

# Energy & Environmental Management for Schools

## Energy Management Unit

7<sup>th</sup> November 2007



**BRADFORD**  
one landscape many views



## What do we need to do?

- **Live and operate sustainably**
  - Don't deny a good future to others
- **Don't waste**
  - Conserve/preserve resources

## What do we need to do?

- **Consider our impacts**
  - Monitor energy
  - Carbon footprints
  - Use other performance indicators
- **Change our ways**
  - Attitudes
  - Lifestyles

## Why do we need to do it?

- **Reduce climate change effects**
  - Global warming, melting icecaps, rising sea levels, flooding, extreme weather, nature imbalanced
- **Avoid pollution, environmental damage**
- **One world is not enough**
  - Increasing population/development
  - Decreasing resources
  - WWF report – if all the world used resources at the same rate as UK citizens we would need 3 planets

# Why do we need to do it?

- **Government targets/political will**
  - CO<sub>2</sub> reduction targets, reductions on 1990 levels: 26-32% by 2020, 60% by 2050
  - Renewable energy targets - electricity production: 10% by 2010, aspirations for 20% by 2020
  - Carbon Reduction Commitment
    - Carbon trading for large organisations
    - Extension of “smart” metering

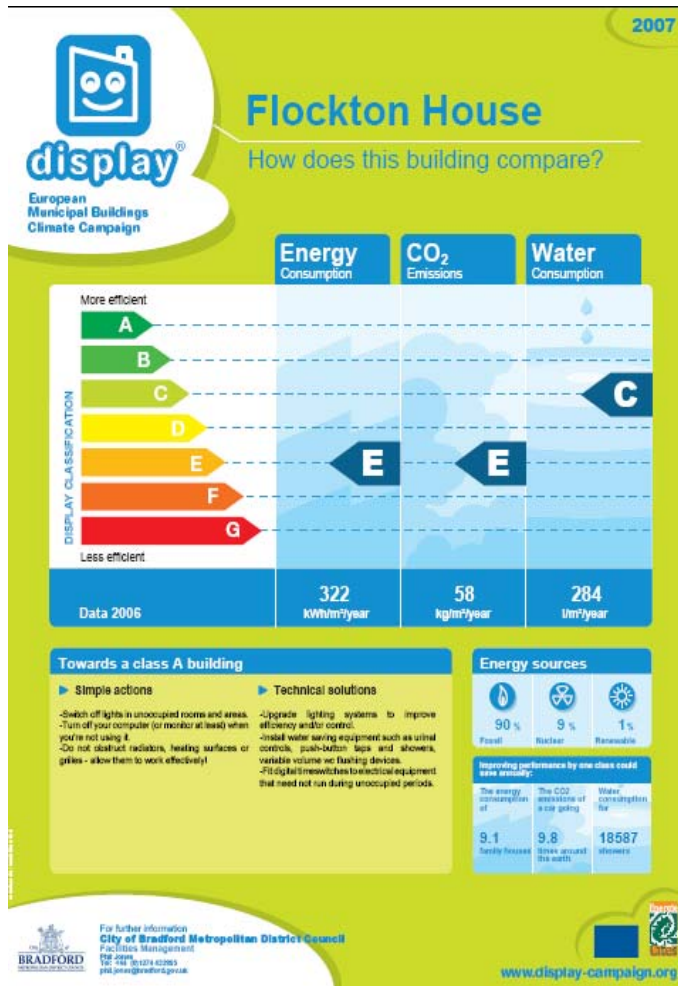
# Why do we need to do it?

- **Building Energy Performance**
  - Tightening of Building Regulations
  - Increasing standards on designs (such as BREEAM “Very Good” ratings required for new schools)
  - Home Improvement Packs (HIPs)
  - Energy Performance Certificates (EPC’s)
  - Display Energy Certificates (DEC’s)
  - Benchmarks

# Current Benchmark Levels

<b>Benchmarks for Primary Schools</b>			
	<b>Fuel (kWh/m<sup>2</sup>)</b>	<b>Electricity (kWh/m<sup>2</sup>)</b>	<b>CO<sub>2</sub> (kg/m<sup>2</sup>)</b>
Best Practice	78	19	27
Good Practice	105	23	34
Typical	151	32	46
Bad Practice	203	46	60
<b>Benchmarks for Secondary Schools</b>			
	<b>Fuel (kWh/m<sup>2</sup>)</b>	<b>Electricity (kWh/m<sup>2</sup>)</b>	<b>CO<sub>2</sub> (kg/m<sup>2</sup>)</b>
Best Practice	79	23	28
Good Practice	103	27	35
Typical	144	33	45
Bad Practice	190	42	56

## Display Energy Certificate



- From April 2008, DEC's to be displayed in all public buildings (or those from which a public service is provided) with a gross internal area of 1000 m<sup>2</sup> or more.
- Annually updated.
- Report potential improvement measures as well.

# Why do we need to do it?

- **Social Responsibility**

- Public awareness will be raised and comparisons will be made
- Peer pressure to improve
- Feel good factor from doing things right/well
- Poor performance will become unacceptable

# Why do we need to do it?

**TO SAVE MONEY!**  
**WASTE IS COSTLY – AVOID IT**

# How will we do it?

- **Education**
  - Assess the current situation
  - Raise awareness of the situation
  - Develop an improvement approach
  - Engage people in delivering improvements

# How will we do it?

- **Education**
  - Educate the educators
  - Practice what is preached
  - Learn from mistakes (and good practice!)
  - Use the school as a resource

## How will we do it?

- **Education**
  - Lead by example
  - Get the right messages to parents
  - Consider feedback
  - Make good practice common sense