

Designing for Occupants, Handover & How People Use Their Homes.....

- Introduction
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- Handover
- How People Use Their Homes
- Questions

Introduction:

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Building
Consultancy**



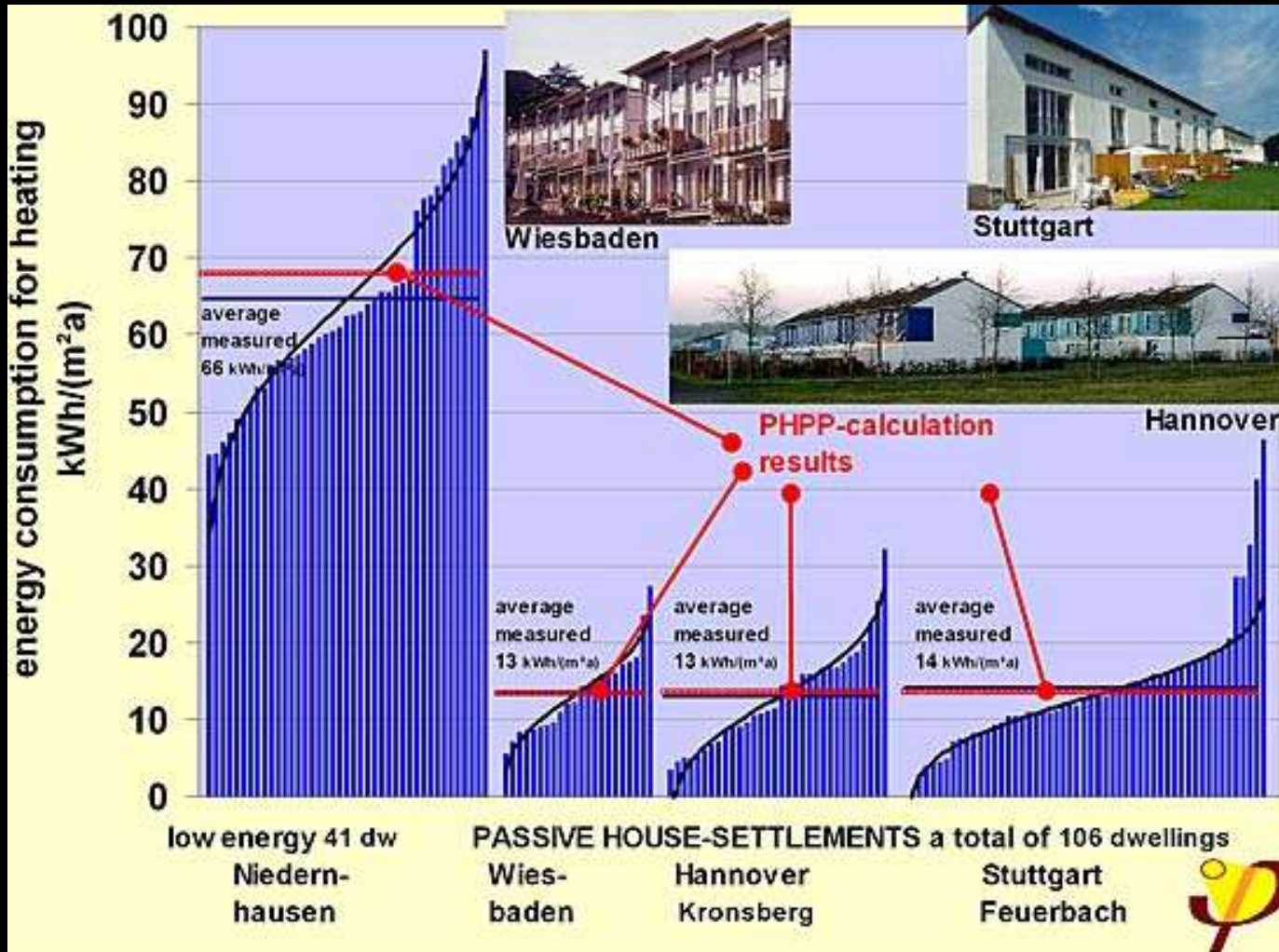


Passive (in the true sense)

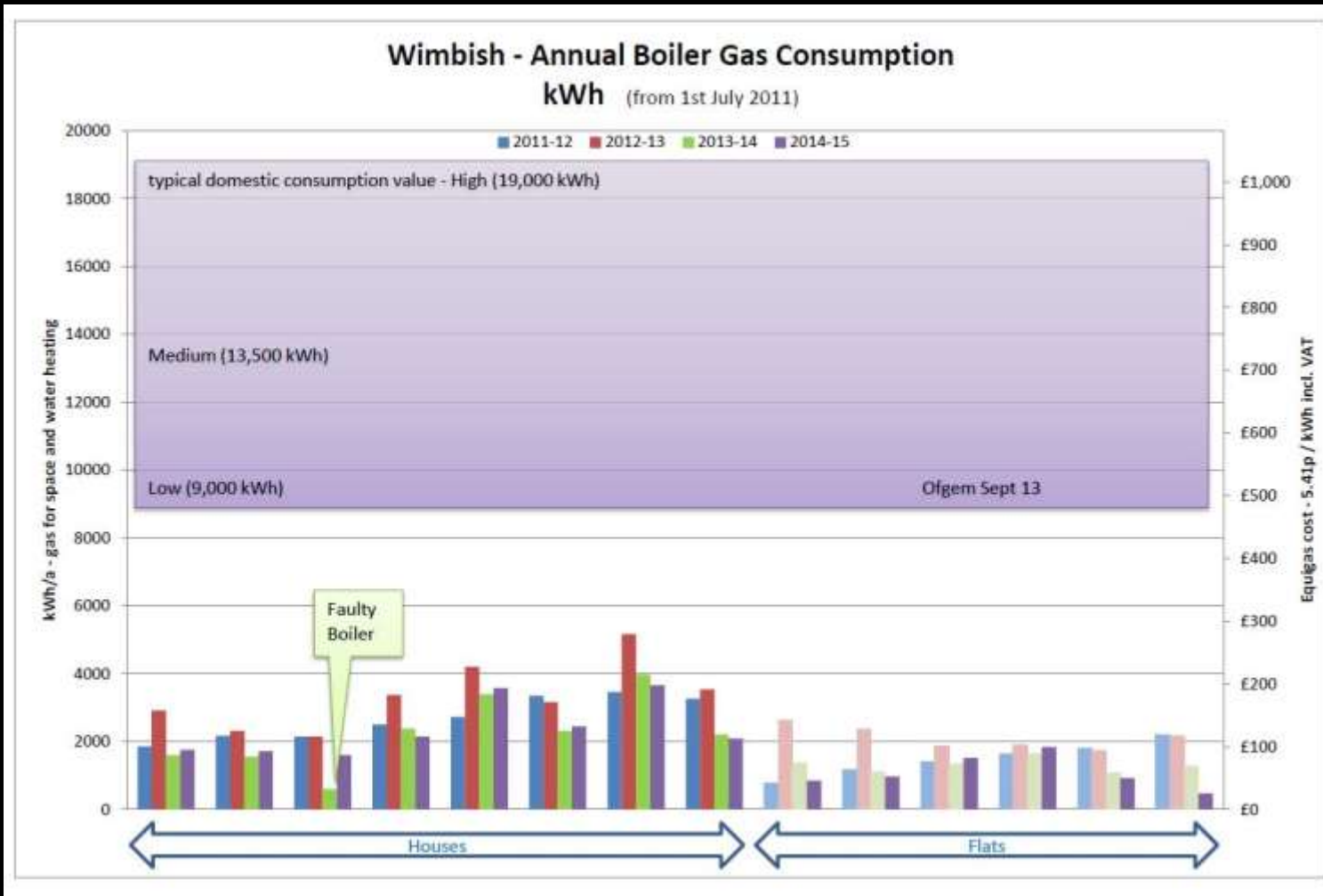
Occupants should be able to use the building intuitively

It should work without excessive user intervention

Passive (in the true sense)



Passive (in the true sense)



Solar shading & Overheating

PARSONS + WHITTELEY

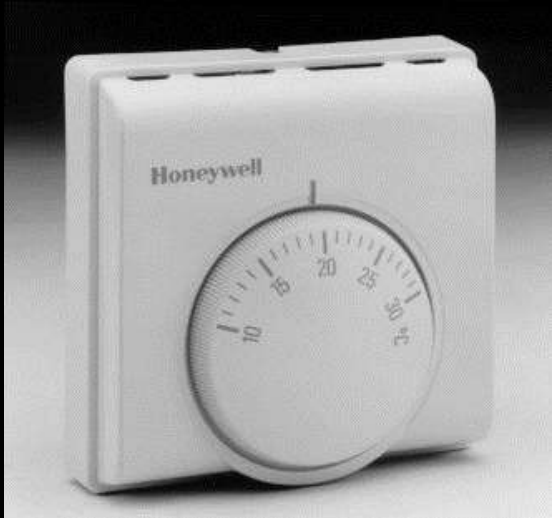


Design for occupancy

Internal Heat Gains:

- PHPP 9 IHG allowance of 50W per dwelling
- Particular benefit for smaller properties

Ease of Use



Ease of Use

PARSONS + WHITTELEY



MVHR Design & Commissioning



MVHR Design & Commissioning



Involve the maintainers.....



What to do if the house is cold

The best way to warm up the house is to ensure that the sun can reach the windows on the back of the house. If you have the outside blinds down, then this shades the windows and might prevent the house making the best use of the sun's heat. Make sure these blinds are raised during the day when you want to keep the house warm.



Also keeping the windows and doors shut in heating periods (winter or cold spells), will help to make sure that you keep the heat in the house. However if you do still need additional heat, the heater for the house is called Genvex and is situated in the cupboard on the landing.

The controller for the Genvex is on the wall just at the bottom of the stairs and it looks like this. The centre of the screen will show the current room temperature.

Press button (K7) to access the temperature, use buttons K3 & K5 to adjust it and press K4 to store the new temperature.

(Most people have this set to around 21 degrees but you should adjust yourself what is comfortable. Obviously having this set too high will use more electricity and your bills may be higher).

If you have raised the temperature setting on the controller, the Genvex will start to warm the air that comes out of the ceiling vents in the Dining Area and Bedrooms and your house should soon reach the temperature you have set. This may take a little longer than in a conventional house but because the house should always be warmer to start with, this is not really a problem.

What to do if the house is too warm

If your house is too warm firstly make sure that the heating is not set too high. In summer or hot periods you could turn it down to 10 degrees to ensure it doesn't come on unnecessarily.

Once you are satisfied that the heating is properly set, you can cool the house down by controlling the amount of heat gained from the sun.

Firstly keep the outside blinds shut during the hot day. Opening them means you are letting the heat in! Lower the external temperature during the day by opening the rear windows during the day so that they reflect the sun's rays. Opening the blinds means you are letting the sun's rays in.



When you are cooler, you can raise the blinds and open the windows. This ensures the house is still safe and secure but you get a through draught of cooler air and this will help to keep it comfortable.

When you leave the house, to ensure you soon learn how to keep the house comfortable, you can raise the blinds and open the windows.

Passivhaus differs from other houses

Most ordinary houses heat up and cool down very quickly, wasting a lot of energy used to heat them in the first place.



That's why they often have heating systems that come on in the morning, go off during the day and then come on again in the evening. Passivhaus has a slower response and doesn't need that type of control, instead it has a constant temperature regime meaning your house will be comfortable all the time but will use a lot less energy.



Handover

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Handover

"Hey moving is fun, isn't it?!" - said no one ever.



som^{ee}cards
user card

Handover

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Checklist

Passivhaus Handover Checklist

Address..... Date.....

Occupants Name.....

		Done
1.	Welcome and Introduction to Passivhaus	
	Insulation	
	Windows	
	Air tightness – reduced draughts	
	Heat from occupation and solar gain	
2.	Heating System	
	Strategy (if house is cold/warm)	
	Windows closed	
	Controls	
3.	Domestic Hot Water	
	Controls	
4.	Cooling	
	Heating Off	
	Windows – purging strategy	
5.	Ventilation	
	MVHR – principles	
	Controls	
	Fan Speeds	
6.	Air Leakage	
	Holes!	
7.	Fuels	
	Gas- Metered	
8.	Electricity – Smart Meters	
	Other	

Monitoring

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How people use their homes

- Better use of space – no cold spots
- More pride and respect for the property
- Definitely some re-bound

Some problems....

- Initially poor M&E design tended to overcomplicate controls
- MVHR as heating and ventilation combined can confuse
- Immersion heater backing up without indication or control!
- Conflicting advice regarding MVHR
- Interference with air flows
- External blinds used for privacy
- Specialist maintenance companies

Some stories...

- The tumble dryer effect
- 35° degrees
- The disbeliever
- “I never want to live in a non-Passivhaus”
- “My bill is lower than your bill!”

Let's hear from some occupants... PARSONS + WHITTELY



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Thank you

Chris Parsons – Parsons + Whittle