

EDUCATION PORTFOLIO

SYNTEGRA GROUP

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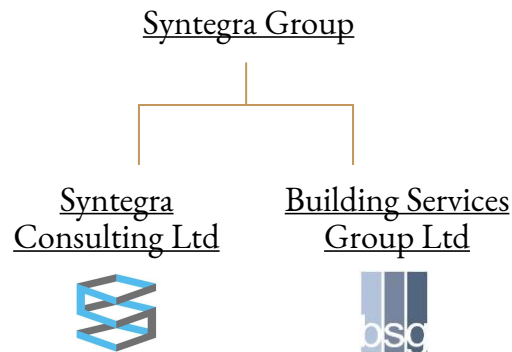
The Syntegra Group are a multi-award-winning International planning specialist and multi-discipline engineering design consultancy. Through our group of companies, we provide a complete range of solutions for planning, property development, and energy efficient built environments that offer long-term sustainable benefits to all stakeholders – Ultimately creating ‘Better Buildings’.

We are committed to tackling climate change by designing low carbon engineering solutions and deploying energy efficient technology & certification to the built environment throughout all stages of a project lifecycle. Our team will ensure that overall targets and legal requirements for carbon emissions are commercially viable and not only met but exceeded wherever possible.

We maximise development value and minimise risk across all sectors of the built environment.

Our propositions are:

- Multi-disciplined planning consultancy
- Multi-disciplined engineering consultancy
- Building compliance and certification
- Energy utilities procurement and validation



Services



MEP Consultancy

- Full M&E design, tender documentation and engineering support
- M&E Feasibility studies
- Engineering services reviews
- Building Services Condition /Acquisition/ Dilapidation / Energy Surveys
- Engineering asset management
- Equipment/Asset registers and installation life cycle planning
- Single point of failure analysis and specialist services for the data centers
- M&E clerk of works duties
- Clients representative roles, including corporate engineering brand standards



Sustainability

- Energy feasibility and sustainability studies
- BREEAM/SKA/LEED/ Passivhaus / Well-Building assessments
- Renewable and low carbon engineering solutions
- Energy audits / Life Cycle Assessments



Ancillary Specialist Services

- Lighting design consultancy
- IT/AV design consultancy
- Vertical Transportation Design
- Acoustic design consultancy
- Air quality consultancy
- Civil engineering design



The Schools at Somerhill

Multiple projects at an Independent School in Tonbridge, Kent

We were employed on several projects for The Schools at Somerhill, Tonbridge (a Jacobean Mansion spanning 150 acres)

The first being the construction of a new build music block on the existing, landscaped site. It comprised approximately 370m² of practice rooms and associated areas over one and a half floors. BSG provided full design and construction stage monitoring.

The second project being the refurbishment of the Science Blocks within the existing Grade II listed building. The existing MEP main infrastructure was retained and modified accordingly to reflect the newly designed classroom layouts. Works included a complete re-wire of the power installation from the existing distribution boards and an overhaul of the lighting installation. We provided lighting calculations and a careful selection of new LED light fittings and controls to ensure sufficient lighting levels were achieved throughout the science laboratories and classrooms. A new emergency lighting system was also installed throughout all areas of the Science block.

Project Scope

Full MEP Design Drawings

Drainage and domestics

Air Source Heat Pump

St Edwards School, Oxford

Cricket Pavilion at Independent Day and Boarding School

St Edwards School Oxford is an independent, co-educational, boarding and day school for ages 13-18.

We were employed to carry out the Mechanical and Electrical Design to the Cricket Pavilion within the School Grounds.

MEP Design Services included:

- Calorifiers & Water Heaters
- Grilles
- Heat Pumps
- Heat Exchange Ventilation Unit
- Distribution Boards
- Luminaire Schedule
- Full Mechanical and Electrical Specifications
- Full Design Drawings

The project was carried out by our experienced Engineers.

Project Scope

Full MEP Design Drawings

Mechanical and Electrical Specifications

Mechanical and Electrical Schedules

CATS College, Canterbury

Extension of Laboratory Building at Independent Day and Boarding School

CATS College Canterbury is a Co-educational Independent Day and Boarding School located in Canterbury, catering primarily for foreign students.

We were employed to provide design of the following:

- Extension of laboratory building
- New hot and cold water services
- New drainage and gas supplies
- New condensing boiler and heating system
- Heat recovery ventilation
- Automatic controls

Project Scope

MEP Design Drawings

Mechanical and Electrical Specifications

Mechanical and Electrical Schedules

Imperial College, London

Electrical Design for a Contractor at Imperial College, London

We were employed on the Imperial College project when the project construction was well underway and at an advanced stage. Acting as the Contractors Designer and had to liaise with the Clients M&E consultant to submit cable calculations for various electrical services across the site utilising the existing electrical infrastructure as designed by the base build MEP Design Team. The scope for the Contractor was as follows:

- Provide calculations and cable specifications for 2 No. 400A supplies to a specific building using cable calculation software.
- Cable calculations were based on lengths and load requirements for the proposed buildings
- Advise of re-installation method / bending radius of selected cables
- Provide electrical infrastructure design and specification of Smart Electric Vehicle Chargers for Phase 2 of the project.
- Provide cable calculations for pop up power posts and various external electrical services throughout Phase 2 of the project.



Project Scope

Electrical Design

Cable Calculations

Design and Specification of Smart Electric Vehicle Chargers

Cornwall College, St Austell - John Keay House

Lighting Feasibility Study for a College in Cornwall

We were asked to visit John Keay House, Cornwall University, with a view to making recommendations to reduce the electricity lighting consumption.

The fittings seemed to be well maintained, although there were some lights that weren't working.

The light levels were good, but there was a great deal of constant flickering (strobing) with the existing lights and the majority of lights were found to be switch start. The use of such an inefficient fluorescent light source that is illuminated constantly offers a significant saving when changing to LED. This equated to a current yearly consumption of

- 557,077 KW
- 314.03 carbon tons
- annual lighting electricity cost of £50,136.

Project Scope

Cost Savings £38,309 p.a.

Total Savings £345,173

Payback 2.85 years

Reduction in Energy Costs: 77%

Carbon Savings: 242 T p.a.



EXAMPLES OF ACOUSTIC DESIGN PROJECTS

- Pound Hill Junior School, Crawley (356 pupils)
- Highcliffe Junior School, Leicester (414 pupils)
- Collis Primary School, Teddington (745 pupils)
- Abbey Infant School
- Beths Grammar School, Bexley (1,300 pupils)
- Greenfield Primary School, Oldham (271 pupils)
- Aboyne Lodge School, St Albans (205 pupils)
- Beaucroft Foundation School, Wimborne (165 pupils)
- Royal Russell School, Croydon (900 pupils)



EXAMPLES OF PLANNING ASSESSMENT PROJECTS

- Redden Court School, Havering (866 pupils)
- Loddon Court Farm Day Nursery, Spencers Wood (45 pupils)
- Harris Academy, Rainham (917 pupils)
- Bonneville Primary School, Lambeth (361 pupils)
- Bloxham School, Banbury (440 pupils)
- Rowhill School, Dartford (138 pupils)
- King Charles Centre, Surbiton (Adult Education)
- St Nicholas CofE Primary School, New Romney (341 pupils)
- Tower Road School, Bristol (545 pupils)
- Mrs. Blands Infant School, Burghfield (211 pupils)
- Michael Syddall CofE Primary School, Richmond (151 pupils) - Civil Design and Flood Risk mitigation consultancy
- The Gatwick School, Crawley (650 pupils) - Civil Design and Flood Risk mitigation consultancy



EXAMPLES OF OTHER EDUCATION PROJECTS

- Technical Colleges, Angola
- Kent Institute of Art & Design, Canterbury
- Manchester University, Poole Stokes Wood (40,485 Students)
- New Beacon School, Sevenoaks (325 pupils)
- Brent Children's Centre, Preston Park School
- Lowther Primary School, Barnes, London (365 pupils)
- Donhead Preparatory School, Wimbledon (329 pupils)
- Cardiff University, Cardiff (33,510 Students) - Energy auditing and consultancy services for entire estate
- Carleton High School, Pontefract (965 pupils)



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