



HVAC Commissioning

Description of Works

This £237m facility boasts a low carbon footprint and low energy use, with 60% of energy needed to run Alder Hey in the Park being generated on-site. Cleartech Group Ltd were awarded the HVAC commissioning and water treatment works for this project.

Working in partnership with Crown House Technologies and Laing O'Rourke, we formed an integral part of the project team, ensuring successful delivery of the project on time and on budget. Cleartech's team of highly experienced HVAC commissioning and water treatment engineers carried out the pre-commission clean of all heating and chilled systems using side stream technology. This included the set up of hoses, chemicals, IBCs and the flushing & filling rig, in a safe and controlled area, as well as filling and flushing all systems in accordance with BSRIA BG29/2012. All heating and chilled systems were sampled and tested on a weekly basis to ensure chemical dosage rates were correct and compliant.

All side streams were monitored daily with filter bags being cleaned/changed where required, ensuring a continuous efficient cleaning process. All heating and chilled systems (inc LTHW CT and LTHW VT) systems were balanced on a zone by zone basis in line with current CIBSE codes. We also balanced the domestic water (systems), and set up and tested all TMV's (thermostatic mixing valves) including fail-safes. Domestic Water System Disinfection Cleartech disinfected all domestic water systems.

On completion of disinfection works in each section/zone, sentinel outlets were sampled to ensure TVC's, E.coli, Coliforms and Pseudomonas were of an acceptable level to allow handover.

Cleartech Service: HVAC Commissioning & Water Treatment

Client: Crown House Technologies for Alder Hey Children's Hospital

Location: Liverpool

Type of Property: £237m Children's Hospital

Cleartech's Scope of Works:

- Pre-commission clean of heating and chilled systems in accordance with BSRIA BG29/2012.
- Systems included:
 - LTHW primary - 60,000 litres
 - LTHW secondary serving zone 1 to 7 - 65,000 litres
 - CHW serving zone 1 to 7- 72,000 litres
 - GSHP cooling - 5,400 litres
 - GSHP heating (inc UFH) - 10,000 litres
 - Heat rejection circuits - 15,840
 - Disinfection of domestic water system