1250	0m 12m 24m 36m 48m 60m 72m 84m 96m 108m 120m
KEYPLAN	



Fire Strategy Key

Compartmentation

— 60 minutes (EI) *

— 30 minutes (EI) *

(R = Load-bearing capacity, E = Integrity, I = Insulation)

Notes:
* Also (R) where the wall is an element of structure.

Fire Doors

● / ○ FD60S / FD60

● / ○ FD30S / FD30

(S = Smoke control to resist leakage at ambient temperature)

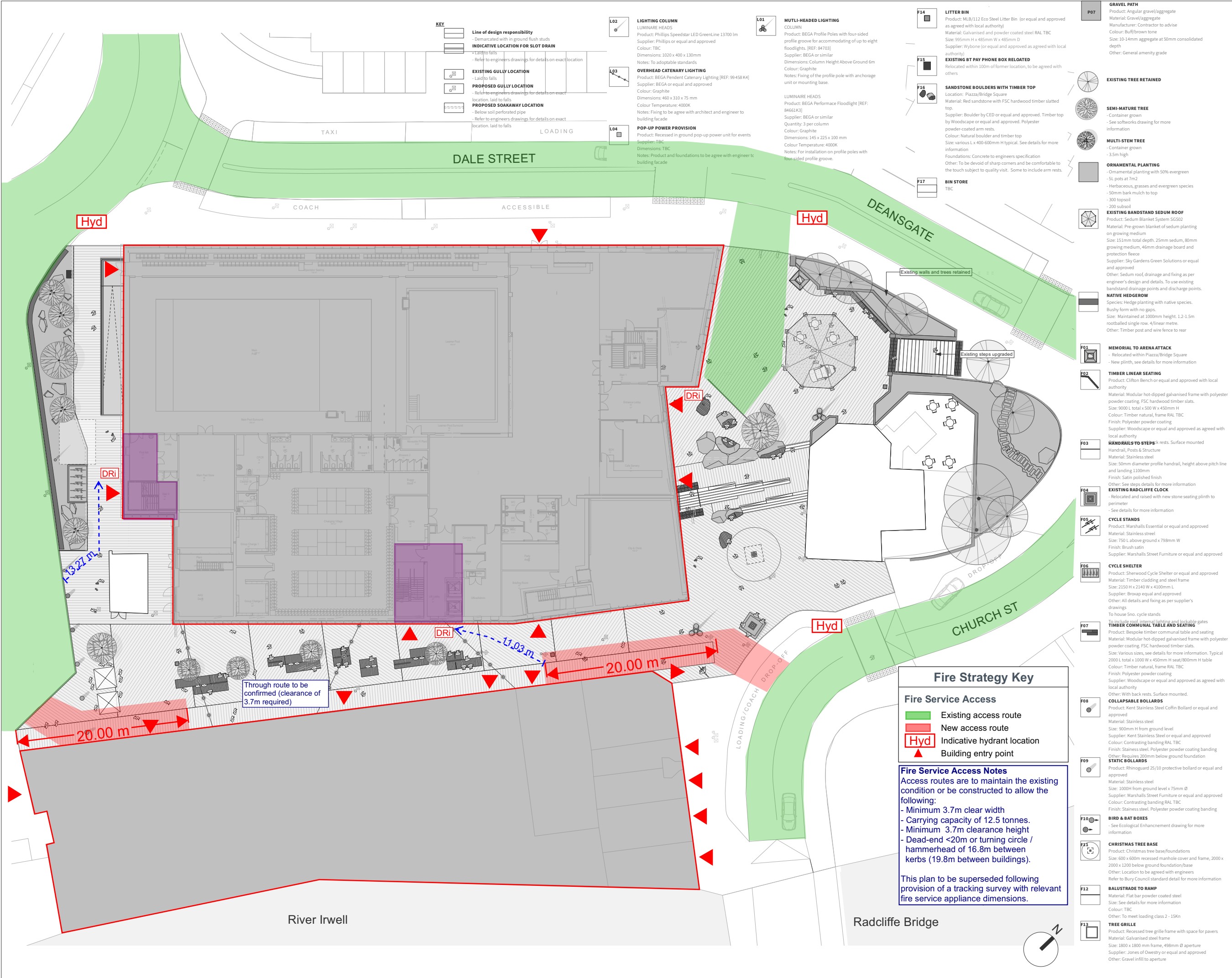
Other

Ref Protected refuge (indicative)

FP Fire alarm panel (indicative)

Viewpoint Status: S4 / Viewpoint Status: S3

P05	Updated to suit client comment	DAS	10.01.23
P04	Battery reduced in length	DAS	10.01.23
P04	Stage 3 Review	AT	14.10.22
P03	General Layout Updates	AT	09.09.22
P02	General updates to comments	LM	12.08.22
P01	Updated - new sections added	LM	29.07.22
Rev	Description	By	Date
01	Vinci Construction		
02	Radcliffe Market Chambers & Basement		
Proposed Second Floor Plan			
5860_2_2003	P05		
RADHUB- PAL- ZZ- 02- DR- A- 2003			
02/10/22	1 : 100		@ A0
DAS	DAS		
Planning	Tender	Construction	
Design	Contract	As Built	
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NOTES:

1. Do not scale from this drawing.
2. Always work to noted dimensions.
3. All dimensions are in millimetres unless otherwise stated.
4. All setting out, levels and dimensions to be agreed on site.
5. The dimensions of all materials must be checked on site before being laid out.
6. This drawing must be read with the relevant specification clauses and detail drawings.
7. Order of construction and setting out to be agreed on site.

P01.1

CONCRETE PAVING WITH NATURAL AGGREGATE FINISH

Location: Site wide

Material: Kellen - Liscio or equal and approved

Manufacturer: Hardscape Ltd or equal and approved

Colour: Mid grey tones TBC

Size: W150mm x L 300mm x D 80mm to vehicular (P01.1) & D 62mm to pedestrian (P01.2)

Bond/Finish: TBC. Include bespoke end units

P02

CORDUROY WARNING PAVING

Location: To top and bottom of steps in public realm

Material: Corduroy concrete units

Manufacturer: Marshalls or equal and approved

Colour: Contrasting tone to adjacent paving

Size: 400mm L x 400mm W x 50mm D

Bond: Stack bond

SANDSTONE CUT BOULDERS

Location: Site wide

Material: Red sandstone with artwork opportunity integrated TBC

Supplier: CED or equal and approve

Colour: Natural

Size: 1000mm L x 600mm H

Foundations: Concrete to engineers specification

Other: To be devoid of sharp corners and be comfortable to the touch subject to quality visit

P03

STEPPING STONES

Product: Natural sandstone slabs

Material: Red sandstone

Manufacturer: CED or equal and approve

Colour: Natural red tone

Size: 800 L x 300 W x 80mm D

Other: To be flush in gravel path in concrete haunched foundation

P04

GRANITE STEPS

Material: Granite

Colour: Royal White steps and midnight black nosing

Finish: Steps and nosings flamed

Supplier: Hardscape or equal and approved

Size: W 300 x L 915 x D 190. Top step W 400. 50x50mm nosing

Other: Artwork opportunity on risers

Refer to details for more information

P05

RAMP TO HUB BUILDING

Ramp

Material: Insitu, fine smooth finished cast high-quality concrete wall, tapering with ramp. Brushed concrete pavings.

Size: See details for more information.

Other: Subject to further design detail with engineers

Cladding/Coping

Material: Brick cladding to wall.

Size: 215 x 102.5 x 65mm

Colour: TBC with architect

Manufacturer: TBC with architect

Appearance: Creased

Balustrade

Material: Flat bar powder coated steel

Size: See details for more information

Colour: TBC

Other: To meet loading class 2 - 15kN

S2-P07	17-10-2022	STAGE 03	JTO	RM
S2-P06	05-08-2022	STAGE 03	JTO	RM
S2-P05	19-07-2022	STAGE 03	JTO	RM
S2-P04	16-06-2022	STAGE 03	JTO	RM
S2-P03	10-05-2022	STAGE 03	JTO	RM
S2-P02	25-01-2022	STAGE 02	JTO	RM

Revision	Date	Description	Drawn	Appr.

Client Bury Council

Project Radcliffe Civic Hub

Drg Title Landscape General Arrangement

Created on 04-01-2022

Created by JTO

Approved by RM

Scale 1:200

Size A1

Workstage Stage 03

Drg No. RADHUB-PIE-00-00-DR-L-0001

Suitability S2

Revision P07

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Viewpoint Status: S4 Newpoint Status: S3

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19. BS 5266-1, 'Code of practice for the emergency lighting of premises', 2016.
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21. BS 8519, 'Selection and installation of fire-resistant power and control cable systems for life safety and fire-fighting applications.' 2020.



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Revision	Date	Issue
00	20 October 2022	Draft RIBA Stage 3 issue for design team review
01	24 January 2023	Amended to reflect update to RIBA Stage 3 design

Produced on behalf of Bespoke Fire Safety Design by:

A handwritten signature in black ink, appearing to read "CH", with a stylized flourish at the end.

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