



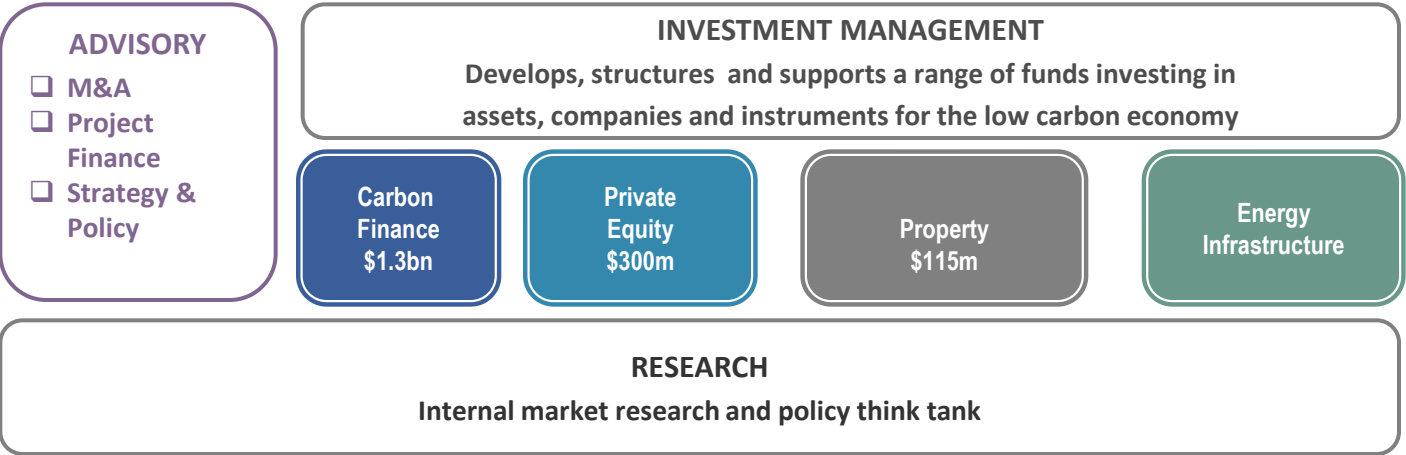
# Climate Change Property Fund Retrofit Case Study

Unepfi February 2011

Climate Change Capital<sup>®</sup> 

# CCC Global Platform

CCC's integrated fund management teams leverage proprietary analysis and networks to target premium returns in five global asset classes.



- ▶ The firm is headquartered in **London** and **Beijing** with c.90 employees across the geographies.
- ▶ CCC was Founded 2004 and currently has c.\$1.5bn Funds under Management at 31/12/10.
- ▶ Activities are focused on the **UK, EU, and Asia**

# CCPF (Climate Change Property Fund)

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- £150m Gross Mainstream Commercial Property Fund
- Invest in: Urban non car dependent assets –Offices/Retail. UK only City Centres London + Big 6.
- 100% UK focused – powerful legislative, occupier and valuation drivers.
- Investors: Global Institutions who are investing in the low carbon economy – UK / Australian / European
- Specific Focus: Energy Efficiency around existing let buildings.
- UNPRI, CDP, CCPF KPI's (Energy/Water/Waste)

# Energy Efficiency and the Property Industry – Myths and Realities

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- It is all about new construction.

**NO:** *most of the buildings we will have in 2050 are already here.*

- It is mostly about heating and insulation.

**NO:** *electricity dominates in many UK non-domestic buildings.*

- It's all about carbon.

**NO:** *Reduce the demand..the Carbon will look after itself*

- It's all about technology.

**NO:** *It's firstly about commitment, use, monitoring and management, joining things up sensibly, and paying attention to detail. No Green Bling.*

- *It's Up to the Construction Industry to put things right*

**YES & NO:** *the occupier's habits, management and equipment have a major influence ... but the industry doesn't follow through into use*

- We need a massive refurbishment programme

**YES & NO:** *start by fine tuning what you have to work as intended.*

# 5 St Philip's Place, Birmingham

## 2003 Refurbishment Breeam "Excellent"

### FRI Lease to Government for 11 years unexpired

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### CCPF Asset Management Strategy – 10 steps

1. Pre-acquisition Sustainability Checklist ~ Flood risk/transport
2. Pre-acquisition BREEAM/Energy Gap analysis
3. Tenant engagement. Sustainability > Operating costs
4. Occupant Satisfaction Survey
5. Agree Target/specification with Tenant
6. Finalise Cost + procurement > Retrofit.
7. Continuous Commissioning
8. Behavioural Change : Green Lease addendum (MOU)
9. Post Retrofit Occupant Survey
10. Ongoing measurement /Benchmarking ~ CCPF KPI's

# Making performance Visible : DEC (Feb 2009)

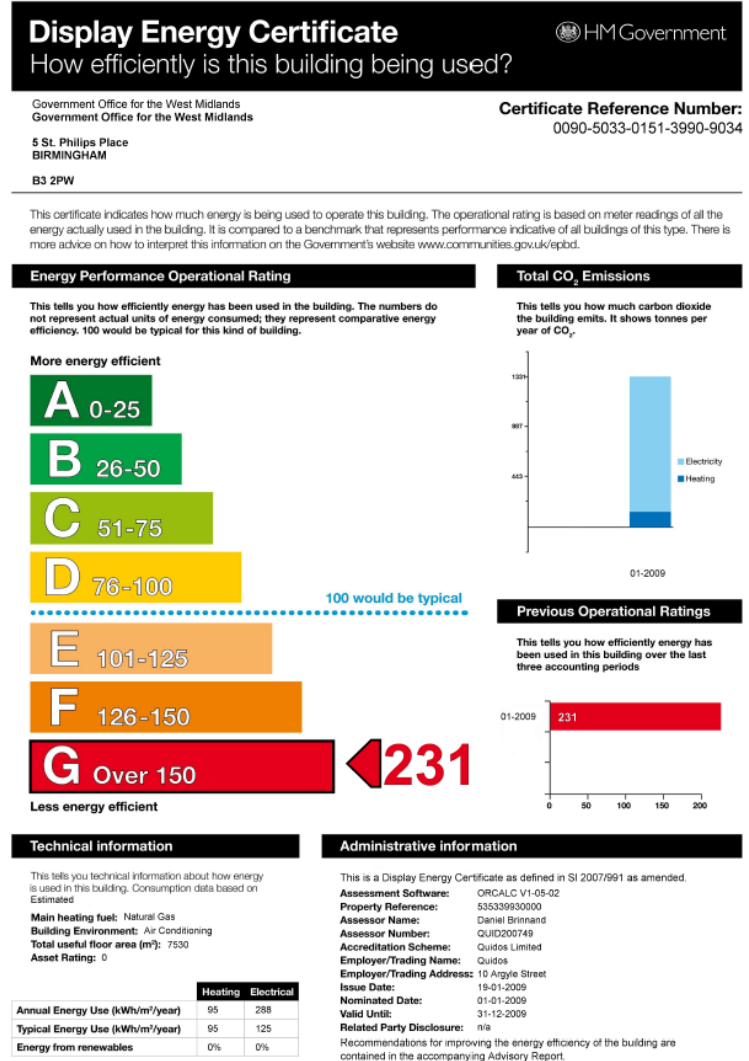
**5 St Philip's Place** - High specification but poor DEC – with CO<sub>2</sub> emissions 231% of benchmark

## WHY?

Annual heating energy use was 95 kWh/m<sup>2</sup> -24% better than the DEC benchmark value of 125 kWh/m<sup>2</sup>

## BUT

Annual electricity use was 288 kWh/m<sup>2</sup>- over three times the DEC benchmark value of 95 kWh/m<sup>2</sup>.



# We found problems with the meters both main and sub-meters

Main meter was wrongly calibrated

A factor of 2 too high



Principal sub-meter failed.  
Other two were wrongly calibrated

Impossible to do cross checks

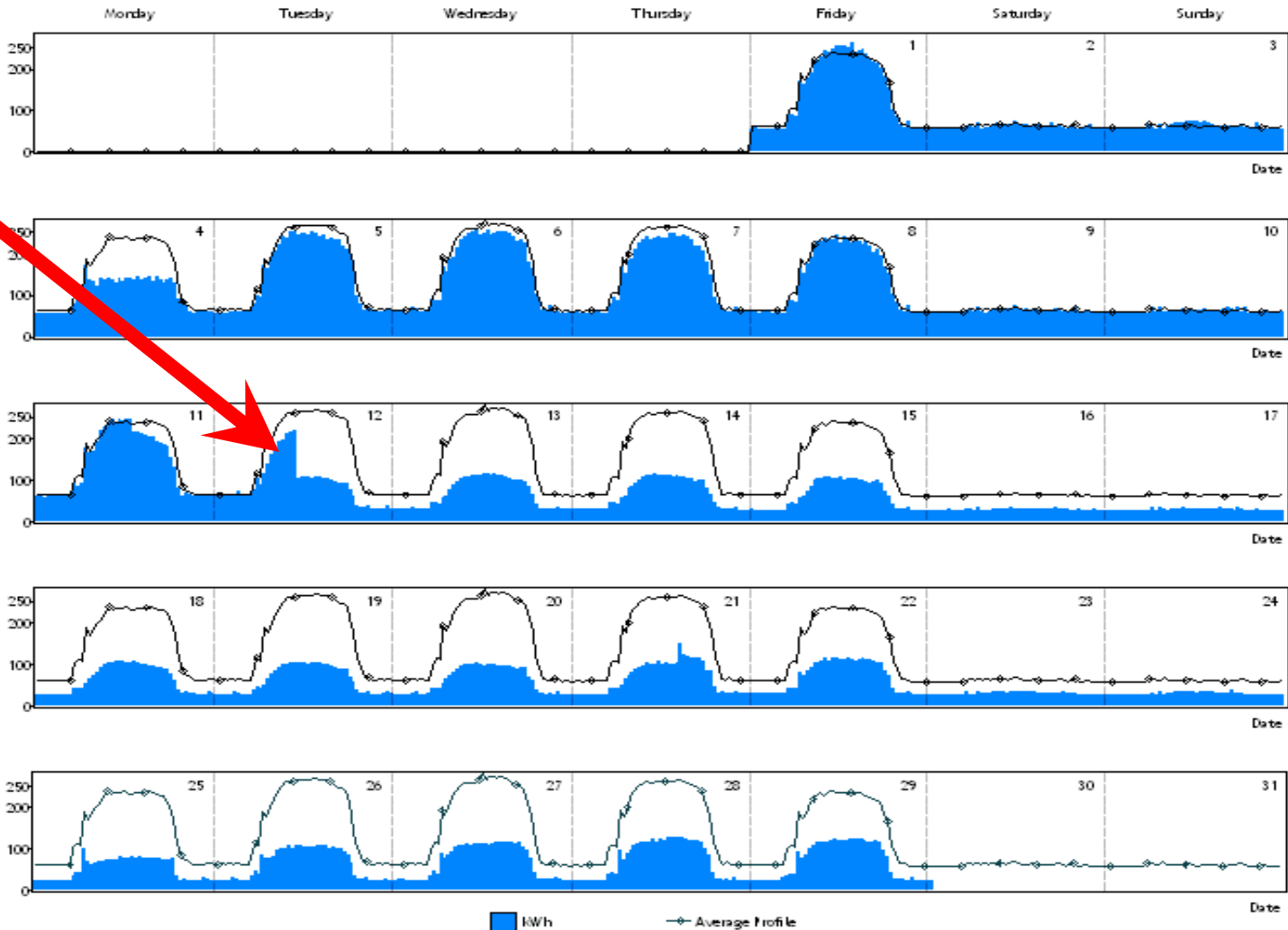


Halifax retail unit also feeding off office tenant supply – to be corrected to separate supply/meter.

# nPower has confirmed the meter error after a site meeting with GOWM and PE on 5 May

Metering records were corrected. On 12 May 2009, 2008-09 data has now been updated retrospectively

Significant rebate secured from Utility company



SOURCE: Website set up by Briar Associates for GOWM [www.briars-online.co.uk](http://www.briars-online.co.uk) (password required)



## Inefficient Boilers and pumps were on constant 24 hours

And heat was circulating into the two main air handling units for the air conditioning, which were hot to touch

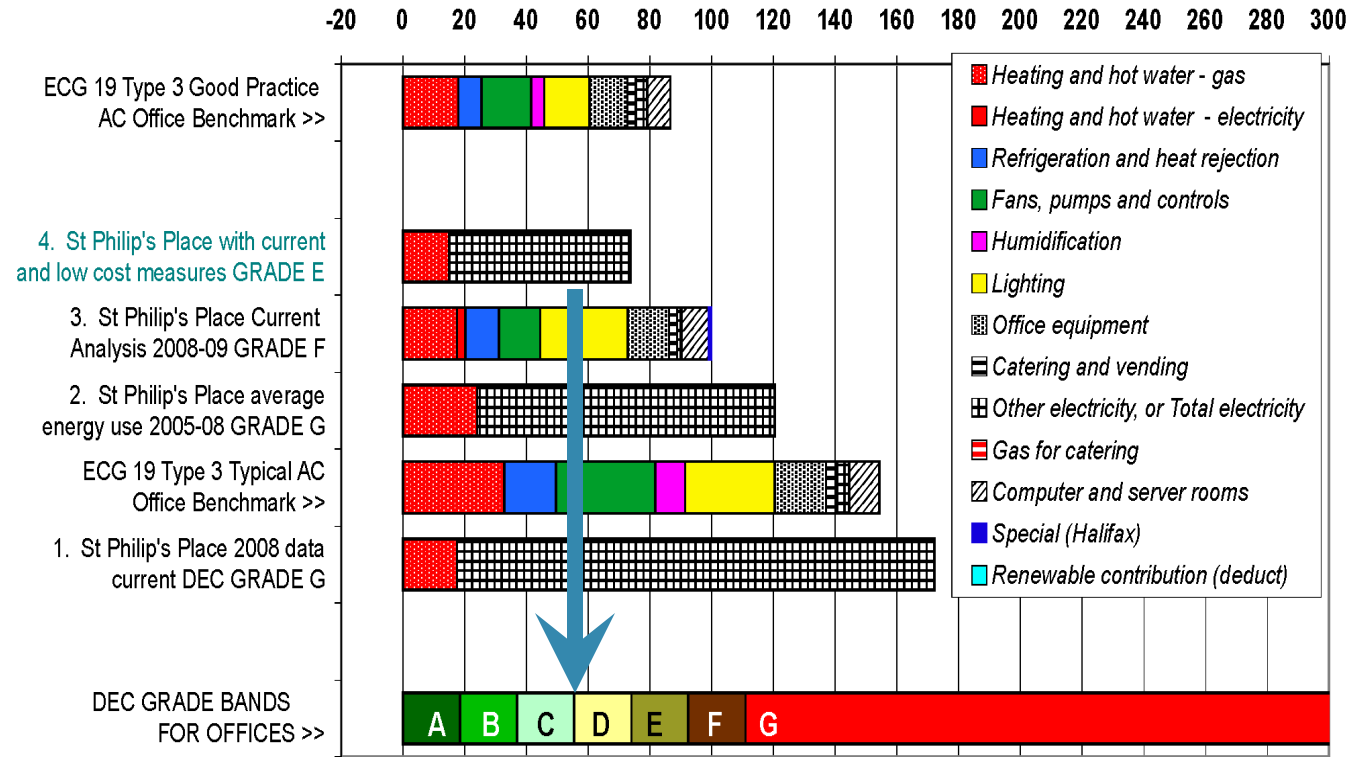
If this is normal in winter (and we think it may be), there is scope for significant savings by fine-tuning the heating controls and Building Management System (BMS)



# 2010 target - boiler plant, controls, BMS, smart metering and lighting replacement etc

5 St Philip's Place Offices:  
Annual CO<sub>2</sub> emissions, DEC Grades and benchmarks from Energy Consumption Guide 19 for a "Type 3" air-conditioned office

*Kg/m<sup>2</sup> Treated Floor Area at Defra 2008 CO<sub>2</sub> factors of 0.185 for gas and 0.537 for electricity*

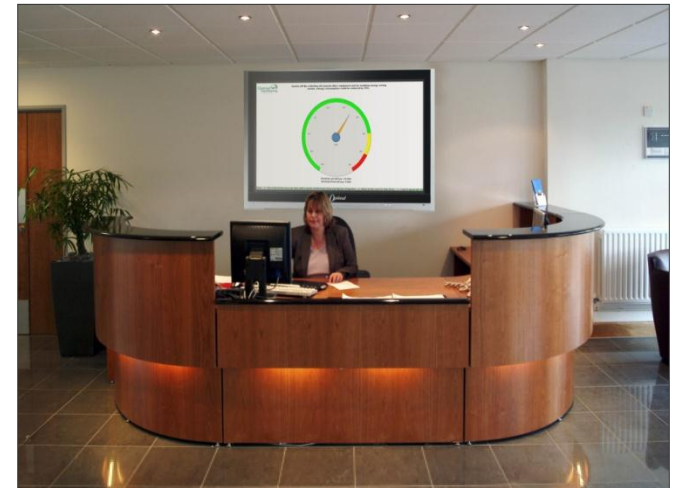
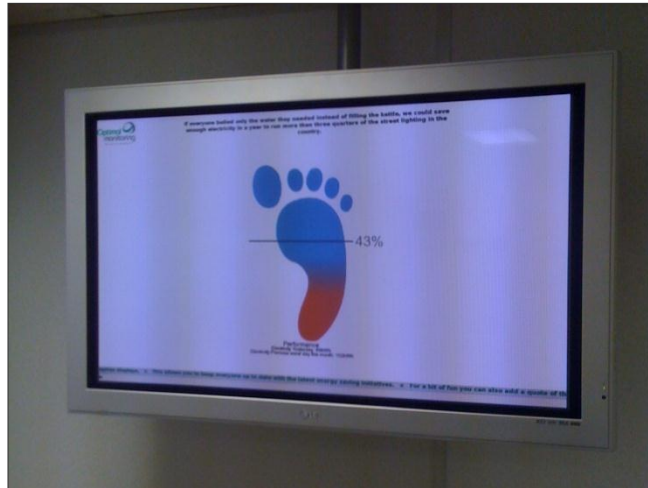
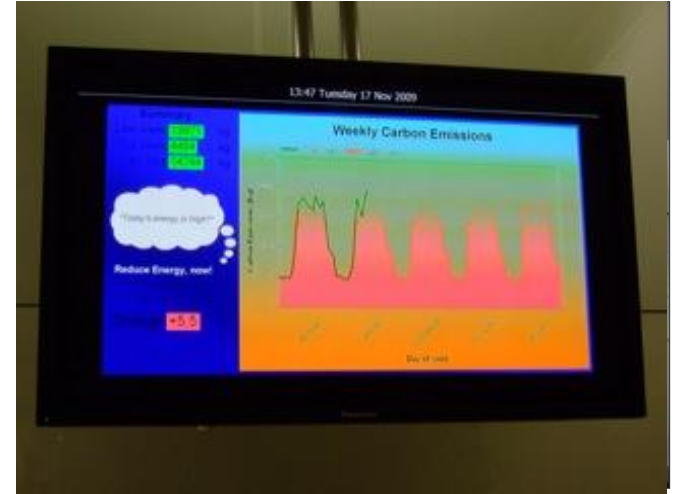


## 5 St Philip's Place, Birmingham Total Capex £750,000 inc fees

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	2008	2009	2010	% Change 2008-2010
<b>Electricity KWH/year</b>	2,306,732	1,124,000	899,000	<b>- 61%</b>
<b>Electricity Cost p.a.</b>	£300,000	£165,000	£130,000	<b>- 56%</b>
<b>Carbon tCO2 p.a.</b>	1,297	716	615	<b>- 53%</b>
<b>DEC</b>	G	F	E	

# CCPF AM&T (Automated Monitoring & Targeting)



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