

This former 2 bedroom end terraced house was refurbished and converted to a training centre in 2010. Typical of the local area stock, it has 9" solid brick walls, slate roof and external render to the gable end. During the refurbishment it was internally insulated with 50mm foam and plasterboard dry lining where possible and has 270mm of loft insulation. The centre is accredited by Logic Certification for PV, ST & HP.

Heating - Mitsubishi EcoDan 8.5kW Air Source Heat Pump via suitably oversized Myson Premier line double convector radiators. Design heat load is 8.2kW.

Hot water – Viessmann 2.5m² 200F roof integrated flat plate collector, OSO 210 litre unvented twin coil cylinder, Resol Flowcon D-HE pump station with remote performance display.

PV – 6 no. Romag PowerGlaz SMT6-60 225W modules, SMA SB1100 inverter with Sunny Web box for remote monitoring at: <http://tinyurl.com/bohuo6v>



Ground Floor training rooms equipment

Solar Thermal

- Wall mounted Thermomax evacuated tube system c/w PAW Flowcon RF pump station, Resol DeltaSol AL controller, 60 litre Newarkcyl twin coil tank. Simulated solar gain from halogen floodlights
- Filsol FS0.5 drainback solar training trolley
- Filsol FS0.5 pressurised solar training trolley
- Fill and flushing station, 5 bar
- Manual filling station, antifreeze retention tubs etc
- Hoval VK10 evacuated tube collectors
- 0.5m² flat plate solar collector demo trolley c/w integral 10 litre tank

Photo Voltaic (PV)

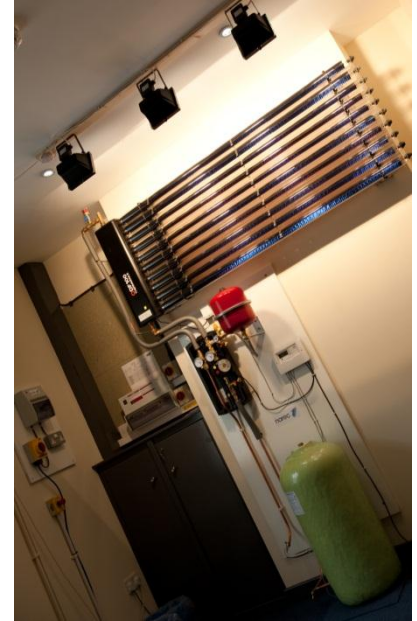
- 2 wall mounted inverter wiring boards with Katko DC & AC isolators, Fronius or Mastervolt inverter, Landis E110 generation meter, BP250 PV module and simulated faults
- Wall mounted safe isolation demonstration unit
- PV system generation meter, MCS schematic and labelling
- Building DB with circuit schedule, heat pump and electric car consumption meters
- G59 relay cabinet with control circuit, contactor etc

Heat Pump

- Heating BWarm 8000 8.7kW ASHP with covers removed for demonstration
- Kensa 4kW GSHP demo trolley with cut-away sections for demonstration
- 250m Ground source coil fill and flushing unit split into two circuits c/w isolating valves
- 5 bar fill and flush pump and antifreeze holding tank

First Floor training classroom

- Windows 7 PC & colour laser printer
- Interactive whiteboard for display, conventional whiteboard for notes etc.
- Comfortable table seating for 8 or 9
- Bookcase with MCS documents, building regulations, product literature, demonstration equipment etc. for solar thermal and PV.
- Operational OSO 210 litre twin coil unvented cylinder with solar thermal, heat pump and immersion heating. Full G3 unvented safety kit, expansion vessel, tundish etc. Copper pipework with a mixture of joints – compression, solder ring and high temperature push fit.
- Heating controls including Mitsubishi FTC2 controller, Honeywell 2 channel programmer and S-plan heating control valves
- Resol Flowcon D-HE digital pump station with high efficiency Grundfos solar pump, SD1 remote display, pressure relief valve with discharge route to catch pot etc. Pipework insulated with 19mm Armaflex HT with taped joints.
- Solar Thermal test kit with refractometer, multimeter, PH test strips etc.
- PV test equipment inc. irradiance meter, DC clamp meter, insulation resistance etc.



Second Floor training equipment



- Viewing gallery with Velux window enabling hand-on access to solar PV mounting system and solar thermal collector
- AC & DC isolator with additional connectors to conduct array testing (Voc, Isc etc.)
- SMA Sunnyboy SB1100 c/w sunny Web box data connection unit and irradiance cell
- Door to loft space access for solar thermal pipework, sensor joint etc

Welfare

- Visitors sign in book
- 12 lockers with keys for delegates to use if they wish
- Part G compliant toilet/washroom
- Fire alarm
- Entry fob system, intruder alarm
- Kitchen
- First aid kit, eye-wash station, health and safety info board
- External smoking area
- Plentiful free car parking in local area

For details on the renewable energy training offered by Narec Distributed Energy, at this facility and others, please go to <http://www.narecde.co.uk/service/renewable-energy-training/>