

VERSATEMP CASE HISTORY

St Helens House Hotel, Dublin

The opening of the £20 million five star hotel, Radisson St Helens, represents the culmination of an extensive and varied reconstruction project including the installation of a Versatemp Air Conditioning System. St Helenís House, a national monument and listed building, fell into disrepair in recent times but has been meticulously restored to its original splendour but modernised within very specific guidelines. It is now under the management of the Radisson SAS Group.



Obviously in a five star hotel luxury and comfort are important features. On entering the hotel guests will notice original brass ventilation grilles at low level in the foyer. Despite the fact that the entire building, including the original building, is air conditioned, little else by way of services are visible. This was achieved by using the award winning Versatemp system which consists of a discreet two pipe water loop which can be installed with minimum disruption to the fabric of the building. Versatemp is often the only viable solution for refurbishment projects when dealing with the limited slab to slab heights associated with older buildings. The reverse cycle heat pump terminal units are capable of both heating and cooling.

James Rooney of VMRA Consulting Engineers said, At the heart of the building services concept lies an integrated energy system built around an ambient temperature water ring main. Water is maintained at a constant temperature (37 degrees Celsius) within the main, which interconnects all heating and cooling equipment in the building. Energy is drawn from the ring as required, for the heating of spaces or ventilation air, via the Versatemp Heat Pump system. Fresh air is delivered into the building at the base of the Versatemp units via a concealed sub-floor ducting system, with return air exhausted via corridor ceiling plena. All of this ensures that no grilles or sensors intrude into delicate restored wall and ceiling finishes.

Solutions for the 21st Century

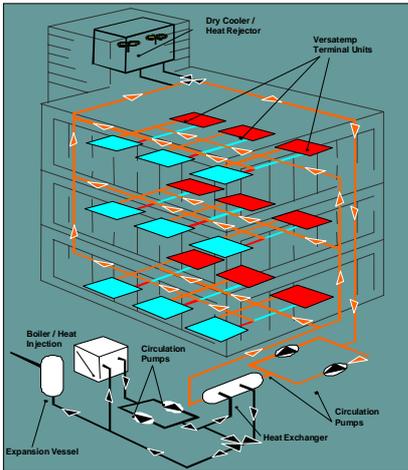
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The Versatemp Heat Pumps also cool spaces and ventilation air, rejecting the heat from these spaces into the water ring. A sophisticated BMS dictates that if the ring temperature falls below its set point, a CHP plant and boilers add heat as required. If the temperature rises, a Dry Air Cooler brings it down to the ideal. As a hotel the building is a net consumer of heat for most of the time, allowing the CHP to produce low cost electricity to power the Versatemp Heat Pumps and other electrical plant.

This restoration project shows what a partnership and an environmentally aware approach, combined with the demands of an historically valuable building can achieve.



Thermal Balance Diagram



Versatemp EQH Unit



Thermal Balance can be achieved for 60% of a year.



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Versatemp

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