

# Schools

Case Study



Building Services Design  
Consulting Engineers



## Thomas Becket RC School, Northampton



### The Requirements

Remodelling work was carried out in the existing school building and a new extension was added to create new department entrances. Temporary accommodation was provided to ensure the school was able to continue to function while the work was carried out. The project was split into eight phases, so that reoccupation could be carried out at each stage.

### The Solution

BSD provided the full design of M&E services to facilitate a safe working environment for the occupiers of the existing operating school. BSD devised a phasing strategy that comprised an enabling contract, which included the construction of an Energy Centre and Substation. The M&E services detailed design included heating, general and kitchen ventilation, and natural ventilation via louvres and roof turrets in accordance with BB101. In addition, BSD's designs incorporated LV distribution, general and emergency lighting, small power and data infrastructure.

### Total Project Value

£10,500,000

### Design Team

Architect: GSS Architecture  
Project Management: EC Harris  
Main Contractor: Morgan Ashurst

“ The phasing of this project made it all the more complex because everyone had to work around the students, which meant constantly moving things around. However, thanks to all parties involved, the project was delivered three months ahead of schedule and to budget. ”

Jonathan Hunter,  
Associate, GSS (Gotch Saunders Surridge).

# Schools

Project Experience



**Building Services Design**  
Consulting Engineers



**Customer:** Northamptonshire PFI  
**Total Project Value:** £20,000,000  
**The Requirements:** Remodelling and extension work for 30 school buildings in Northamptonshire  
**The Solution:**

- Detailed design of M&E services
- New lighting, power, fire alarm and data systems
- High efficiency condensing boilers and new heating systems
- Domestic water services
- Above ground drainage



**Customer:** Luton Building Schools for the Future  
**Total Project Value:** circa £500,000,000  
**The Requirements:** A consortium to provide the services required to improve all school buildings in Luton over a 10-15 year period  
**The Solution:**

- BSD, Dodd Group and Wates are providing the complete design, construction and management services for each individual project, starting with Lea Manor School



**Customer:** Kent Building Schools for the Future  
**Total Project Value:** £16,000,000  
**The Requirements:** Two new build academies – Thamesview School and Northfleet Technical College – with a BREEAM 'Excellent' rating  
**The Solution:**

- Full M&E design
- Solar water heating
- Rainwater harvesting



**Customer:** Maplefields, Corby  
**Total Project Value:** £12,000,000  
**The Requirements:** A new primary and secondary school serving children with special educational needs. The school will be one of the first to be built using the newly revised Department of Children, Schools and Families' criteria for Carbon Emissions Reductions (60% lower than 2002)  
**The Solution:**

- Design the building services utilising the latest low energy services
- Natural ventilation with heavy thermal mass
- Power factor correction and voltage reduction
- Fluorescent LED lighting
- Low energy system pumps and fans
- Low carbon technologies proposed include solar thermal, natural gas fired CHP and bio-oil fired boiler plant