Sustainable approaches to energy for museums

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The Sustainable Business Partnership CIC
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Agenda

Introduction

How efficient is the operation of our heating.
Stan Rayfield

Recap – water workshop

Q&A group discussion on energy, ventilation, heating etc.
Recap – water workshop

- Water supply and waste-water treatment
- Water bills – things to look out for
- Dealing with water on site – too much and not enough
- Future scanning – water issues in the future to build into planning
Environment Agency Water Company performance assessment says pollution from the nine water companies at worst level in five years

The worst performing companies are South West Water, Anglian, Northumbrian and Southern

No river in England is in a good overall condition - sewage discharges and agricultural and industrial chemicals entering the water system

2,204 “pollution events” in 2019

Southern Water was responsible for 458 pollution incidents, nearly double its 2018 total.

Southern Water paid its chief executive Ian McAulay a £538,100 bonus despite reporting an 'unacceptable' rise in pollution across its network. The award took his total annual pay and pension to £1.1million, more than double his basic salary of £435,000.
How efficient is the operation of our heating
Energy analysis

1. Benchmarking
2. Consumption profiling
3. Outside temperature comparison
Benchmarking

Main heating fuel: Natural Gas
Building environment: Heating and Natural Ventilation
Total useful floor area (m²): 4696
Asset Rating: 98

- Heating Energy Use (kWh/m²/year): 117
- Electricity Energy Use (kWh/m²/year): 135
- Annual Energy Use (kWh/m²/year): 122
- Typical Energy Use (kWh/m²/year): 95
- Energy from renewables: 0%
Consumption profiling
Comparison with outside temperature

Gas use compared to outside temperature
What have we discovered?

Gas consumption is at an average level (scope for improvement)

Summer consumption higher than expected

Gas consumption isn’t closely in line with how cold it is

Raises questions for how the system is controlled
Issued discovered

Wrong setting for summer/winter switch (august)

Night time set back – temperature too high

Pumps ran most of the year
Q&A Group Discussion
Thank you for your time

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