



11.87%

overall energy saving

< 12

months ROI

## Case study: Grosvenor House Hotel

### Background

The Grosvenor, A JW Marriott hotel, is a luxury 5-star hotel on Park Lane in central London. The hotel accommodation includes over 600 rooms and suites delivering the highest levels of comfort expected in such an establishment. The Great Room is the largest banqueting space, in a 5-star hotel in Europe, hosting major events such as the BAFTAs. The property has evolved over the years as the needs have changed to meet the demands of the modern traveller and hotel operator. The property consists of three elements, north, south and central with building services split between north and south serving the entire facility. Over time the systems have become more challenging to maintain and operate to their optimum level.

### Challenge

Optimised Buildings were tasked with carrying out remedial works, upgrading existing system and reducing energy consumption in an effort to improve the guest experience. Due to its age and vast size this is not easily done, and solutions needed to be tailored to the individual challenges presented throughout the hotel.

### Quick facts

Annual Saving of £331,000

23.7% saving of HVAC energy

Analysed base line data and energy profiles through Optimised Analytics

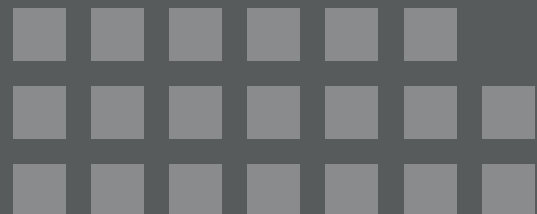
BeMS improvements & optimisation in the Great Room to ensure constant comfort and efficiency

Modified control strategies to improve energy efficiency while improving guest comfort

Optimised Bureau provides continous monitoring to identify anomalies

See the solution overleaf

[optimisedbuildings.com](http://optimisedbuildings.com)



## Solution

In order to bring the site up to the latest specification to allow optimum control, the ageing Honeywell Excel BMS was upgraded to the latest Tridium N4 platform one area at a time.

The new software platform allows the maintenance team to deliver a programme of preventative planned maintenance. The improved network architecture has allowed for a central command and control room to be setp in the hotel that offers centralised monitoring and control, complemented by alarms and alerts that enable the hotel team to deliver reactive works as they are highlighted by the dashboards. This ensures systems are always functioning optimally and are maintained when needed.

## Analytics and Optimisation

An initial assessment of the site complemented by Optimised Analytics platform enabled us to make immediate adjustments for instant savings and optimisation of the assets. Strategies were agreed and implemented, this included:

- analysing the base line data and energy profile
- identifying energy usage throughout the day
- aligning time schedules to match usage

- operating at suitable temperatures during the use periods without affecting the comfort conditions
- ensuring correct use of override switches
- preventing heating and cooling systems do not conflict with each other

Once these areas were addressed, the Optimised Bureau managed service could now remotely monitor the performance of the HVAC, BeMS and lighting systems to ensure continuous operational efficiency.

The hotel is also supported remotely though the Optimised Bureau that is providing continuous monitoring to identify anomalies and generate reports, alerts and ongoing energy management recommendations, with reactive support where needed.

## Results

The hotel and Optimised Building teams continue to work closely together monitoring the building systems, playing an active role in assisting the key stakeholders in making the right decisions to improve the operation of the property.

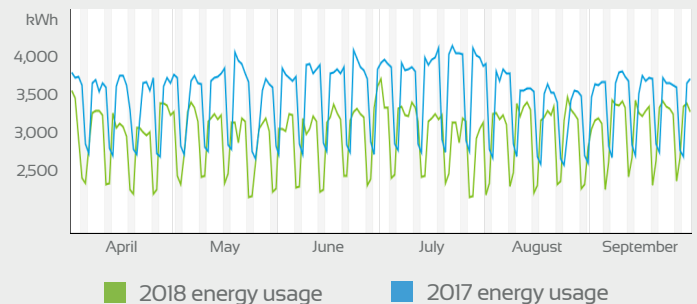
The optimisation process is on going and to date the hotel has achieved an 23.7% reduction in HVAC energy consumption resulting in a pay back for the hotel of less than 11 months.

## Year 1 Results\*

£ savings	£331,000
CO <sub>2</sub> Reduction	763,362 kg
kWh Saving	2,932,000 kWh
% of Total Energy Spend	11.87%
% of HVAC Energy Spend	23.7%

\* Figures based on actual data from Jan-Jul 2018, estimated for Aug-Dec 2018

## Annual Comparison



“Optimised Buildings have been instrumental in transforming the way we operate the hotel from an engineering perspective while significantly reducing our energy expenditure and improving guest comfort.”

Gordon Ormond, Direct Engineering  
Govenor House Hotel

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