meel group

PROJECTS

Case Study: Bacup & Rawtenstall Grammer school

Case Study: Education

Client: Star Academy Trust

Site: Bacup & Rawtenstall Grammar BB4 7BJ

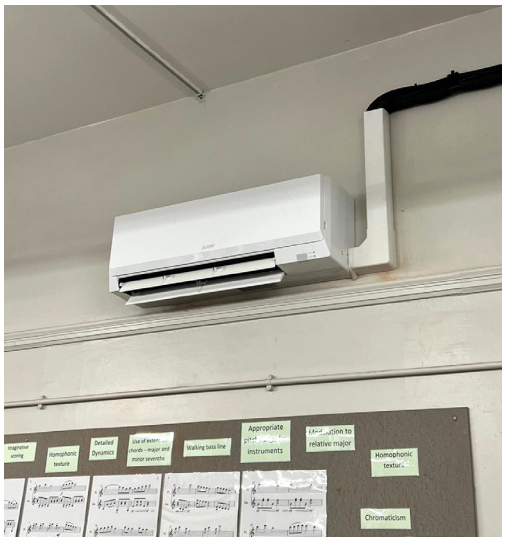
Budget Mechanical: £1,196,794

Budget Electrical: £718,810

Completed: November 2025

Services Used

- M&E designs
- Electrical Engineering
- Mechanical Engineering
- BMS Engineers
- Builders Works
- Ceiling Contractors
- Renewable Energy
- Fire Alarm Installers
- Test & Commissioning
- Decoration & Cleaning



A new heating system and controls, along with air-source heat pumps and the replacement of electrical infrastructure, constituted a significant MEP refurbishment at the school.

Site:
Bacup and Rawtenstall Grammar School is a selective co-educational academy grammar school in Waterfoot, Rossendale, Lancashire, and the oldest part of the buildings dates back to 1911.

Contract Arrangements:
Meel Group was awarded the role of principal contractor through a competitive tender process.

Project Background:
The project aimed to improve schools' teaching environments and drive efficiency and cost savings.

The mechanical plant and equipment, along with their controls, had reached the end of their serviceable life; the school's heating system performed poorly, and maintenance costs were high.

Renewable energy in the form of air-source heat pumps and controls was to be integrated into the system to reduce the carbon footprint and energy bills.

The school's existing electrical infrastructure had also reached the end of its serviceable life and required a complete upgrade to ensure safety, reliability, and compliance with modern standards.

Mechanical Scope:

Work included the removal and disposal of redundant mechanical plant controls, distribution pipework, and emitters. The new installation consisted of supplying and installing boilers and associated equipment, pumps, dirt air separators, pressurization units, and a completely new BMS system.

We installed green energy systems using air-source heat pumps, which provide primary hot water (supplemented by electric heating) and primary stored water, with additional support from the low-temperature hot water (LTHW) boilers. PV solar energy panels were also installed.

New emitters were added in the form of fan convector units and radiators. Additionally, air conditioning systems were installed throughout the building.

Builders Work Scope:

Installation of ceilings across a large area of the first floor and adaptations to allow the M+E installation. Coring of holes and patch paint and repair associated with a large scale M&E refurbishment.

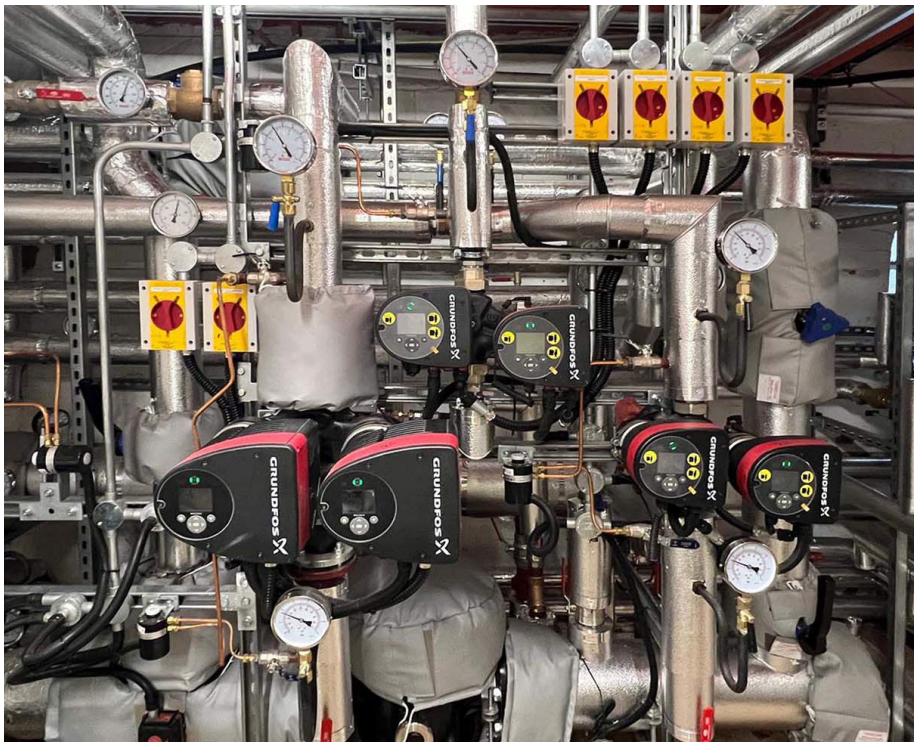
Electrical Scope:

Compliance
The project was undertaken to ensure the school's electrical and lighting infrastructure complies with current statutory requirements and recognised industry standards, including BS 7671:2018 (IET Wiring Regulations, 18th Edition) and the Electricity at Work Regulations 1989.

In addition to achieving compliance, the works were intended to extend the serviceable life of the electrical systems, improve overall safety and reliability, and provide a brighter, more comfortable, and practical learning environment for staff and pupils.

Upgrades
The new lighting installation was designed in line with best-practice guidance, including CIBSE LG2: Lighting for Education, with attention paid to maintaining appropriate UGR (Unified Glare Rating) values to minimise glare and support visual comfort in teaching spaces.

As part of the upgrade, new lighting controls were installed to optimise energy efficiency, increase classroom flexibility, and ensure consistent illumination levels throughout the building.

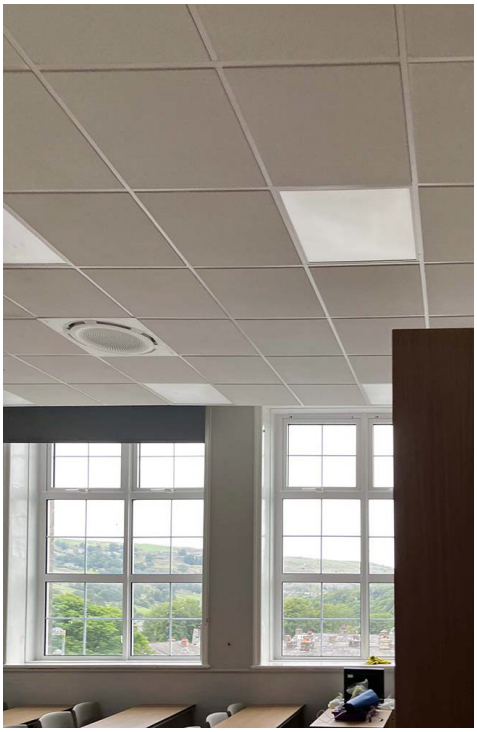


Project Challenges:

Working on a project of this kind within a live school environment required meticulous planning and a strong focus on safety.
The school were excellent at supporting the installation of electrical and mechanical services. We coordinated closely with school administrators to identify the least disruptive times for construction activities, while accounting for staff and student schedules.

Health and Safety:

Safety was our top priority within the Grammar School. We established clear zones for construction and ensured these were securely segregated from areas accessible by staff and students. Our teams worked at heights during the installation, which was managed safely with appropriate access equipment. No accidents or near misses occurred during the project.



The Results:

The project was very successful. Bacup and Rawtenstall Grammar School's students and staff now enjoy working in a building that is comfortable, well-lit, and conducive to learning.

Star Academy Trust now has a building with a heating system that is both energy-efficient and designed for a long lifespan.

Its improved electrical lighting system is also energy-efficient and fully compliant with regulations.

The client has expressed their gratitude for the works being completed within a short time frame to a high standard.

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