

Case Study

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Case Study: Heat Capture Crematorium

The Challenge

To install one of the UK's most innovative heat recovery systems to a local authority owned crematorium in the Midlands to use heat recovered from the crematorium to supplement the heating system at a neighbouring leisure centre and pool. The project was challenging as the stadium was open to the public during construction.

The Solution

Devised by the local authority, which owns both facilities, the system has already won acclaim and the local authority a Green Apple Environmental award, being hailed as a best practice eco-example. It sees the water used to cool the flue gasses run alongside the water used in the swimming pool with heat energy (not the water itself) exchanged between these pipes.

Specialist heating and ventilation engineers have installed the stadiums heat exchange equipment and around 400m of underground super-insulated flow and return pipework between the sports centre and the crematorium. There, it is linked to the crematoriums new mercury abatement system which is being employed to remove mercury and other harmful gasses from the flue emissions in line with European regulations.

The main contractor and the services designers were engaged at all times to ensure time schedules and budgets were met and the design was made workable.

The Outcome

The scheme when implemented was one of the most efficient heat recovery schemes in the country.

The heat exchange project is the second of two contracts at the stadium, following the installation of all the mechanical and electrical services as part of a general upgrade of existing facilities and a new build extension, including pool.

It is expected that 42% of the annual heating demand at the stadium will be provided from the crematorium. Heating a large leisure facility like the stadium requires around 360kWh of energy per day. The waste heat, which is created regardless of any further use, provides 280kWh of heat every day that the crematorium is operational.

The local authority are expecting to save about £15,000 per year on gas bills for heating the stadium - and this saving will increase as energy prices increase.

If the heat recovery project hadn't taken place, the stadium would have needed to have a combined heat and power Unit installed at the cost of about £100,000.



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