



Imperial War Museum, London

Heating and Cooling for Museums glass atrium

The Imperial War Museums origins date back to 1917. Its huge popularity has lead to the museum opening new sites, the number of which now totals 5 museums across the UK- each detailing conflict and its impact on Britain, its former Empire and the Commonwealth, from the First World War to the present.

In 2013 Thermo-Floor UK were approached by Buro Happold to work on part of a huge renovation to the Atrium and First World War Galleries at the Imperial War Museum's oldest site in central London. The project was to supply the UFH & Cooling the 5th Floor Atrium area of the Museum. The project covered the design, supply, installation & commissioning, of an area of 240m²- using 2400m of pipe (1.5miles)

The large quantity of windows and glazing throughout the building meant cooling was required alongside heating to absorb the high levels of solar gain during the summer months, and to minimise heat build up within these area.

The design element of this project included engineering a complicated bespoke manifold- with separate flow and return headers and with the heat exchanger, mixing station and pump unit in the middle- all to enable the intricate

Facts and Figures

Building

- Floor area : 240 m²
- Insulation: Rc = 0.032 m².K/W - Floor insulation:240 m²

Source of energy

- Boiler and Chiller

Climate system

- Heating and Cooling
- Active heating up to 50°C flow
- Active cooling down to 17°C flow
- Heat recovery - ventilation

WTH-system

- Full service project execution
- RU-WKSC bespoke manifold for heating and cooling
- Central control through the building management system
- 1.5 miles of Thermo-Floor 20mm x 3.4mm underfloor heating/cooling pipe

installation of the underfloor heating & cooling of the museum.

After final approval of the design plans, our highly skilled installation team began the installation and commissioning of the project in November 2013. This took 5 days in total to complete, and included completing the work at night so as not to disrupt the day to day operations of the museum.

The final result is a system that provides heating and/ or cooling to maintain constant temperature levels throughout the year to ensure the comfort of staff and visitors of the museum- all linked to state of the art control systems controlled via an external weather compensator.