



MONUMENT PLACE

*An Energy
Efficient
Building*

24 MONUMENT STREET
LONDON EC3

1 Introduction

Monument Place is a highly energy efficient new office development achieving a high rated commercial BREEAM 'Excellent'.

Some of the features which give the building this rating are as follows:

- Good solar design through extensive modelling of the façade and excellent thermal and solar performance
- Solar PV providing renewable electricity to the common areas
- Building services that employ the best available technology in terms of energy efficiency
- Automatic lighting control to offices & cores via daylight sensing and presence detectors
- Building Energy Management Systems (BEMS) and metering

Monument Place achieves an Energy Performance Certificate (EPC) rating of 'B' out of a range of 'A' to 'G' with a score of 30, placing it towards the higher end of the band.

The figures in this report are based on the EPC assessment and the building is compared with a 'Typical' Office Building as defined in the Chartered Institute for Building Services Engineers (CIBSE) Energy Consumption Guide 19 (ECG019) – Energy Use in Offices. It is also compared to similar new and existing buildings as used in the EPC assessment.

2 Building performance comparison with other offices

Energy use at Monument Place is significantly lower than comparable buildings

Monument Place significantly out performs both the CIBSE 'Typical' and 'Good Practice' Office Buildings for energy consumption.

The 'Typical' Office Building can be likened to office stock constructed in the 1990's prior to the introduction of Part L of the building regulations. The 'Good Practice' office building is broadly

equivalent to office buildings built between 2006 and 2010.

Monument Place also outperforms 'EPC New Building' and 'EPC Typical'.

The 'EPC New Building' target relates to a current post 2010 building whilst the 'EPC Typical' refers to similar buildings constructed in the last 25 years.

3 Benefits

Compared to both the CIBSE 'Typical' Office stock and the EPC typical benchmarks, Monument Place performs exceptionally well on energy use and running costs. With rising energy prices predicted for the coming decade, and beyond, the benefits of leasing an energy efficient building will only

increase over time. Energy prices have risen on average 9.49% per annum since 2004 and are predicted to continue to rise at over 5% per annum going forward; this will mean continued increasing occupancy costs for those occupiers of poorly performing buildings.

4 Sustainable Occupation

Sustainability and cost effective occupation are at the forefront of Monument Place “Best Practice” design. Each element of the design has been carefully considered to ensure a high EPC rating of “B” and an “Excellent” BREEAM rating. This has been achieved through a broad array of energy efficient initiatives including on-site renewable energy, passive solar design, energy efficient lighting with PIR and daylight sensing controls, all of which are supported by an intelligent Building Management System. There are also excellent cyclist facilities including showers and lockers to encourage environmentally conscious commuters.

- EPC - Energy Performance Certificate ‘B’
- Energy Efficiency – Highly energy efficient heating and cooling

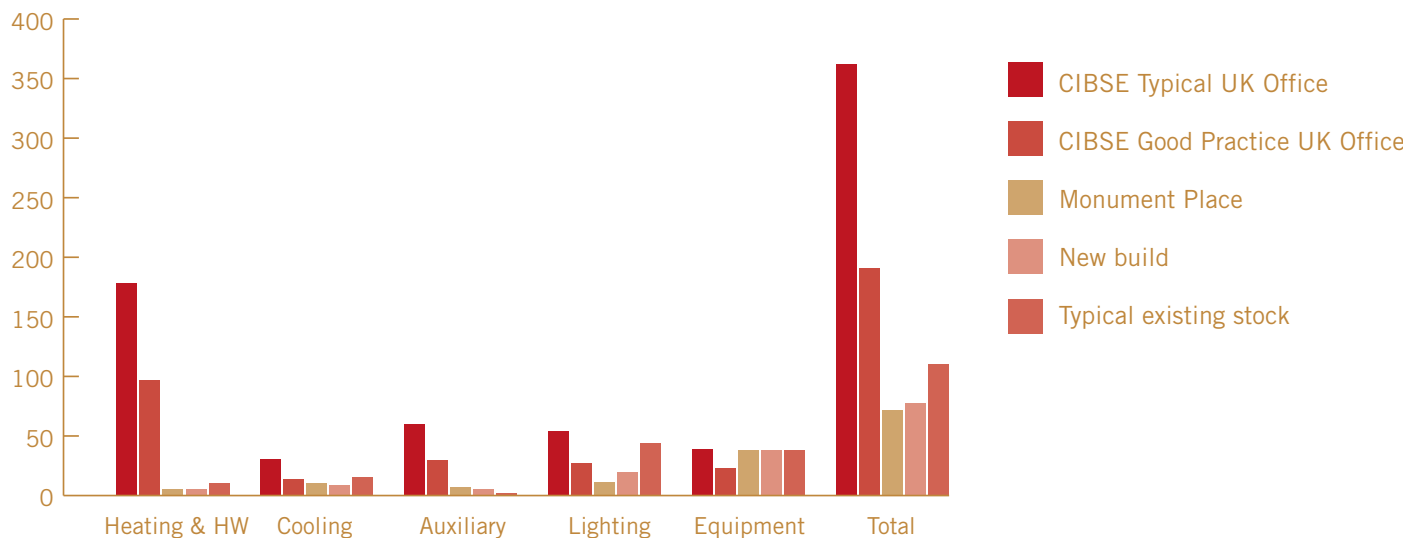
- BREEAM - An “Excellent” rating
- PV cells - 200m² of PV cells installed on the roof
- Sustainable transport – BREEAM compliant shower and cycle facilities
- Lighting controls - PIR lighting controls with intelligent daylight sensors

Monument Place, with its strong eco-credentials, can demonstrate significant occupational cost savings when compared to a more typical office building in the UK. The graph below demonstrates the difference in annual energy consumption, per unit floor area, when compared to both the CIBSE* and EPC benchmarks.

*Chartered Institute for Building Services Engineers

End Use Energy Consumption

| Building | Heating & HW kWh/m ² /year | Cooling kWh/m ² /year | Auxiliary kWh/m ² /year | Lighting kWh/m ² /year | Equipment kWh/m ² /year | Total kWh/m ² /year | Source |
|-------------------------------|--|-------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------|----------------------------------|
| CIBSE Typical UK Office | 178.00 | 31.00 | 60.00 | 54.00 | 39.00 | 362.00 | CIBSE |
| CIBSE Good Practice UK Office | 97.00 | 14.00 | 30.00 | 27.00 | 23.00 | 191.00 | CIBSE |
| Monument Place | 5.04 | 10.60 | 7.18 | 11.06 | 37.96 | 71.84 | mTT Energy modelling. Actual. |
| New build | 5.65 | 8.42 | 5.77 | 20.03 | 37.96 | 77.83 | mTT Energy modelling. Notional. |
| Typical existing stock | 10.70 | 15.94 | 2.13 | 43.66 | 37.96 | 110.39 | mTT Energy modelling. Reference. |



5. Financial Savings

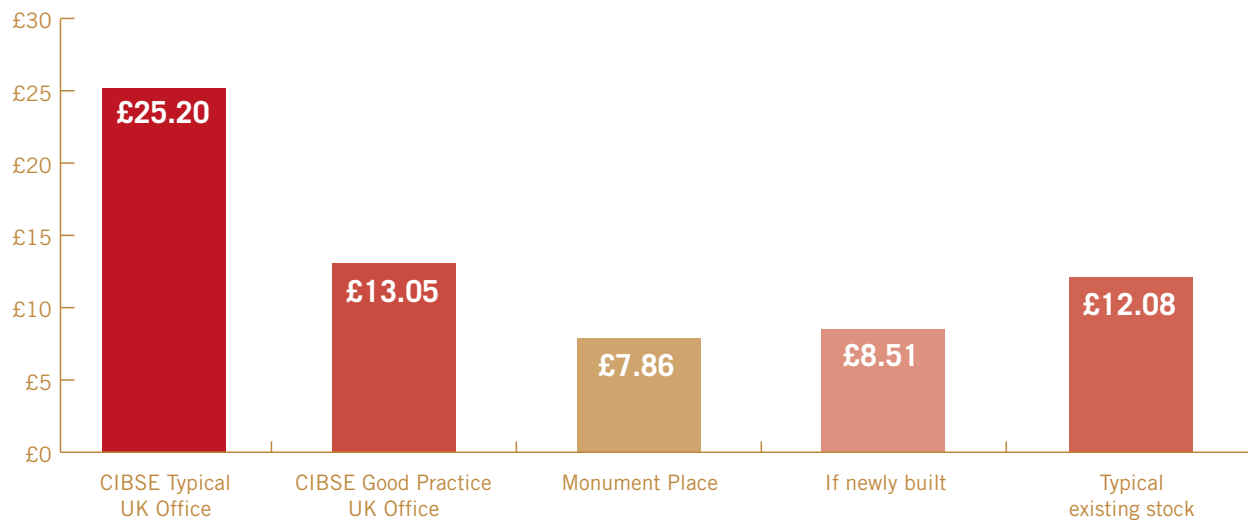
A financial analysis has been performed to quantify the savings that could be made by an occupier at Monument Place as compared to the specified benchmarks. These costs have been based on the most recent and appropriate energy pricing information from the Department for Energy & Climate Change DECC.

The graph below demonstrates the significant energy cost savings that could be made. It shows how annual bills could be significantly reduced by between 35% and 69% when compared to a more 'Typical Office' building as measured against 2010 Building Regulations.

Building performance comparison with existing offices (Energy cost £/m²/year)

| Building | Heating & HW £/m ² /year | Cooling £/m ² /year | Auxiliary £/m ² /year | Lighting £/m ² /year | Equipment £/m ² /year | Total £/m ² /year |
|-------------------------------|--|-----------------------------------|-------------------------------------|------------------------------------|-------------------------------------|---------------------------------|
| CIBSE Typical UK Office | 5.07 | 3.39 | 6.56 | 5.91 | 4.27 | 25.20 |
| CIBSE Good Practice UK Office | 2.76 | 1.53 | 3.28 | 2.95 | 2.52 | 13.05 |
| Monument Place | 0.55 | 1.16 | 0.79 | 1.21 | 4.15 | 7.86 |
| New build | 0.62 | 0.92 | 0.63 | 2.19 | 4.15 | 8.51 |
| Typical existing stock | 1.17 | 1.74 | 0.23 | 4.78 | 4.15 | 12.08 |

Notional running cost (£/m²/year)



Energy price (p/kWh): Gas 2.85, Electricity 10.94. Source: TBC – pricing from DECC Commercial Energy User Pricing

In conclusion, the 'best practice' design of Monument Place will reduce energy usage and thus occupancy cost when compared to other office buildings