

POTTERS MEDE SPORTS PAVILION ENERGY SAVING ECO CREDENTIALS

Insulation

The best way to save money on heating is not to lose the heat you have generated. To this end the floors, walls and ceilings all have 150mm of insulation, but the outer roof has a full 250mm of Xtratherm PIR board creating a system called "warm roof". All the steel doors are insulated and self-closing, and are gasketed into the frames. Windows are specially coated double glazed, and argon filled. For insulation purposes, the only windows in the building are the patio doors and one window in the main hall, and four velux windows in the Taylor room, where the light benefit from windows offsets the heat loss. We exceeded building regs at the time for thermal efficiency and required R values.

Space Heating

the sole mode of heating is electric Air Source. Both the upstairs Taylor Room and the downstairs Main Hall have their own individual Air to air heating/cooling systems. The downstairs has a combination of air source ceiling mounted cassettes, and under-floor heating powered by the air to water heat pump.

Hot water

The Air to water heat pump is also the primary heating for the hot water. Each hot water tap is run off a hot water ring circuit so water is not wasted running the tap waiting for it to warm up.

The changing room has very small energy efficient infra red spot heaters to "take the chill off" heating people not the air, Warm fresh air is fed into the changing room via the heat recovery ventilation system whereby the waste heat from the showers is collected before it is extracted from the building thus continuously removing humidity and odours

Solar thermal.

Solar thermal panels pre-heat the water for the hot water system.

Solar PV

Solar Photo Voltaic panels provide base electricity and have resulted in major savings since the facility was opened. It is a sad fact that Parish Councils for some unknown quirk of Government Policy are banned from claiming feed-in tariff for their surplus generation.

Rainwater Harvesting.

All toilets are filled with water from the Rain Harvesting system, where all roof run-off is collected in an underground tank, and pumped back into a collection tank to feed the toilets.

Heat Recovery Ventilation

There are two independent Heat Recovery Plants, one for the shower block, and one that serves the two halls. Both draw warm moist stale air out of the rooms, extract the heat in a heat exchanger, and use that heat to warm incoming fresh air. So the buildings remain fresh and warm. This has had a marked side effect in the showers which dry out quicker after use, and hence do not suffer the normal mould problems caused by high humidity and low temperatures

Lighting

All lighting is either LED or Low Energy fluorescent

Security

CCTV with off site monitoring and recording, external PIR lighting. Electric security shutters to all windows



Above - roof insulation



Air Source heat pumps



Above Solar thermal and PV panels



Recycling Ventilation plant



Rainwater tank



Underfloor heating installation

