LAKESIDE ACADEMY, TELFORD

KEY FACTS

CLIENT
SHEPHERD ENGINEERING SERVICES

YEAR COMPLETED
2016

ARCHITECT
FAULKNERBROWNS

CONSTRUCTION COST
£20M

FLOORPLATE SIZE
100000 SQ FT

PROJECT DESCRIPTION

Lakeside Academy in Telford principally accommodates a new build primary school and secondary school, with post sixteen and community functions incorporated within the secondary school building all of which is constructed on a live school site. The building engineering systems are arranged to suit this joint facility in the most energy and cost conscious manner whilst providing a suitable level of autonomy between the different functions. Key design features are the use of LED lighting throughout and provision of peak temperature lopping to the main hall using an evaporative cooling solution.

BWB were engaged by the Shepherd Group to provide concept through to working drawing mechanical and electrical building engineering systems design. The Shepherd Group undertook to use Lakeside Academy to test BIM Level 2 delivery throughout the design and construction team in order to prepare for compliance with Government implementation deadlines.

SERVICES PROVIDED

Building Information Modelling (BIM)
Building Physics and Facade Engineering
Electrical Engineering
Lighting Design
Mechanical Engineering
Carbon and Energy Management
Thermal Modelling
Utilities
BWB provided detailed working design of the mechanical and electrical engineering services, fully co-ordinated using Autodesk Revit software in a BIM environment which was monitored for quality by a BIM specialist.

The facility was designed to permit development in two phases as the new primary school element could not be built until the existing school was decanted into the new secondary school and demolished. Opportunities to utilise pre-fabrication techniques were investigated resulting in a standard pre-fabricated rooftop heating plantroom being developed, the arrangement for which was then replicated on the other three academies in the Telford and Wrekin batch designed by BWB on behalf of the Shepherd Group.
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KEY CHALLENGES & SOLUTIONS

Tight ceiling void space made the co-ordination of services challenging. The use of Revit software assisted the 3D co-ordination and enabled early resolution of service distribution routes.

KEY CONTACTS

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