

AVONMOUTH FIRE STATION

PROJECT NAME:

Avonmouth Fire Station

CLIENT:

Avon Fire & Rescue Service

LOCATION:

Avonmouth, Bristol

M&E ORDER VALUE:

£1.0 million

CONTRACTOR:

Knights Brown Construction Ltd

CONSULTANT:

Couch Perry & Wilkes

Dodd Group was invited to install the MEP services to this new fire station in Avonmouth, Bristol. Use of renewable energy solutions with the ASHP, Solar PV and electric car charge points has helped the scheme achieve BREEAM excellent rating

Mechanical services included a 96.5kW gas fired condensing boiler in a centrally located plant room and a roof mounted Air Source Heat Pump (ASHP) provide primary low temperature hot water (LTHW) services. Secondary ground and first floor variable temperature systems serve radiators and ceiling mounted radiant panels throughout the building. Hot Water is produced via two 300litre indirect hot water cylinder served primarily by LTHW throughout the winter and 2no 3kW immersion heaters in the summer. Mechanical Ventilation Heat Recovery (MVHR) units are installed within the rest rooms, store rooms and WC/shower rooms. Individual room CO² and temperature sensors manage air quality and ventilation requirements.

Electrical services included a 150kVA new-metered low voltage TP&N electrical supply rated at 200A serves the fire station. Within the electrical switch room, the incoming supply is connected to a Form 3b Type 2 24-Way TP&N main MCCB LV switchboard, which in turn feeds a network of distribution boards located around the building. Internal lighting is provided by a variety of LED luminaires provided throughout the spaces with a fully programmable DALI lighting control system. Emergency lighting is provided by dedicated LED luminaires connected to a central battery system located within the ground floor electrical switch room. Other systems in the building include a category L2 analogue addressable fire detection and alarm system; an IP based Paxton Net2 automated access control system; closed circuit television (CCTV) and a Cat 6A structured cabling system.

