STANDARDS THAT ARE FAR FROM STANDARD

CASE STUDY

CLAPHAM FUTURES | MIXED USE

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CASE STUDY - CLAPHAM FUTURES | MIXED USE

A mixed use public services, leisure and community space with residential accommodation, Clapham Futures is a contemporary scheme that takes accessibility and openness as its central design themes, delivering them in a distinctive spiral structure, connecting a library and customer centre to a new doctors' surgery, café, performance space and community rooms. The building's unusual layout called for an innovative approach to the fire strategy and FDS Consult's experience of unconventional buildings meant that the team was able to take the required creative approach to the strategy and value engineer significant savings.

FDS Consult was responsible for developing the scheme's fire strategy concept, including fire systems and construction specification, fire service access and means of escape. The building's open plan and spacious layout meant that a code-based approach to the fire strategy would not have been possible without extensive compartmentation and the introduction of an additional staircase, which would have compromised the aesthetics of the architectural design, reduced the useable space and increased costs.

Working closely with the architects, FDS Consult's expert team used the company's in-depth understanding of First Principles fire engineering and took a solutions-driven approach to justifying the building's layout by:

- Introducing fan-assisted smoke shafts to enable extended travel distances within the residential areas
- Specifying enhanced smoke detection systems and integrating these with smoke venting systems to ensure effective smoke clearance on all levels
- Implementing intelligent compartmentation and smoke venting in the library café to justify extended travel distances
- Devising a phased evacuation strategy for non-residential areas
- Using First Principle radiation calculations to minimise the impact of boundary conditions on the external facades
- Devising creative protection to the ground floor discharge routes from the residential staircases

The fire strategy was developed using FDS Consult's in-house expertise and justified using the team's experience of computer modelling techniques to map smoke and fire behaviours in the proposed solution. Using CFD modelling (Computational Fluid Dynamics) FDS Consult was able to provide cost savings by:

- Rationalising smoke venting arrangements to the basement car park
- Rationalising compartmentation in the health centre, including the open plan main entrance
- Removing fire shutters
- Separating stairways and avoiding the need for an additional stairway

Type of project:
Mixed Use

Client:
Cathedral Group

Architect:
Studio Egret West

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