

PUDSEY WATERLOO PRIMARY SCHOOL

LEEDS



G&H

PROJECT TITLE

Pudsey Waterloo Primary School

SERVICES

Mechanical and Electrical

CONTRACTOR

Eddisons

CLIENT

Pudsey Waterloo Primary School

DURATION

16 weeks



HEADLINES

- The new 50kW ballasted photovoltaic (PV) array and 50kWh battery energy storage system (BESS) will generate approx. 45,778kWh of energy per year, covering 40% of the school's annual electrical consumption, and reducing carbon emissions by approx. 21,459 kg per year.
- 10 G&H colleagues delivered the project, including one apprentice.

PROJECT OVERVIEW

In partnership with Eddisons, we helped secure funding for Pudsey Waterloo Primary School from Salix Finance, as part of the 2024 Public Sector Decarbonisation Scheme (PSDS). The funding was obtained to update the school's heating system to a new, low-temperature air source heat pump (ASHP), install LED lighting, and add solar PV to reduce both energy costs and carbon emissions.

THE CHALLENGE

The project began during the school summer holidays. However, as work continued into term time, managing on-site activity during school hours posed logistical challenges. To minimise disruption to lessons and extracurricular activities, strict health and safety measures were implemented, including clearly segregated work zones and procedures to

avoid any direct interaction between contractors and pupils.

For the LED upgrades, operatives worked twilight shifts, ending with a full daily clean-down to ensure classrooms were safe and tidy for lessons the next day.



All works were completed to a high standard and in full compliance with relevant regulations. G&H compiled comprehensive commissioning certificates and documentation, which were handed over in a detailed Operation & Maintenance (O&M) manual to the school and client.

SOLUTION

G&H was appointed by Eddisons as the principal contractor for the full mechanical and electrical package. Key works included:

- Installation of 3 x Clivet 30.2 reversible ASHPs, positioned within a 2.5m-high purpose-built Jacksons acoustic enclosure.
- Construction of a purpose made underground services trench across the playground to house heating and cabling routes into the plant room.
- Supply and installation of a new 2,500-litre buffer vessel, including formation of a new concrete base.
- Installation of a modern, high-efficiency, inverter-driven Grundfos twin-head circulation pump, heat meter, and electricity meters.
- External DN80 welded pipework installation, all trace-heated to activate below 5°C, then fully insulated, metal-clad, and labelled.
- Adaptations to the Building Management System (BMS) to integrate new temperature/flow sensors, heat/electricity meters, Air Handling Unit (AHU) controls, and master/slave ASHP operation.
- Replacement of existing lighting with LED luminaires across classrooms, the school hall, canteen, and back-of-house areas.
- Installation of a 50kW ballasted solar PV array with a 50kWh battery energy storage system (BESS).

"G&H has seamlessly delivered the project and I couldn't be happier with the end result. Throughout, the G&H team was diligent, prioritising health and safety and working flexibly to minimise disruption to the school's pupils and staff. There are too many benefits to mention, but notably, we have reduced our carbon emissions significantly."

Mark Dobson, Facilities & Estates Manager
Pudsey Waterloo Primary School



THE RESULTS

Pudsey Waterloo Primary School and its 468 children and 68 members of staff now benefit from an efficient and economical heating system. The school can now self-generate 40% of its annual electricity consumption, which will reduce energy bills in the long term, meaning the money saved can be reinvested into other resources.

In addition, carbon emissions have reduced too, supporting net zero targets.

CONTACT US

0345 609 0334
info@wearegandh.com
wearegandh.com

G&H

Firlands Mill, South Parade
Leeds, LS28 8AD



