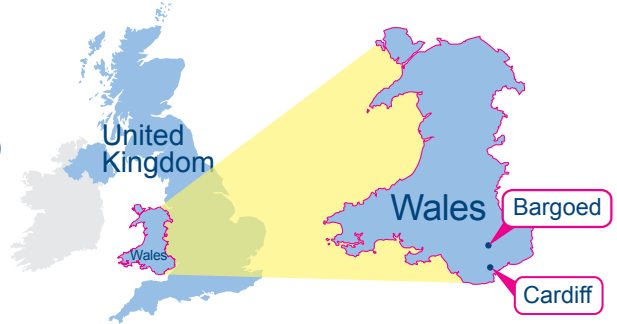


# Exhaust air source heat pumps: Monitoring study

This case study focused on a family house (for two adults and up to three children) on a residential development known as 'Park Crescent' in Bargoed, Wales, UK.



The monitoring methodology and results investigated the comfort conditions, energy use and carbon dioxide emissions when exhaust-air-source-heat-pumps (EASHP) providing space and water heating are used in dwellings.

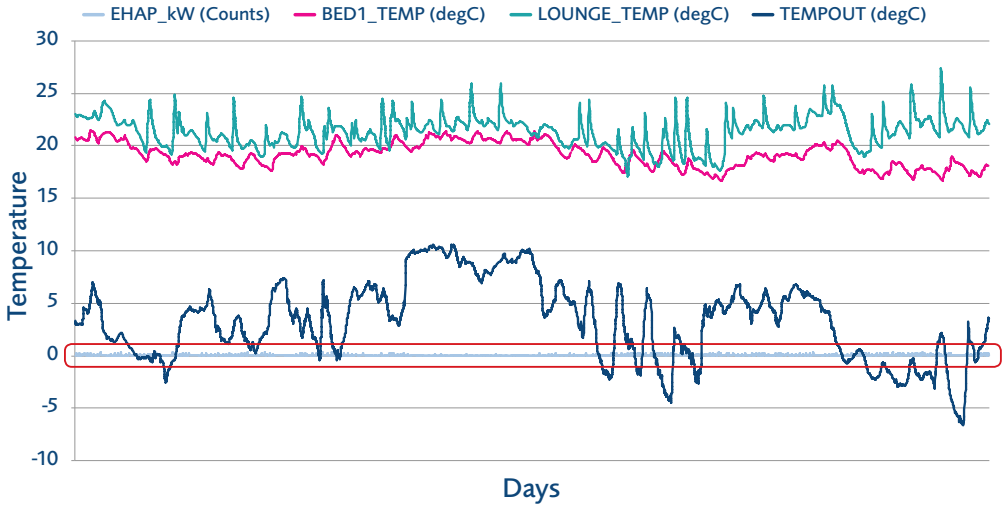
The aim of the research programme was to investigate the development of a monitoring protocol for United Welsh, which could be used to test the environmental performance, energy consumption and occupancy behavior and occupant attitudes at recently completed residential general needs dwellings. The key research questions are discussed in more detail in the paper id: 1653631.

Park Crescent residential development site



For more information go to: [www.uwha.co.uk](http://www.uwha.co.uk)

Physical Monitoring Results for January 2011 - Lounge & Bedroom air Temperature Vs Exterior Temperature; and Power consumption of the EASHP (Y axis: °C; X axis: days 1st to 31st January 2011)



**Come and see the poster: Poster session 1 • 18th October 2011**

### During January 2011:

- The lounge temperature exceeded **23°C** on almost everyday
- Only **175.58kWh** of energy was used for the EASHP
- The total monthly energy cost for the EASHP was only **£22.85=€26.20**
- The total monthly CO<sub>2</sub> emissions for the EASHP was only **95.73kg** CO<sub>2</sub> per unit

### Contact

Dr J.R. Littlewood Email: jlittlewood@uwic.ac.uk  
Telephone: 0044 (0) 29 20 41 66

Mr G. J Davies Email: gdavies@uwha.co.uk  
Telephone: 0044 (0) 29 2085 8184

Kindly supported by:



Llywodraeth Cymru  
Welsh Government

For more information go to: [www.uwha.co.uk](http://www.uwha.co.uk)