

CASE STUDY



PROJECT HAL | INDUSTRIAL



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News International is the publishing group behind some of the UK's most widely read newspapers and when the company's printing facilities in Wapping were coming to the end of their serviceable life, the company invested in a new 27,250m² print works in Broxbourne, Hertford. With a huge production space and large quantities of paper and highly flammable inks stored on site, developer Carillion enlisted the fire engineering expertise of FDS Consult to enhance safety at the new plant and value engineer the fire design. Thanks to FDS Consult's innovative approach, the building gained building regulations approval whilst achieving cost savings in excess of £1 million.

While the building has the appearance of a large industrial unit from the outside, internally it has five mezzanine levels with a central printing area that rises up the full 22m height of the building where the huge web presses print onto giant rolls of paper. At around 150m, the travel distances in this area of the building were over three times those specified by the codes, and the fire strategy had to factor in means of escape for personnel operating the large cranes used to maintain the printing presses. The building is split into just three compartments and, to counter the inherent fire hazard posed by the large amounts of paper stored on site, the insurers had specified that a four hour wall should be put in place between the paper storage area and the main process area.

FDS Consult took a solutions-driven approach to addressing these issues and went back to the architect's plans to assess where a creative approach to the fire strategy could be used to safeguard the original design and provide value engineering savings. FDS Consult's innovative approach included:

- Justified reduction of sprinkler heads down to a standard response to meet requirements and ensure insurance compliance
- Justified omission of staircases to raised platforms and overhead cranes in the main press halls via CFD modelling and analysis of the evacuation period.
- Development of phased evacuation to improve business continuity
- Justified extended compartments based on sprinklers and CFD modelling demonstrating potential for fire spread
- Justified omission of fire protection based on thermal analysis of structural elements

Type of project:
New Build Newspaper Printing Facility

Client:
News International Ltd

Architect:
RPS Burks Green

Main Contractor
Carillion

By working with the building's architectural design, FDS consult was able to deliver considerable cost savings by omitting any additional compartmentation and removing one of the staircases, whilst proving the building's safety using advanced computer modelling techniques in order to gain building regulations approval and agreement from the insurers.

