

Royal Liver Building

Client: **CBRE**
Site: Royal Liver Building, Liverpool
Project: Rooftop Condenser Removal

CASE STUDY

One of the most
iconic buildings
in the UK



Royal Liver Building, Liverpool

AIM: Remove an extensive bank of refrigeration condenser units (and prevent the need for further units) from the rooftop of the building, to allow the space to be utilised for functions and events and to preserve the Grade 1 listing of the Royal Liver Building.

SOLUTION: BGES Group created a new plantroom at basement level with heating and cooling equipment installed to feed a 7,500 litre Buffer Vessel. Pipework was then installed up through the existing risers to allow the new fan coil units within the developed spaces to utilise the Buffer Vessel circuit.

The existing LTHW pipework circuit was extended into the new plantroom, and via a heating plate heat exchanger maintains a minimum temperature of 20°C during occupied hours.

In summer months and under increased rejection of heat by the building circuits, a new 600kW dry cooler was installed to maintain a temperature in the buffer less than 28°C via a cooling plate heat exchanger, whilst utilizing the maximum amount of free cooling from the external ambient air.

The existing main Boilerhouse MCCP BMS controls are Honeywell Centraline AX with LON distributed Input/Output modules.



The Royal Liver Building was a challenging project but throughout the whole process, including through commissioning and set-up, BGES delivered to our very high standards, and beyond.

Daniel Clarke Senior Director CBRE

The latest EagleHawk controller was fitted in the new plantroom MCCP, complete with panel mounted keypad providing a user interface with animated graphics for all system parameters, setpoints, faults and alarms available at this interface.

A new Tridium Niagara4 Web Supervisor has been added to the site, which incorporates all points from both the original and new plantroom controllers. Through the utilisation of the latest generation Niagara4 HTML5 graphics capabilities, a complete user interface has been provided allowing a rich graphical interface with enhanced graphs and charting. These can be accessed from any PC browser, tablet or mobile device without the need for Java plug-ins or drivers.

