ENGINEERED EFFICIENCY

17040

UNIVERSITY LABS HVAC OPTIMISATION: UPGRADE, REPAIR AND RECOMMISSIONING

CLIENT | LOCATION

Top UK University

SECTOR

Education - R&D

PROJECT BRIEF

Address carbon dioxide reduction within the building and provide solutions for the sustainability team of the University to enable them to reach carbon dioxide reduction targets. The team were aware that the laboratory buildings were the largest users of energy - in particular the synthetic chemistry building and its ventilation system. The building contains a large amount of fume cupboards, so safety was a prime concern during the project for the University and EECO2.

The EECO2 team had to work very closely with the University Estates Team and the building users, to avoid disruption to the ongoing work within.

METHODOLOGY

Firstly, the team assessed the safety requirements of the building during a fume cupboard survey. They then performed a HVAC survey to assess opportunities for improvements, again evaluating safety requirements of the building.

METHODOLOGY CONT.

The survey uncovered a satisfactory HVAC design, however there had been modifications made to the design and components that had failed, resulting in lower efficiency levels than the original design was able to deliver.

Using the survey results, the EECO2 team produced safety and energy efficiency suggestions and created an implementation plan.

SOLUTION

The repairs had to be organised with the University in mind. EECO2 team had to be very flexible, often working out of hours, ensuring the fume cupboards were free for use when required, reducing the impact on the building users as much as possible.

- EECO2 performed extensive testing to develop a revised exhausted fan control strategy, to ensure safe velocities were maintained in the air duct.
- Repairs, modification and recommissioning of the HVAC system, including the controls and the components.

EECO2 did such a good job for the sustainability team, that they have been asked to assess a number of additional buildings on the University campus too.

RESULTS

30% reduction

in annual Electrical Energy Consumption

£78k cost saving

in Electrical Energy costs per year

FOR FURTHER INFO

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