

BLACK CAT
BUILDING CONSULTANCY

FIRE STRATEGY REPORT

Huddersfield Market Hall, Brook Street, Huddersfield HD1 1RY

Kirklees MBC

17th June 2025

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CONTENTS

1 INTRODUCTION 1
2 MEANS OF ESCAPE IN CASE OF FIRE 3
3 FIRE ALARM AND EVACUATION PROCEDURES 8
4 ACTIVE FIRE SAFETY SYSTEMS 8
5 CONSTRUCTION 9
6 CONCEALED SPACES / CAVITIES 10
7 VENTILATION DUCTWORK 11
8 EXTERNAL FIRE SPREAD – UNPROTECTED AREAS 12
9 FIRE FIGHTING FACILITIES 12
10 FIRE SAFETY MANAGEMENT 13
11 INFORMATION, LIMITATIONS AND ASSUMPTIONS 14
12 BUILDING REGULATIONS 14
13 CONCLUSION 14
14 SIGNATORIES 14

APPENDICES

Appendix A. **Fire Strategy Plans**

1 INTRODUCTION

1.1 Description of Building

The market building is Grade II* listed and is recorded as having been constructed between 1887 and 1889. An interesting point is that the architect is listed as R.S. Drydale, Borough Surveyor.

The Historic England listing states:

> *Cast iron. Walls and north lights of each aisle roof glazed all over. 6 aisles, each taken on 4 giant iron columns with elaborate foliate capitals. Decorative patterns are pierced in girders. Hipped roofs on segment-shaped iron trusses with decorative patterns pierced in them. Glass canopies on pierced ornamental brackets with similar valences. Continuous round-arched lights above these, in 2 tiers, or 3 as the ground slopes away towards the east. Frieze with roundels and heraldic ornament.*

This impressive market hall remains in Local Authority ownership and is due to be refurbished, with original features retained.



Figure 1: Elevation illustrating cast iron works and glazing

1.2 Fire Strategy Design Basis

The fire strategy for the renovation works is based on the Building Regulations (BR) and Approved Document B – Fire Safety, Volume 2: Buildings Other Than Dwellings (ADB).

1.3 Building Regulations

Regulation 3 of the Building Regulations defines building work as:

a. The erection or extension of a building
b. The provision or extension of a controlled service or fitting
c. The material alteration of a building or a controlled service or fitting.

Regulation 4 states that building work should be carried out in such a way that, when complete:

a. For new buildings or work on a building that complies with the applicable requirements of the Building Regulations: the building complies with the applicable requirements of the Building Regulations.
b. For work on an existing building that did not comply with the applicable requirements of the Building Regulations:
    i. The work itself must comply with the applicable requirements of the Building Regulations, and
    ii. The building must be no more unsatisfactory in relation to the requirements than before the work was carried out.

This principle is often referred to as 'no worse than before' and means that if an existing situation does not meet current Building Regulations or ADB standards, it may still be considered compliant, provided the proposed work does not make the situation worse.

1.4 Buildings of special architectural or historic interest

ADB also discusses the potential difficulties that may occur in applying Part B (fire safety).

Paragraph 0.17 of ADB states:

> *Where Part B applies to existing buildings, particularly buildings of special architectural or historic interest, such as the Huddersfield Market Hall, for which the guidance in this document might prove too restrictive, some variation of the provisions in this document may be appropriate. In such cases, it is appropriate to assess the hazard and risk in the particular case and consider a range of fire safety features in that context.*

1.5 Aim of Report

This report is intended for use in any submission to Building Control and the Fire Brigade for regulatory approval, the future management of the building and will be utilised by the Fire Risk Assessment process.

As outlined in sections 1.3 and 1.4 above, the BR and ADB give some latitude for existing buildings and, more particularly, for historic buildings.

The aim is to retain as much of the historic fabric of the building as possible, and therefore we will endeavour to show compliance with BR, and in a large part, this will be no worse than existing.

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, paragraph 0.7, Property protection.

Further information on the protection of property can be obtained from the FPA website: **www.thefpa.co.uk**.

2 MEANS OF ESCAPE IN CASE OF FIRE

2.1 General

The market can, in the main, be classed as Purpose Group 4 (Shop & Commercial), with occasional use as Purpose Group 5 (Assembly & Recreation). These purpose groups apply to the existing and refurbished market hall.

The small ancillary units, which are detached from the market hall, are used for small storage, preparation or office purposes in support of the market traders. It is appropriate to classify these units as Purpose Group 7a (Storage & Other Non-Residential Uses).

ADB stipulates the following maximum permitted travel distances:

- Shop & Commercial: 18m in one direction and 45m in more than one direction
- Assembly & Recreation: 18m in one direction and 45m in more than one direction.
- Storage & other non-residential (normal hazard): 25m in one direction and 45m in more than one direction
- Plant room: 9m in one direction and 35m in more than one direction

The market hall, associated plant rooms and the ancillary detached units do not exceed the limits set out above.

See Appendix A for proposed layouts.

2.2 Market Hall - Ground floor

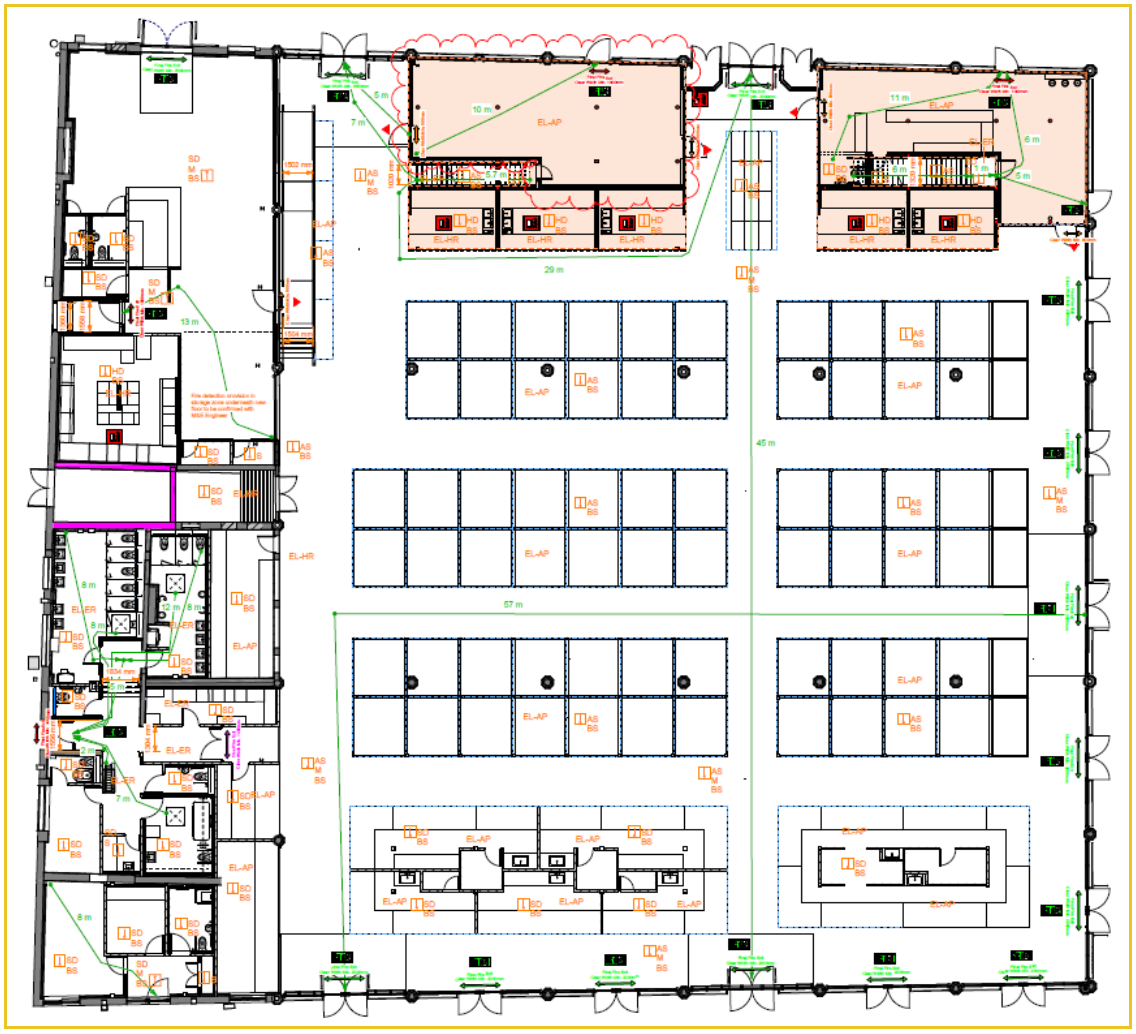


Figure 2: Proposed Ground Floor Market Hall

As can be seen from the extract above, the general layout of the hall with significant external exits will not exceed travel distances set out above and is no worse than the existing one.

First Floor

The proposed first-floor plan for the market hall includes two first-floor areas open to the public when the ground floor unit is trading, and a number of plant spaces/deck only accessed for maintenance and repair of the market plant.

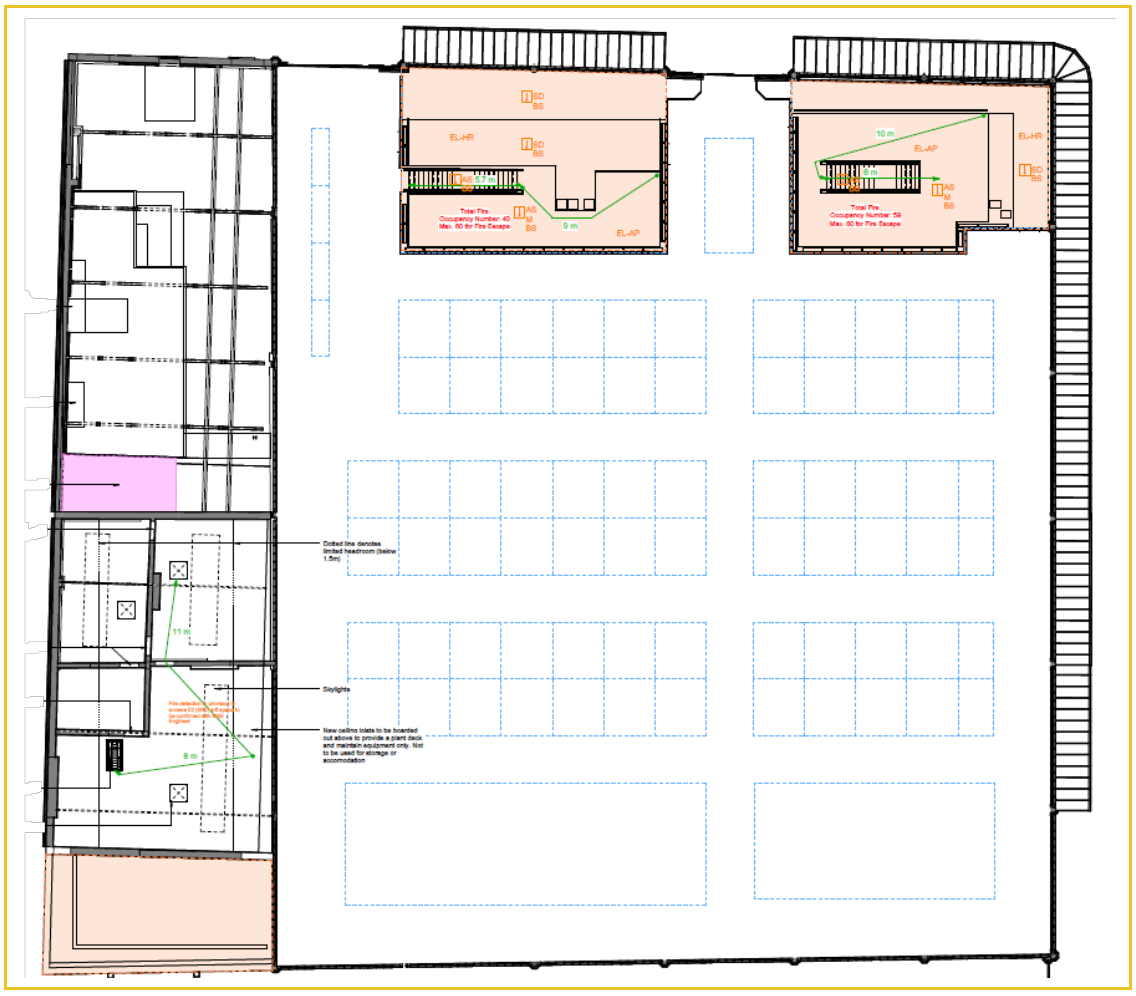


Figure 3: Proposed First Floor Market Hall

The main alterations to the existing Market Hall comprise the addition of two first-floor decks to accommodate the public. These decks have been configured such that the single direction of travel does not exceed 18m.

The plant decks are also configured such that they do not exceed 9m in a single direction and 35m in more than one direction.

Ancillary Units

Set aside and below are some small ancillary units, along with external parking and waste management areas illustrated on the part site plan below.

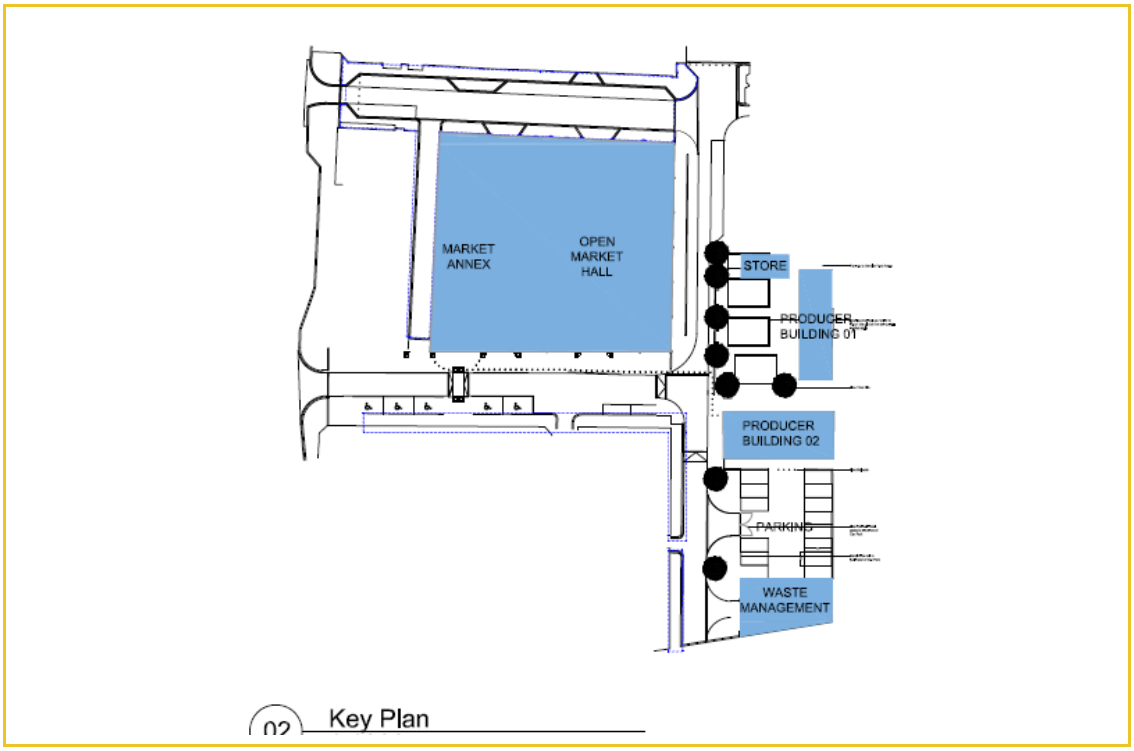


Figure 4: Ancillary units detached from the Market Hall

A scan can be seen from above; there are two ancillary units: Producer Building 1 and Producer Building 2.

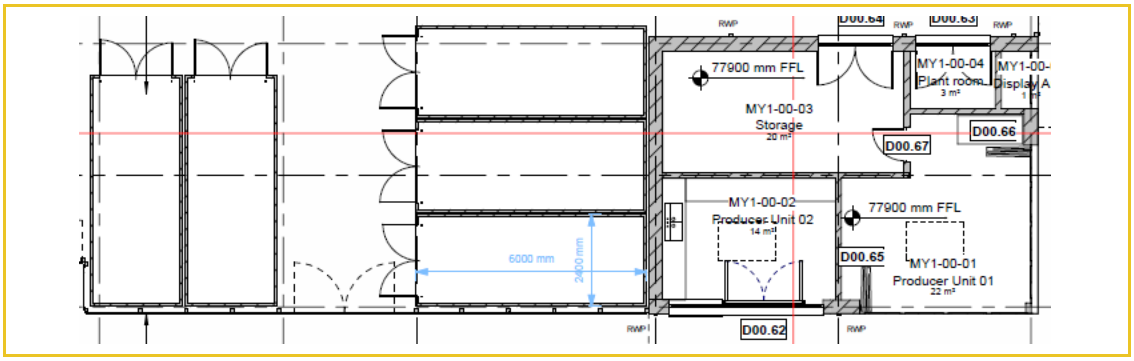


Figure 5: Producer Building 1

Producer Building 1 consists of some steel shipping containers used for storage, which are not discussed further, and a small masonry building of approximately 60m². This building contains three stores/general-purpose units, along with a plant room and display area.

The internal means of escape is within 18m of travel in a single direction.

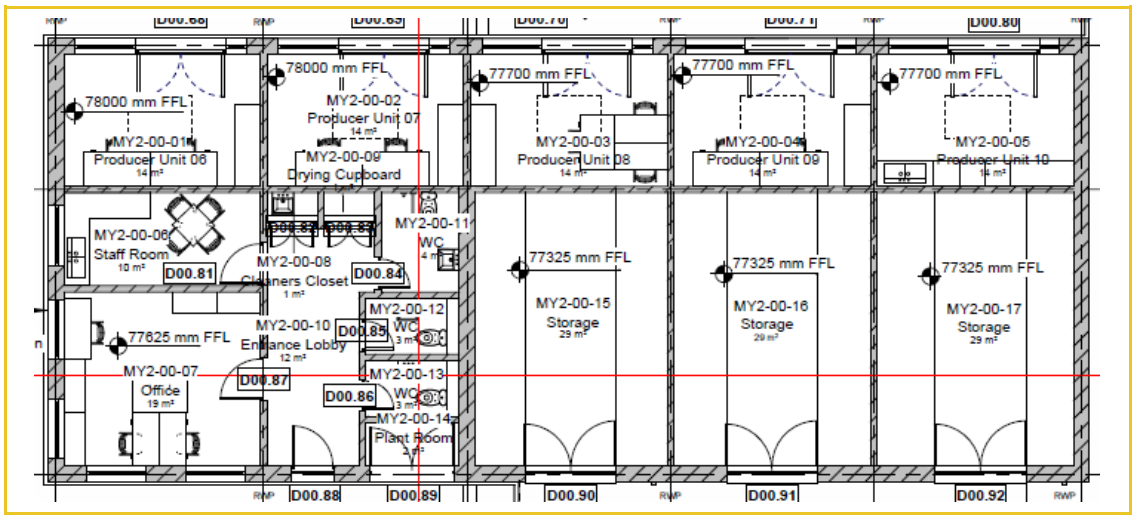


Figure 6: Producer Building 2

Producer Building 2 consists of five stores/general use units, three larger storage units, and a small market office with ancillary staff facilities.

The internal means of escape is within 18m of travel in a single direction.

2.3 Occupancy

ADB has occupancy numbers for different uses; however, occupancies have been provided by the Design Team/Client for different uses in the market hall.

- Shop sales area (Market Hall) 2.0m² per person
- Assembly 0.5m² per person
- Offices 6.0m² per person

It is considered that the occupancy densities described above are very conservative.

However, ADB also states that, as an alternative, the floor space factor can be determined by reference to actual data taken from similar premises.

As described above, data from the Kirklees MBC design team has been used, indicating:

- The Market Hall has 13 exits from the main market hall, excluding the 3 separated units and the lower corner commercial unit. Given the proximity of some exits, it is reasonable to discount 2, resulting in 11 exits with a combined clear width of 22 metres (11 exits × 2 metres each).
- According to ADB, using 5mm per person @ 22m equates to 4,400 people being catered for escape.
- The client team has identified a central 600m² area which may be utilised for entertainment such as music events. Assuming 0.5m² per person, this equates to 1,200 occupants. This can comfortably be accommodated.

Using the most onerous case of 0.5m² per person, this would equal 1,200 potential concert goers.

As the proposals have the potential exits for 4,400 people, from the main hall with additional exits from the external units, there are more than enough exits for concerts or general market use.

3 FIRE ALARM AND EVACUATION PROCEDURES

3.1 Fire Detection for the Market Hall

ADB directs reference to BS 5839-1 Table A1 for guidance on the most suitable fire detection and alarm system for various building uses.

The most onerous use, based on occupancy numbers, will be during concert mode. Unfortunately, BS 5839:1 offers limited specific guidance for this scenario.

Based on the general mixed use of the market, potential concert mode, food and beverage outlets, it is suggested that an L2 standard of system would be appropriate.

3.1.1 Evacuation Procedures for the Market Hall

It is intended that the whole building will evacuate on detection of fire, i.e. simultaneous evacuation.

If operational difficulties arise due to false alarms, consideration may be given to implementing an investigation period of up to 6 minutes. However, if a second device activates or a call point is triggered, then the Market Hall must proceed to full evacuation.

It is recommended that, on activation of the fire alarm system, the market management has a system in place that automatically informs the Fire Service, generally through an alarm receiving service.

3.1.2 Detection, Alarm & Evacuation Procedures for the Producer Buildings

These small, detached buildings would comply with BR if equipped with a manual alarm system only. However, the client will likely require an L2 standard of detection system in these areas. The evacuation for these buildings will be simultaneous.

4 ACTIVE FIRE SAFETY SYSTEMS

4.1 CCTV

It is envisaged that a colour CCTV system will be provided to the Market Hall to monitor the development. This system is primarily for security, but is undoubtedly useful in a monitoring role.

This system may also be extended to cover the external ancillary areas.

4.2 Emergency Lighting

Emergency lighting will be installed throughout the Market Hall and ancillary buildings in accordance with BS 5266-1:2016 and providing sufficient fittings to clearly and unambiguously indicate and provide illumination from within the building, and along external routes to the street in the event of mains failure.

4.3 Safety signage

Fire exits and exit routes should be provided with exit and intermediate directional signs in accordance with BS ISO 3864-1 and BS 5499-4.

Particularly within the Market Hall, signage will need to be sized appropriately according to viewing distances. A useful guide is provided below.

Graphic Symbol Height	Viewing Distance
100mm	17.0m
110mm	19.0m
120mm	20.4m
130mm	22.0m

4.4 Cooking facilities

All hot food cooking facilities are to have 'Ansil' type suppression fitted in the cooker extraction hood.

5 CONSTRUCTION

5.1 Structure

5.1.1 Market Hall

The Market Hall is generally a cast-iron and glass listed building, with an area of masonry to one side.

ADB typically requires 60 minutes of fire resistance (FR) to elements of structure.

Where new structural elements are introduced, these—along with any supporting components—will be designed to achieve 60 minutes fire resistance.

However, existing unprotected structural members will not be retrofitted with fire protection.

This approach is in line with Regulation 4 as discussed earlier.

5.1.2 Transformer room enclosure

Within the existing Market Hall building, there is a transformer room that will be utilised by the electrical supplier (DNO). The DNO has specified that the structure surrounding the transformer enclosure, walls & slab over is 120min FR.

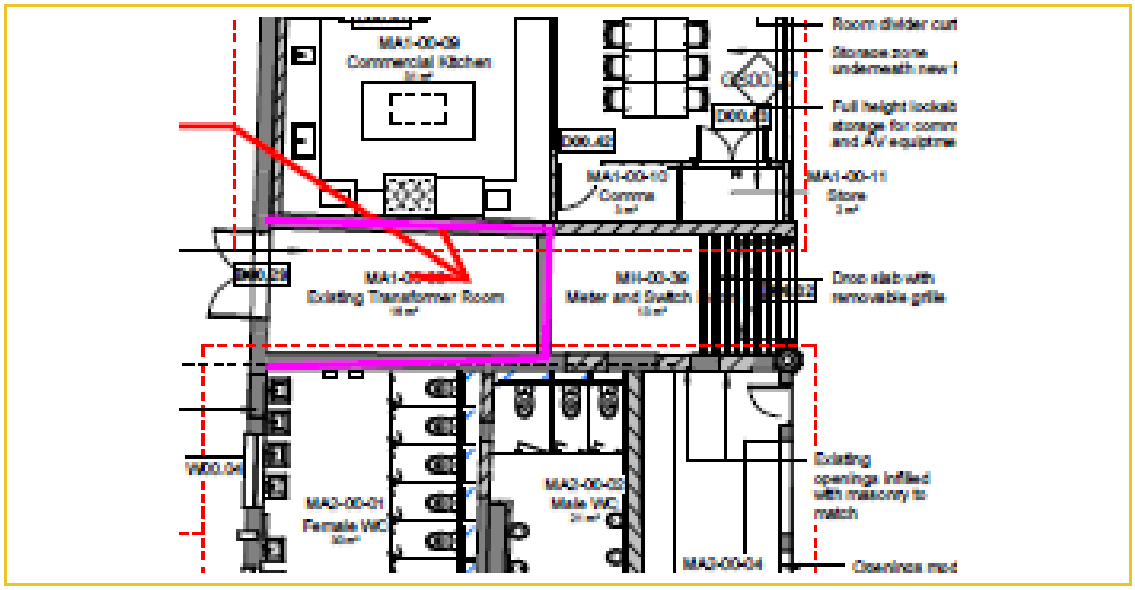


Figure 7: Transformer enclosure

5.1.3 Ancillary units

The detached single-storey ancillary units are generally of masonry construction, capable of achieving 60 minutes of fire resistance. However, as these units are within the local authority compound for market management use, it is not considered necessary to provide fire protection to the external walls.

6 CONCEALED SPACES / CAVITIES

Cavities in the construction of a building provide a ready route for the spread of smoke and flame, and this can be a greater risk to life as any spread is concealed.

The Market Hall has a few concealed spaces.

Where any new false ceilings are installed or other cavities are created, it is recommended to follow the principles outlined in ADB Diagram 9.1 for the placement of cavity barriers and Table 9.1 for the maximum dimensions of cavities.

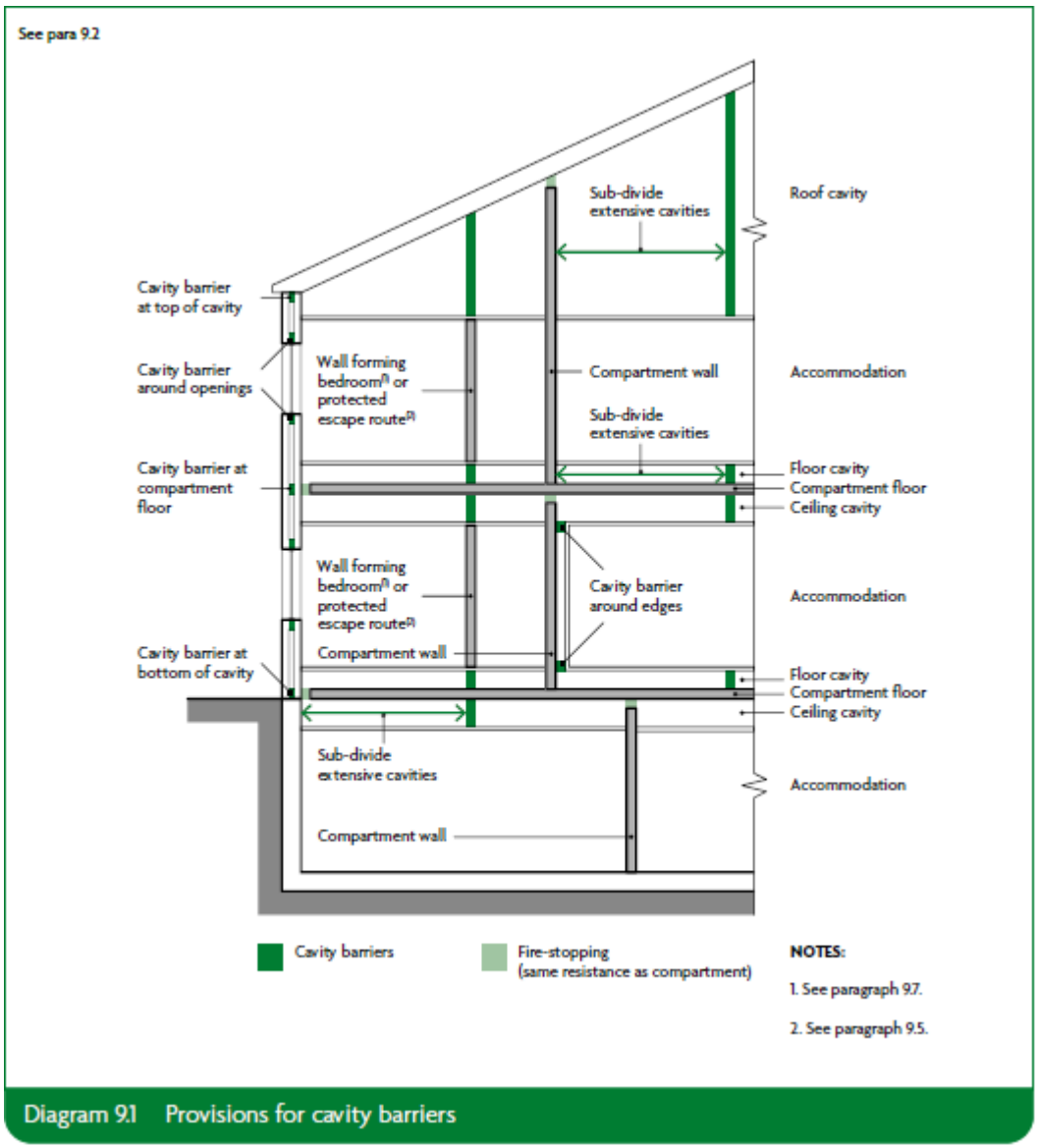


Figure 8: ADB diagram 9.1 – provision of cavity barriers

Table 9.1 Maximum dimensions of cavities in buildings other than dwellings (purpose groups 2 to 7)

Location of cavity	Class of surface/product exposed in cavity (excluding the surface of any pipe, cable or conduit, or any insulation to any pipe)	Maximum dimension in any direction (m)
Between roof and a ceiling	Any	20
Any other cavity	Class C-s3, d2 or better	20
	Worse than Class C-s3, d2	10

Figure 9: ADB table 9.1 – maximum dimension of cavities

It should be noted that the maximum dimension of cavities illustrated above can be exceeded, provided if a single room with a ceiling cavity or underfloor cavity exceeds the dimensions in Table 9.1, cavity barriers need only be provided on the line of the enclosing walls/partitions of that room if both of the following apply.

a. The cavity barriers are a maximum of 40m apart
b. The surface of the material/product exposed in the cavity is class C-s3, d2 or better.

7 VENTILATION DUCTWORK

If any air handling ducts pass through fire-separating elements—such as protected structures around escape routes or compartment walls—they should be fitted with smoke and fire dampers activated by smoke detection (ADB Method 4). Alternatively, if the duct merely passes through and does not serve the protected area, fire-resisting ductwork may be used instead (ADB Methods 2 or 3).

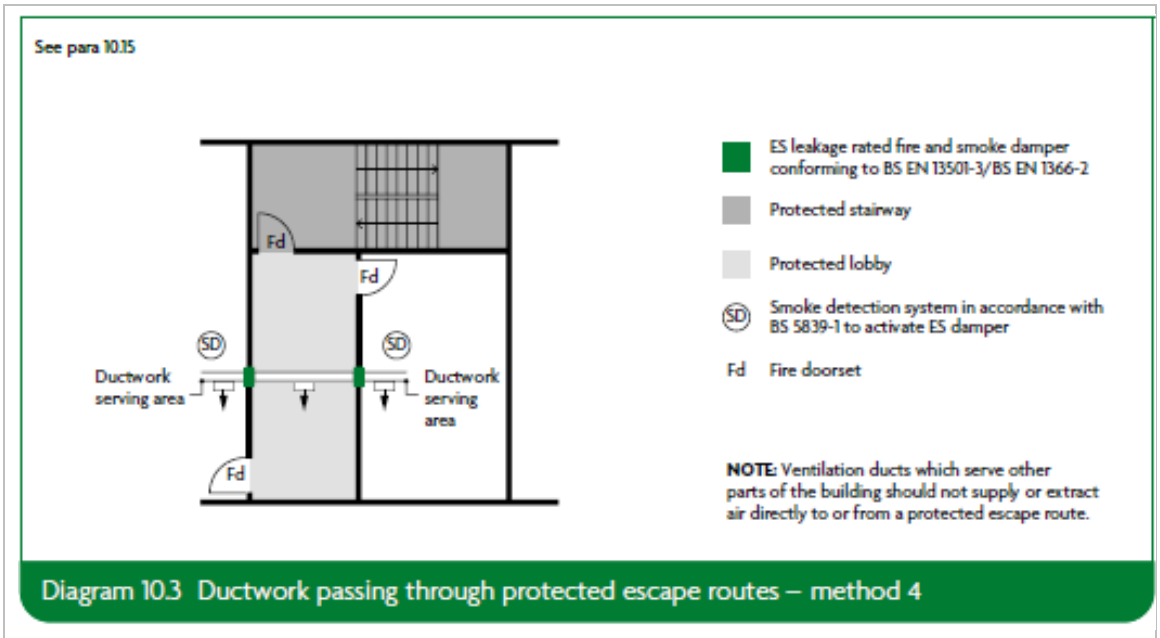


Figure 10: ADB diagram 10.3 duct passing through protected routes – Method 4

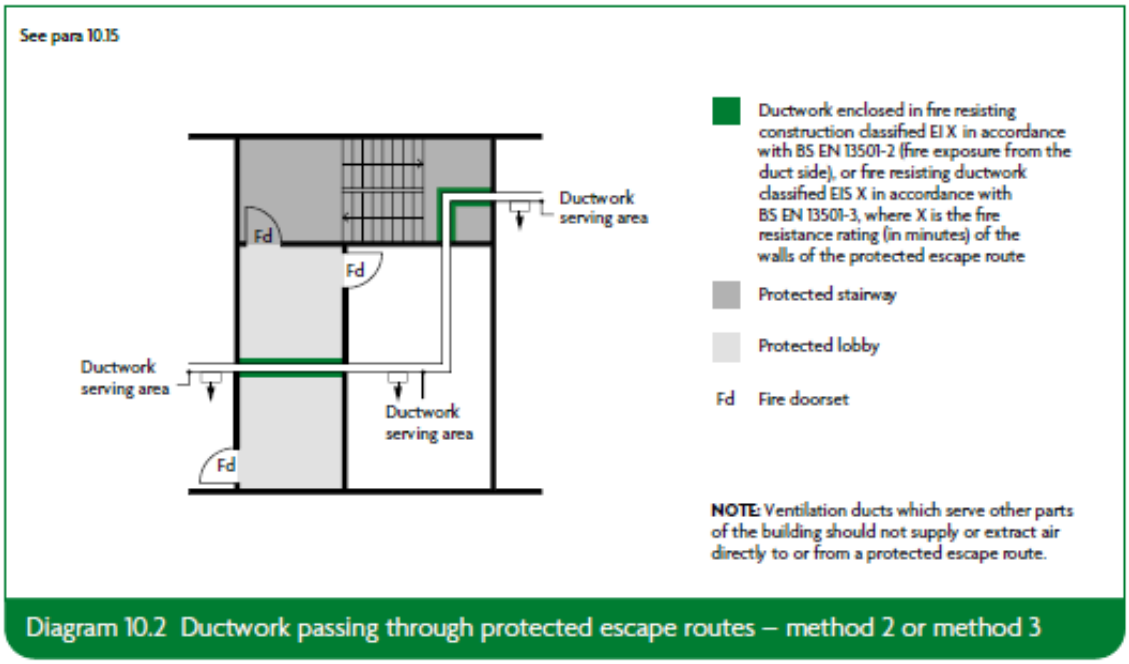


Figure 11: ADB diagram 10.2 duct passing through protected routes – method 2/3

Where cooking extraction ducts are installed, these are anticipated to be specified as FR ducts with adequate access for cleaning and will not have any fire dampers fitted.

8 EXTERNAL FIRE SPREAD – UNPROTECTED AREAS

8.1 Elevations

8.1.1 Market Hall

There are no significant alterations to the external walls of the Market Hall that adversely affect the fire protection.

It is assumed that the original cast iron and glass external walls have no inherent fire protection, and as a listed building, the intent is to retain, albeit with redecoration, the existing.

This approach is in line with Regulation 4 as discussed earlier.

8.1.2 Ancillary units

In general, the majority of the external walls are masonry; however, based on the location of the buildings, the internal masonry walls that separate the potential fire load, and the buildings are all located on LA land, there are no unprotected area issues.

Note: The Design Team need to confirm the Local Authority land ownership boundary.

9 FIRE FIGHTING FACILITIES

9.1 Fire Service Access Routes

The surrounding highway access is to be used as existing, and provides good access to the Market Hall and ancillary buildings.

9.2 Fire Hydrants

The existing highway hydrants as existing are to be utilised.

10 FIRE SAFETY MANAGEMENT

10.1 General

Once the Market Hall and ancillary buildings are occupied, it is the responsibility of the management to ensure 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; and
- Liaise with and seek the advice of the fire authority as required.

10.2 Staff

Staff should be trained by qualified professionals. The training should be at regular intervals and should ensure 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, in the case of fire, that 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.

10.3 Fire Safety Manual

Before the buildings are 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; and
- 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 Appendix G 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.

10.4 Maintenance and Housekeeping

It is the role of management to ensure maintenance is carried out in accordance with the relevant British Standards, so 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.

11 INFORMATION, LIMITATIONS AND ASSUMPTIONS

The following assumptions and limitations have been used in the preparation of this report:

Assumption

It is assumed that the historic Market Hall has no outstanding Building Regulation non-compliance issues or outstanding Fire Service concerns.

12 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 Insurer's Requirements for Property Protection, RIBA Publishing 2008.

13 CONCLUSION

The renovation of the Huddersfield Market Hall, as described above, complies with the Building Regulations in respect to fire safety. Particular attention should be given to the provisions of Regulation 4, which permits the building to remain no less compliant than existing conditions.

Indeed, with the introduction of an L2 fire detection and alarm system, the strong recommendation for cooker hood suppression in cooking areas, the installation of new emergency lighting and exit signage, and a fire alarm system that alerts the fire service, the proposals represent an overall improvement to the building in terms of fire safety.

It is considered that the proposals are in accordance with Building Regulations.

14 SIGNATORIES

Prepared & Edited By:

Redacted

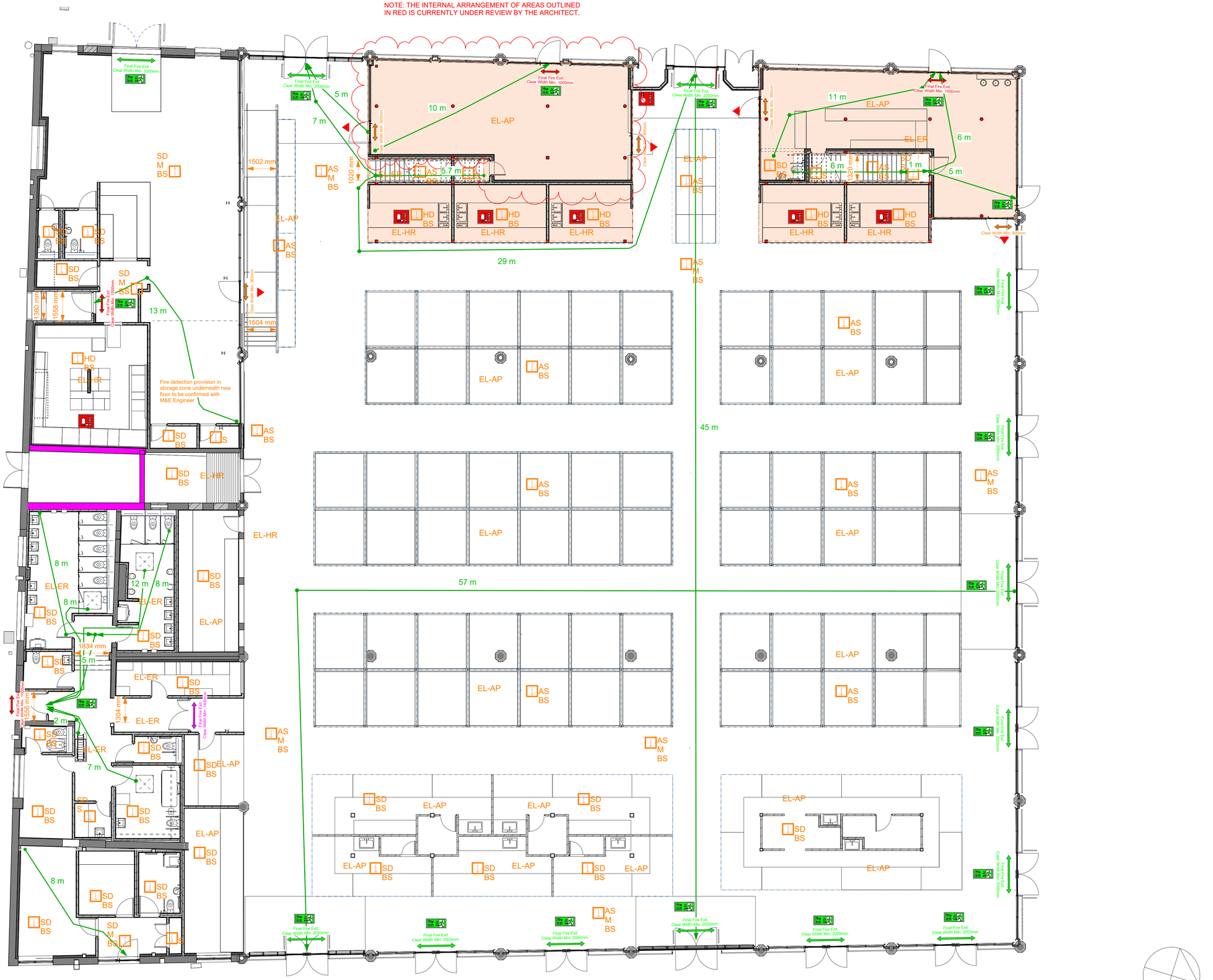
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For and on Behalf of Black Cat Building Consultancy

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Document Ref: BCBC/3739

Version: 1
Status: Final

APPENDIX A. FIRE STRATEGY PLANS

NOTE: THE INTERNAL ARRANGEMENT OF AREAS OUTLINED IN RED IS CURRENTLY UNDER REVIEW BY THE ARCHITECT.



1 Market Hall & Annexe - Level 00 Fire Strategy Plan
1 : 100

0m 2m 4m 6m 8m 10m
SCALE 1:100 @ A1

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KEY

- Automatic Fire Suppression
- Final Fire Exit Point
- Fire Alarm Control Panel
- FR60 - 60mins Fire Resistant
- FR 120 - 120mins Fire Resistant
- FR60 Fire Resistance to Floor Above
- FR120 Fire Resistance to Roof Above
- Max Escape Distance
- Exits Discounted in Fire
- AS M BS — Aspirating Smoke Detection + Beacon + Manual Call Point + Sounder
- AS BS — Aspirating Smoke Detection + Beacon + Sounder
- HD BS — Heat Detection + Beacon + Sounder
- S — Smoke Detection
- SD M BS — Smoke Detection + Beacon + Manual Call Point + Sounder
- SD S / SD BS — Smoke Detection + Beacon + Sounder
- Smoke Detection + Sounder
- FR60 Insulated Ductwork
- EL-AP — Emergency Lighting - Anti Panic
- EL-ER — Emergency Lighting - Escape Route
- EL-OA — Emergency Lighting - Open Area
- EL-HR — Emergency Lighting - High Risk Task Area

NOTE: The maximum horizontal travel distance is 18 metres in a single direction and 45 metres where travel in more than one direction is available.

REV	DATE	COMMENT	DRW | APRV
P01	24/03/25	Issued for planning and listed building consent	CS | NM

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CLIENT: KIRKLEES COUNCIL

PROJECT: HUDDERSFIELD MARKET

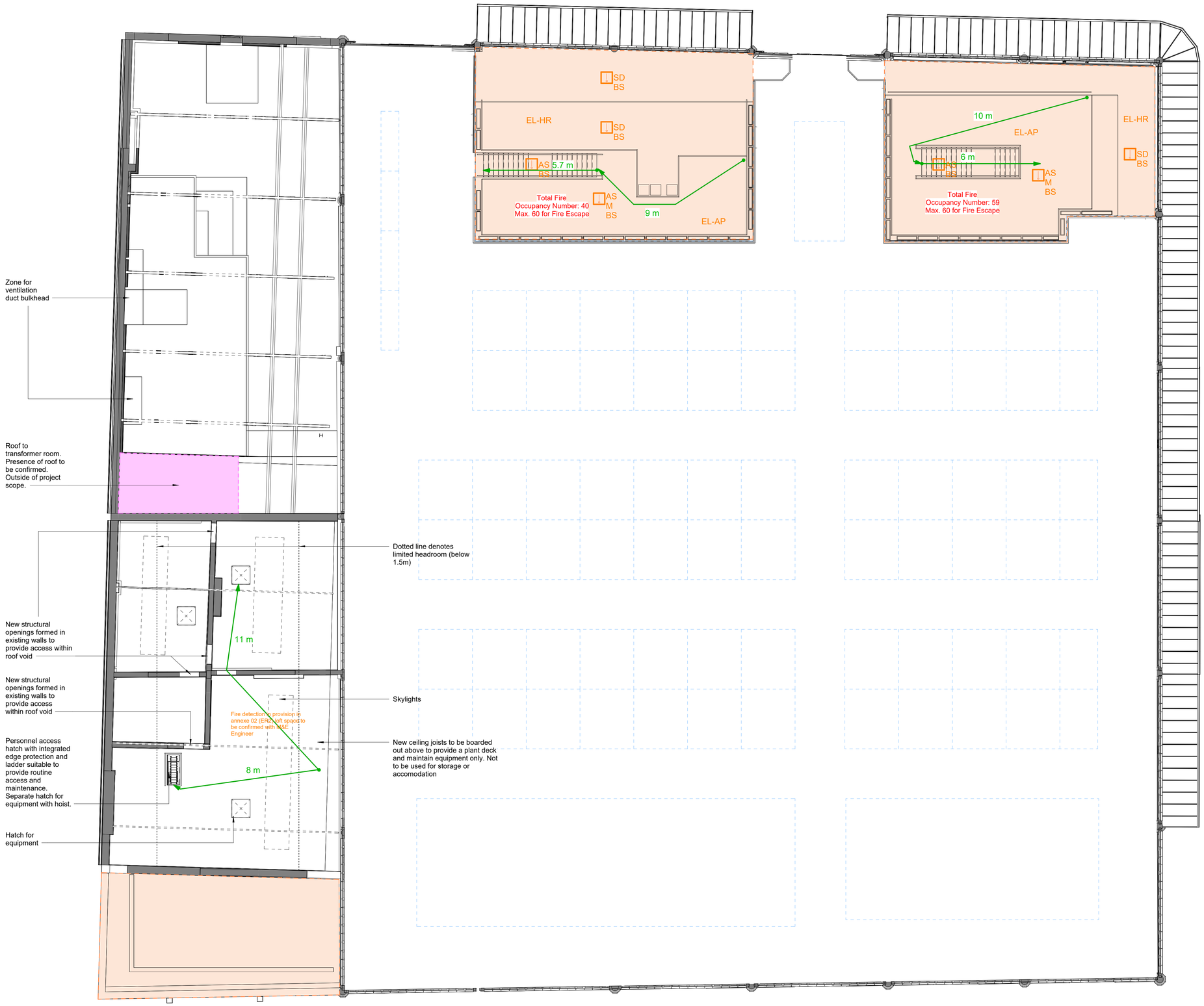
STATUS: S4 - Suitable for Stage Approval

DRAWING: **Fire Strategy Market Hall and Annexe Level 00**

SCALE	DRW | CHKD	RVW | APRV	DATE
As indicated @ A1	CS | NM	CS | NM	24/03/25

DRAWING NUMBER: HUD001-GSA-ZZ-00-DR-A-5131

REVISION: P01



1 Market Hall & Annexe - Level 01 Fire Strategy Plan
1 : 100

0m 2m 4m 6m 8m 10m
SCALE 1:100 @ A1

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KEY

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- S — Smoke Detection
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CLIENT: KIRKLEES COUNCIL

PROJECT: HUDDERSFIELD MARKET

STATUS: S4 - Suitable for Stage Approval

DRAWING: **Fire Strategy Market Hall and Annexe Level 01**

SCALE	DRW | CHKD	RVW | APRV	DATE
As indicated @ A1	CS NM	CS NM	24/03/25

DRAWING NUMBER: HUD001-GSA-ZZ-01-DR-A-5132

REVISION: