

17-21 Chapel Street, Bradford

Stage 2 Outline Fire Strategy Notes

Introduction

We have based our outline fire strategy (and design approach) on guidance provided in Approved Document Part B Fire safety *Vol2 Buildings other than dwellings* and having reviewed the current spatial organisation and condition of the existing building against current practice.

The building is a Grade II listed building structure comprising 4 storeys and a basement. It was previously in use as an 'offices and workshop' building having previously been converted in the 1980s. We are anticipating that a change of material use will apply to the ground floor storey only, as this is intended to be used by the public as a flexible event space for performance, entertainment, conference, exhibition etc. Other floors including the basement will continue in their current use as offices and other ancillary spaces.

We are therefore applying current building regulation standards for fire safety to the ground floor as a whole since there is a material change of use, and elsewhere any material alterations / building work will be carried out so that the building as a whole continues to comply or is no more unsatisfactory than it was before work commenced.

Design considerations relate to compartmentation, means of escape, the creation of new service shafts, provision for refuges and alterations to existing stair enclosures, providing additional protection in relation to the existing passenger lift and the existing plant room, and the replacement of fire detection and alarm systems.

Design principles

- The building comprises 3 compartments: the basement; the ground floor; the floors above ground floor.
- The ground floor is assigned as a separate purpose group rather than an ancillary use due to the size of its floor plate in relation to the overall floor area of the accommodation above basement level.
- The existing stair enclosures are therefore treated as protected shafts to be assessed and adapted if necessary to provide 1 hr fire protection.
- New vertical service shafts / riser will be constructed to provide 1 hr fire protection. Note that generally all existing defunct services will be stripped out and any retained penetrations into protected shafts and between floors are to be made good or fire stopped.
- The existing lift shaft will be retained with a new lift system. A new lobby at each upper floor will provide 1 hr fire protection. At basement level, the use of an automatic fire curtain with smoke control is proposed due to its position in relation to the proposed protected corridor and refuge. Subject to acceptability and the developing access control strategy for each floor, a secondary curtain / smoke control door at each lift shaft door opening other than ground floor, may provide an alternative form of protection to the installation of new lobbies.
- Currently both existing staircases extend from basement level to the third floor. To provide additional protection in the event of a basement fire, the intention is to stop the southern stair at ground floor so that one staircase only serves the basement. The basement capacity will be limited to 60 people (reaching that capacity is also highly unlikely due to proposed uses) and it has been reconfigured to allow for a maximum travel distance in one direction of 18m.
- Additional lobbying to the existing staircases is provided: to separate the basement final exit from the plantroom; to create lobbies at each floor other than at ground floor and the top storey to the staircase still serving the basement; to create new refuges adjacent to each staircase in locations that do not impede the escape route at each storey exit.
- Staircase alterations to the southern stair will include fire protection of its steel structure that will be retained in situ and the insertion of a new floor to separate a furniture store at basement level and a

cleaner's store at ground floor. Open treaded risers are retained as existing on each staircase other than where alterations to the southern stair require their infilling as part of fire protection to the redesigned protected shaft enclosure.

- New lobbies will provide 30 min fire resisting construction.
- The escape strategy allows for separation of purpose groups 3(office) and 5(assembly) escaping from the storeys above and below the ground floor.
- New fire doorsets will be fitted throughout.
- Existing cast iron columns to be inspected / treated with intumescent paint.
- Floor structure to be inspected for 1 hr fire resisting construction.
- A new fire detection and alarm system will be commissioned.
- Further investigation of requirements for smoke vents to the basement (which has half basement windows to Chapel Street) is required.