



Case study: whg

Background

Housing provider whg manages more than 19,000 homes throughout the West Midlands and 5 commercial buildings. The business moved to 100 Hatherton Street in the heart of Walsall to a new 5,000 sq Metre facility in 2012. The 4 story facility is now the workplace for around 300 colleagues on a daily basis and incorporates a state of the art datacenter within.

The control systems within the new facility included a Trend IQ3 BeMS, Mitsubishi Split VRF system providing heating/cooling on the floors, a Delmatic lighting control system, 33 sub meters, Solar PV, Variable Speed Drives, Grey water system, but to name a few.

Challenge

whg moved into their new BREEAM Excellent rated building with the expectation that this new green, sustainable building would be cost effective and simple to operate. Within 6 months of occupancy, neither of these objectives had been met.

See the solution overleaf

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Quick facts

19% kWh reduction in Electricity consumption

42% kWh reduction in HVAC, post optimisation

£28,500 predicted saving for the year

Savings achieved through integration and system optimisation

Full visibility of BeMS, energy consumption and lighting now available

19%
Overall kWh reduction

Optimised Buildings were asked to assess the facility to determine if further energy savings could be achieved through our optimisation proposition. As a result of this whg engaged Optimised Buildings to undertake an audit and it soon became apparent that the building had some fundamental issues. These included poor temperature control in some areas, lack of integration between control systems and high utility costs.

This BREEAM Excellent state of the art building was consuming more than double the kWh/m² against the CIBSE benchmark for a building of this type.

The building had all the systems and assets, where it fell down was in the integration and contractors appreciation of how these systems needed to work together to deliver a BREEAM Excellent building that whg could operate efficiently and simply.

Solution

Working in conjunction with whg's newly appointed facility management company, Optimised Buildings took the technical lead in putting together a plan to get the building back on track. Over a 120-day program working with sub-contractors and specialists the various building services systems were back on track and operating correctly. The core of the project consisted of:

- BeMS headend set-up and control strategy modifications
- Lighting control system interface to BeMS and graphics

- Sub metering interface to BeMS
- AC interface to BeMS and graphics
- UPS upgrade
- Implement Optimised aM&T
- Emergency Lighting integration to BeMS
- Generator operation and test
- Optimisation of systems

The Optimised aM&T platform was installed to monitor the energy sub-meters and fiscal meters to ensure that the building remained on track.

The Optimised Bureau is now providing continuous monitoring on behalf of whg to identify anomalies and generate reports, alerts and ongoing energy management advice.

Results

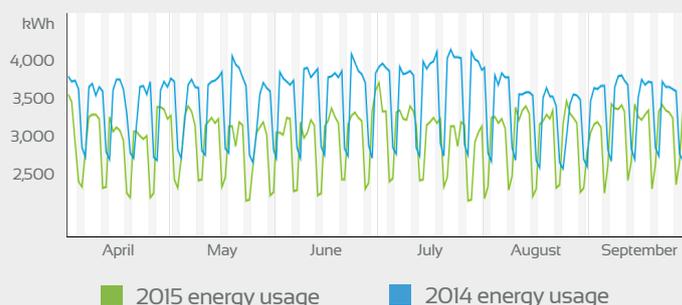
After just 6 months the savings are currently on track to save 19% of the total energy spend compared to the previous year, generating a saving of £28,500 for the year. This saving was generated from HVAC alone, reducing consumption by 42%.

Year 1 Results*

£ savings	£28,500
CO ₂ Reduction	103,685 kg
kWh Saving	233,000 kWh
% of Total Energy Spend	19%
% of HVAC Energy Spend	42%

*Projected over first 12 months (figures calculated based on 6 months of results)

Annual Comparison



“The technical expertise of Optimised Buildings has really helped us get our building to where we expected it to be when it was handed over to us. We have learned a lot since we took on this new facility and believe it is not until you take this journey that you appreciate the full extent of what you are signing off at completion stage. We are very pleased to report that we now have a building that we can manage effectively and one that operates efficiently”

Steven Davis – Facilities and Environmental Manager, whg

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