



Case study: Welcome Finance

Building performance assessment

A comprehensive building performance assessment of Welcome Finance’s 65,000 sq. ft HQ in Nottingham led to an improvement in the building’s EPC rating from ‘F’ to ‘D’, allowing the building to be subsequently sold at a greater value.

Welcome Finance’s head office provides a modern working environment for around 560 people, although typical occupancy is between 360 and 400 people at any one time.

Over a twelve-week period, our building maintenance team supported by our energy performance and technical design teams, worked in collaboration with the building’s facilities management team to undertake a comprehensive assessment of the building.

Data collected during the assessment phase was used to produce a detailed report identifying measures that could be taken to reduce the buildings operational energy consumption profile, whilst achieving a payback on capital investment of five-years or less. Using ‘Dynamic Simulation Modelling’ (DSM), a sophisticated computational software solution that accurately ascertains

the performance within a built environment, we were able to gain an accurate understanding of the building and its infrastructure and determine its actual performance levels.

Assessing a variety of factors including local weather patterns, building form, built surroundings, fabric performance, occupancy regimes and comfort levels, and mechanical and electrical services and systems, we used the data collected and calculated the building’s operating performance.

The results determined that energy consumption was 28.5% higher than that of a ‘Good’ building, and 13.5% lower than what is seen in a ‘Typical’ UK building, as defined by the Carbon Trust’s ECG19 benchmark. ‘Good’ buildings generally represent those that have already undergone a programme of energy improvement works.



Client

Welcome Finance

Sector

Financial Services

Location

Nottingham

www.evotech.co.uk





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The outcome of our assessment process is to identify a 'building performance improvement plan' which delivers a broad range of benefits for the building and its occupants, whilst creating operational cost savings.

Our improvement plan identified a potential reduction in energy consumption of 28%, which would generate a supply cost savings of £59,043 in year one and in excess of £320,000 across a five year period.

We also identified that additional savings of circa £10,800 could be made during the first year through the replacement of paper hand towel dispensers throughout the building's WCs with energy efficient hand dryers.

Therefore, should all the improvement measures identified be implemented, this would equate to a total operational cost saving of £69,843 during year one, at a capital outlay of circa £192k – resulting in simple payback of 2 years 8 months.

Working with the client we implemented the following recommendations:

- Air sealing works to improve building air tightness
- Retrofitting of variable speed drives to CHW & LTHW pump sets
- BMS optimisation
- Installation of energy efficient hand-dryers
- Automatic monitoring & targeting system
- WC water saving devices

This achieved an operational energy consumption reduction of around 14%, which generated a supply cost saving of circa £26k during the first year. Additionally, the building's EPC rating was improved from F to D, resulting in the client being able to subsequently dispose of the building at a greater value upon sale.

Outcomes

28%

reduction in power consumption

£59,043

total first year cost savings

>£320,000

cost savings over 5 years

£507,420

generated over 25 years by Solar PV

EPC rating

Improved from F to D