

COMMUNITY CENTRE CHALLENGE 2010

INITIAL SURVEY RESULTS

AUGUST 2010

CENTRES

Three Community Centres were visited, as follows:

1. Bloomfield Community Centre, Pembrokeshire – 2nd August 2010
2. Bridges Community Centre, Monmouthshire – 3rd August 2010
3. Pontrobert Community Centre, Powys – 4th August 2010

ENERGY PERFORMANCE

The energy data collected is generally for the year to March 2010. Performance figures based on floor areas are as follows:

CENTRE	Electric (kWh/m ² /annum)	Fossil Fuel (kWh/m ² /annum)	Total Energy (kWh/m ² /annum)
BLOOMFIELD	56.6	222.7	279.3
BRIDGES	39.9	235.9	275.8
PONTROBERT	24.8	119	143.8
TYPICAL FIGURES	33	187	220

The typical figures are national benchmarks, sourced from the Carbon Trust publications.

CARBON PERFORMANCE

Based on the energy data, the carbon footprint for each Centre is as follows, for the year to March 2010.

1. Bloomfield: 143.5 tonnes Carbon Dioxide
2. Bridges: 109.8 tonnes Carbon Dioxide
3. Pontrobert: 9.8 tonnes Carbon Dioxide

For comparison, these can be related to floor area.

CENTRE	CO ₂ Emissions Electric (kg/m ² /annum)	CO ₂ Emissions Fossil Fuel (kg/m ² /annum)	CO ₂ Emissions Total Energy (kg/m ² /annum)
BLOOMFIELD	30.8	41.0	71.8
BRIDGES	21.7	43.4	65.1
PONTROBERT	13.5	29.5	43.0

The results for both Bloomfield and Bridges are in line with 'typical' benchmark figures. These two centres are used as Day Care Centres as well as providing community functions.

Bloomfield is particularly good in that they have sports halls and a fitness room, which are used regularly. Both Bloomfield and Bridges run extended hours, particularly Monday to Friday.

Pontrobert is a bit of an odd man out, in that it is mainly linked to an adjacent Primary School, and is used a lot by that school. It is generally only open during typical school hours, 9.00 am to 4.00 pm, and is mainly closed during school hours. So it is not open as long as the other two, and does not provide the same range of facilities, so its performance is correspondingly better than the other two.

SITE ISSUES

1. Bloomfield Community Centre

- a. This site has a mixture of old and new buildings. The older parts are stone built.
- b. The Centre has a 'blow-up' plastic tent covering a sports pitch. This requires a constant positive pressure to keep it up, and constant heating/ventilation to some degree to prevent condensation on the floor, to maintain safety of use. This is a big drain on energy use. There are plans being made to replace this with a permanent building.
- c. The domestic hot water is provided from electrically heated storage tanks, which is part of the reason for the poor electrical performance. Quotations are being sought for solar water heating panels, and there is a potential grant from EON towards purchase of these.
An alternative is to consider direct gas-fired hot water units.
- d. Lighting controls have been installed in many areas, but there are still a few areas where they could be used, particularly in lobby at top of the stairs.
- e. There is a lot of hot water pipework local to the boilers and hot water tanks that require insulation.

2. Bridges Community Centre

- a. This site again is a mixture of buildings, one part being an old stone built mansion house, together with a newer (circa 1950) extension.
- b. The 'Old House' has 2 ancient boilers that provide hot water for heating and domestic purposes. One boiler now failed, and the 2 boilers are to be replaced with new condensing boilers this summer. This will provide good energy savings.
- c. There are no lighting controls, but there was a good discipline in turning lights off when not needed. All empty rooms visited had no lights left on.
- d. Hot water piping in all boiler room needs insulation. The boiler room serving the extension had no insulation at all!
- e. Some radiators are not fitted with thermostatic valves, but there are plans to fit these during the summer.

3. Pontrobert Community Centre

- a. This is a newer building, being opened in 1981. It is a brick built structure.
- b. Domestic hot water is heated by electricity. The kitchen has an independent hot water tank, in the loft space, with a remote on/off switch in the kitchen. The water heating is only switched on when needed. The hot water to the sinks has a point of use electric heater. These arrangements seem sensible.
- c. The boiler is a small domestic type, used only for heating. There are plans to change this when funds are available.
- d. Main area for potential energy savings is the Main Hall heating. This has a large open ceiling space, which will just collect heat. Use of de-stratification fans is recommended, to drive this heat down.
- e. Also in the Hall, there are hot water distribution pipes running around the whole perimeter of the Hall, above door height. These will be giving off heat, but only to the benefit of the ceiling space. These should be insulated.
- f. Cavity wall insulation could also be considered.

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