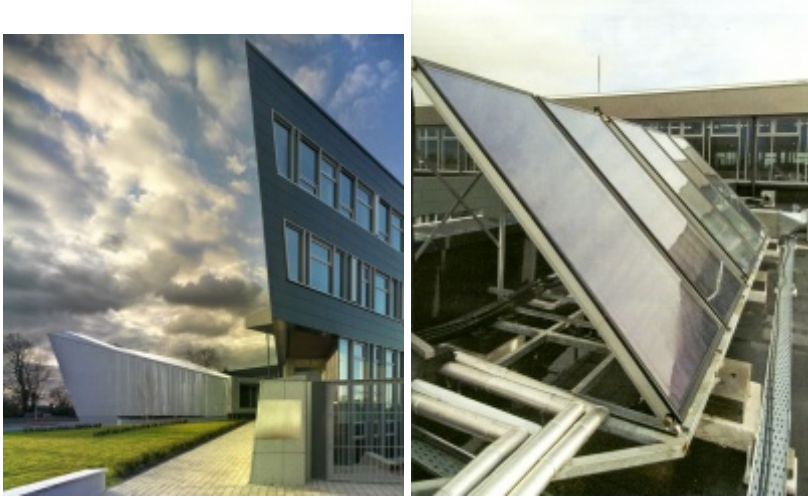


Installations: Clare Co. Council Offices, Ennis, Co Clare

From RVR



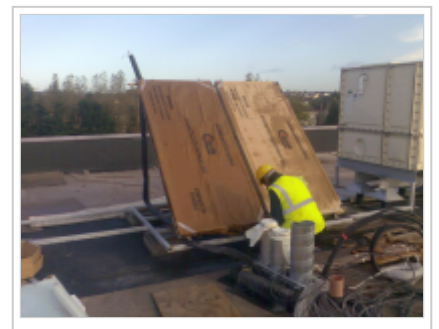
Clare County Council's €25m Corporate Headquarters at New Road, Ennis opened in May 2008. The new building, Aras Contae an Chlair, provides accommodation for 300 staff, as well as meeting rooms, staff canteen, laboratory, Mayor's office, Council Chamber and 3 party rooms for the elected members. The Headquarters incorporates a number of environmentally friendly measures, including a large scale solar thermal system and a wood chip boiler.

The solar equipment was supplied by RVR and the project was the single largest SEI grant aided solar system in Ireland at the time of installation. The system consists of 70m² / 28 no Calpak flat panel collectors along with 11 cylinders totalling 2,800 Litres in volume.

The panels are divided between several different rooftops and form groups of self-contained, decentralised arrays, each of which serves an individual department. A decentralised system was chosen because of the scale of the building - this removed the need for a centralised plant room (lack of space) and minimised the amount of piping required. The brackets for the panels were specially crafted as there was a concern about possible high winds due to the open nature of the roof.

The system provides around half of the building's year round hot water requirements. 500L tanks are provided for larger departments while smaller departments use 200L tanks. Contribution to the total hot water demand varies by usage pattern, varying between 30-45% in smaller departments to 50-60+% in larger departments. Backup comes from the central heating system.

Individual simulations were carried out for each tank and panel combination based on the usage patterns of the individual departments. This provided a simulation report on the solar fraction for each department which helped in designing the system.



Total CO2 savings per annum was simulated at 7.365 Tonnes of CO2 per annum based on current usage patterns. Energy Savings were simulated at 27.6 MWh per annum, or an equivalent of 934m3 of butane.

The M&E consultant was Stefan Zielinski of RN Murphy Consulting Engineers. The mechanical services contractor was Wintrop Engineering from Cork and the solar installation work was carried out by Irish Solar Power from Limerick.

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