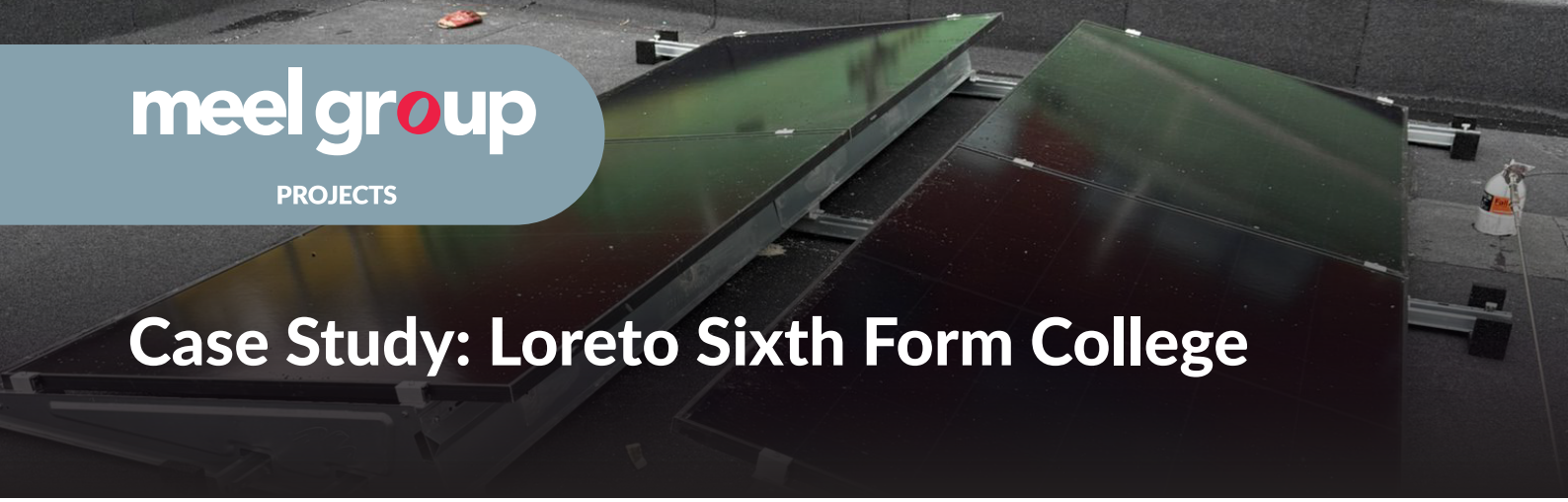

meel group
PROJECTS

Case Study: Loreto Sixth Form College

Case Study: Education

Site: Loreto Sixth Form College, Manchester
Budget Mechanical: £112k
Budget Electrical: £135k
Completed: September 2025

Services Used

- M&E designs
- Electrical Engineering
- Mechanical Engineering
- Solar Panels
- Intruder Alarms
- CCTV
- Fire Alarms
- Wi-fi points
- Ceiling Contractors

Meel Group delivered the complete mechanical and electrical installation for the new college buildings.

Site:
Loreto College is a Roman Catholic sixth form college in Hulme, Manchester, near the boundary with Trafford.

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

Project Background:
A new extension was being built, comprising new office space and a food servery for student meals. The college also wished to incorporate energy-saving measures into the new development, so a number of energy-saving technologies were built into our design, including heat recycling and solar panels.

Electrical Scope:

Electrical Distribution:
A new incoming supply for the new building and terminates at a new MOD156 unit located within the designated electrical intake cupboard.
Two new distribution boards have been installed as part of the installation.

Containment Systems
A comprehensive new containment infrastructure was installed to support the routing and segregation of all electrical and specialist system cabling, including the following services:

- General lighting and power
- Structured data and ICT cabling
- Access control and security systems
- Fire alarm system
- Intruder detection system
- CCTV

Lighting & Emergency Lighting
The internal lighting installation consists of high-efficiency LED luminaires throughout the building. Lighting controls were integrated, offering the following functionality:

- Presence/absence detection
- Manual switching
- Dimming capability
- Timeclock and photocell control for dusk-to-dawn applications

Emergency lighting provision included a combination of standalone and integrated self-contained luminaires, each designed to provide a minimum 3-hour duration of emergency illumination during mains failure, in full compliance with statutory emergency lighting standards.

Power Installation
General power circuits have been installed in accordance with the approved electrical design and the current edition of BS 7671 Wiring Regulations. All socket outlets feature colour contrast finishes to enhance visibility and accessibility, supporting compliance with the Equality Act 2010.

Mechanical Wiring
Dedicated electrical supplies were provided to all specified mechanical plant and equipment, in accordance with the coordinated M&E design.
An electrical metering strategy was implemented to ensure full compliance with Building Regulations Part L (Conservation of Fuel and Power).

Lightning Protection
Class 4 lightning protection system was installed in accordance with the latest edition of BS EN 62305. The system ensures full building protection by directing potential lightning strikes safely to ground.

Data System
A campus-wide network was enabled by a new fibre-optic link to the college. This backbone enabled us to integrate connectivity between the existing building's COMMS room and the new building.

Data infrastructure has been installed throughout the facility to support:

- Wireless networking (WiFi)
- Telephony
- General ICT services

A wall-mounted 9U communications cabinet has been installed to house all associated network hardware.

Fire & Security Systems

The building is protected by a newly installed, fully addressable fire alarm system offering complete coverage in accordance with fire safety design requirements.

Other life safety and security provisions include:

- A disabled WC alarm system, ensuring compliance with accessibility regulations.
- An intruder alarm system fully integrated into the school's wider security infrastructure.
- A networked access control system providing secure access to designated areas in line with the site's security strategy.

Solar Panels:

Infinity RT panels were selected for the solar panel installation they are designed with aesthetics in mind and manufactured using DMEGC Advanced Black Technology.

They had the following essential features:

- Designed with protection against harsh environmental conditions
- Have passed extended stress tests
- Made with focus on circular economy – low carbon footprint,
- PFAS-free and recyclable components.

8 panels were installed – and the system energy generation predicted as 2800kWh. This enables the college building to achieve carbon savings around 1000kg per year.

Mechanical Scope:

The scheme involved the installation of VRF to provide heating, with some additional local electric panel heaters.
Heating VRF (Variable Refrigerant Flow) uses a single outdoor unit to provide efficient, zone-specific heating (and cooling) to multiple indoor units by precisely controlling refrigerant flow, allowing different areas of a building to be heated or cooled independently and simultaneously, even repurposing waste heat in heat recovery systems for maximum energy savings.

- Installation of heat recovery unit with local extract fans to toilet areas.
- Installation of commercial kitchen pipework with local water heaters.
- Installation of BMS panel to monitor VRF, water meters and HRU.
- We also installed Variable Flow Air Conditioning units.

Handover:
All of the installation was tested, checked and compliant before handover the to the client.

Health and Safety:
At Meel Group site safety is a priority. We maintained 5 point PPE at all times with correct permits in place for working at height. No accidents or near misses occurred during the project.

The Results:

The project was very successful and well received by the clients. Loreto sixth form college now has a fully working new additional building with energy efficient lighting and heating.

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