

CASE STUDY



FUTURES COMMUNITY COLLEGE | EDUCATION

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A progressive school that offers vocational training for Year 9+ students alongside traditional, academic secondary education, Futures Community College in Southend-on-Sea has seen a wide range of improvements to its campus, providing sports, IT and arts facilities for use by the community and conferencing facilities for local businesses as well as a state-of-the-art school environment for students. The campus's contemporary architectural design with its large open spaces meant that a code-based approach to the fire design would not be practicable, so FDS Consult's expert team was appointed to apply the company's innovative, solutions-driven approach to the fire strategy. The result was a project that provided a suitably safe environment for all users whilst remaining true to the architects' vision and delivering value engineering savings of £1.5 million.

Key to the success of FDS Consult's creative fire strategy was:

- Using virtual compartmentation created by a sterile spine corridor to act as a fire break that demonstrated equivalence to code based compartments, without formally fire rating construction
- Justifying extended vocational block compartment by BT Redcare, detection and smoke venting to keep temperatures low prior to fire service arrival

Thanks to this approach FDS Consult was able to justify:

- Removal of the sprinkler system from the specification, saving cost and space and allowing the building to remain true to the architect's vision
- Increased compartment sizes, enabling design flexibility
- Extended travel distances
- Open voids between levels
- Reduction of fire rating for the columns in the main dining hall from 60 minutes to 30 minutes based on a Eurocode assessment

FDS Consult utilised the team's understanding of fire engineering and CFD (Computational Fluid Dynamics) expertise to demonstrate that required evacuation times were tenable and safety would not be compromised by the innovative strategy proposed, ensuring that the project secured all mandatory approvals.

Type of Project: New Build Extension to existing school/college site

Client: Prospects Building Services

Architect: Fraser Brown Mackenna Architects



fds consult