

AMBLESIDE PRIMARY SCHOOL

NOTTINGHAM



G&H



PROJECT TITLE

Ambleside Primary School
(Nottingham)

SERVICES

Air Source Heat Pumps (ASHP)

CONTRACTOR

BTG Eddisons

CLIENT

Raleigh Trust

PROJECT OVERVIEW

As part of its commitment to reducing carbon emissions and improving the efficiency of its heating infrastructure, Raleigh Trust needed to replace Ambleside Primary School's ageing gas-fired hot water system with a modern, low-carbon alternative.

Following appointment, G&H delivered the complete removal of the existing gas-fired hot water cylinder and designed, installed, tested and commissioned a new Mitsubishi CAHV P500YB-HPB ASHP system. The installation included new mechanical, electrical and civil engineering works to provide a fully integrated domestic hot water solution, improving system reliability while supporting the school's long-term sustainability goals.

HEADLINES

- Existing gas-fired hot water system replaced with a low-carbon ASHP solution
- New energy-efficient hot water system improves reliability and reduces operational costs
- Supporting the school's decarbonisation objectives through renewable heating technology



SOLUTION

G&H delivered:

- ASHP Installation:**
 Removal of the existing gas-fired hot water cylinder and installation of a Mitsubishi CAHV P500YB-HPB ASHP, located externally within a refurbished bin store complete with new security fencing and access gate.
- Mechanical Plant Installation:**
 Installation of a new 500-litre buffer vessel connected to a plate heat exchanger for hydraulic separation, alongside a new 600-litre hot water cylinder integrated into the school's existing pipework distribution system.
- Electrical Infrastructure:**
 Installation of a new distribution board within the plant room to supply the ASHP, immersion heater, trace heating, circulation pumps and associated plant equipment.
- Pipework & Civil Engineering Works:**
 Construction of new underground trenching to accommodate heating pipework and electrical cabling between the external plant and the school's existing services.
- Ancillary Plant:**
 Installation of new Lowara heating pumps, a Mikrofill 3 pressurisation unit and an air and dirt separator to enhance overall system performance and efficiency.
- Controls Integration:**
 Modifications to the Building Management System (BMS) control panels to integrate and optimise the operation of the new heating system.
- Testing & Commissioning:**
 Comprehensive testing, commissioning and performance checks were completed to ensure the new installation operated safely, efficiently and in accordance with design specifications.

Despite encountering unexpected underground concrete structures during excavation works, G&H adapted the civil engineering programme to maintain progress. Working closely with the school, an alternative pedestrian route was introduced while trenching was completed, ensuring the safety of pupils, parents and staff and minimising disruption throughout the eight-week programme.

"BTG Eddisons managed the process from initial feasibility to fruition, acting as contract administrator and principal designer. Throughout the detailed design and construction phase G&H were professional and thorough in their approach with the end product the first step in enabling the client to reliably decarbonise their estate."

Jack Cooper, Associate Director, BTG Eddisons



THE RESULTS

The completed project has provided the school with a reliable, future-ready hot water system that significantly reduces carbon emissions, improves operational efficiency and supports a comfortable learning environment for pupils and staff alike.

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