

New Secondary School



Location:
Orsett Heath Academy,
Grays, Essex



Client:
McAvoy Group Ltd.



Architect:
Stride Treglown



Value:
£21 million



Civil Engineering

Structural
Engineering

Building Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

A proposed new secondary school is to be provided in Orsett Heath, Essex.

This three storey building offers a new sports / events hall with changing facilities, dining hall, activity studio, staff offices, external play areas and pitches and modern teaching spaces.

Engineering and Design Factors

The structural design for the building consists of a three storey steel structure with composite concrete floors. The steel structure is of modular construction and built off-site, then delivered with the majority of fixtures and finishes complete. The sports hall, main hall, dining hall and activity studio are traditional steelwork construction. Through the use of BIM and clash detection techniques, the challenges faced when coordinating the junctions between traditional build and modular framed portions were overcome.

The civil design included producing a drainage design to suitably drain the development including the application of appropriate SuDS. External works designs were also carried out as part of the scope of works.

Description of the Works

Alan Wood & Partners produced design calculations for both modular and traditional build structures, as well as drawings and 3D modelling for the traditional build portion and the foundations. Surface and foul water drainage design and drawing packages were also produced. Designs and drawings were coordinated across all disciplines within the design team with regular meetings and communication within the team.

Core services

Civil Engineering / Structural Engineering / Geotechnical and Geoenvironmental Engineering