

CASE STUDY



CROWN HOUSE | OFFICES



fds consult

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Occupying a prime commercial site in the heart of Westminster, it was important that the re-development of Crown House into eight storeys of Grade A office space with penthouse apartments on floors nine and ten, retained the original Grade II listed façade. FDS Consult was brought on board to utilise its innovative fire engineering expertise to maximise the available floor space in both the commercial and residential aspects of the scheme and to develop a cost-effective fire strategy that would work with the layout of the building.

In order to achieve these goals, FDS Consult's expert team:

- Justified a shared staircase for the office and residential elements of the building saving the cost and space of a self-contained residential staircase
- Rationalised the fire fighting shafts to minimise smoke venting arrangements, thereby maximising useable floor space
- Removed the need to upgrade the third escape staircase to a fire fighting shaft
- Justified the omission of the lift lobbies from the office floor plates
- Completely removed the sprinklers from the specification for the basement, commercial and residential areas, justifying the apartments' open plan layout without the need for residential sprinklers, despite the fact that the building was more than 30m tall
- Rationalised the fire compartmentation to the building to minimise potential impact on the architectural design whilst ensuring a cost effective approach
- Conducted first principle radiation calculations to avoid two-hour glazing overlooking the boundaries

The building next door to Crown House was also refurbished as part of the same scheme and as the two buildings had previously shared an escape route, FDS Consult also applied the company's creative fire design approach to this issue, ensuring that Crown House could operate successfully independently of its neighbours.

FDS Consult successfully removed the security issues between the two buildings and devised a new exit route by:

- Working with the architect to introduce an external staircase shared with the adjacent building that would maintain security at Crown House whilst enabling an escape route for both buildings
- Justifying the safety of the shared staircase in the event of a fire in the adjacent building

- Justifying extended travel distances within the adjacent building in order to remove one of the original shared exit routes with Crown House

Thanks to FDS Consult's expertise, the client was able to gain approval for the scheme and make savings of £4.2 million in construction costs and recovered floor space. The innovative fire strategy designed by FDS Consult also enhanced the saleability of Crown House by removing any security issues whilst maintaining high safety standards and a deliverable evacuation strategy.

Type of project:
Refurbished Mixed Use Accommodation

Client:
UK & European Investments

Architect:
Sidell Gibson Architects



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