

Environmental conditions in 20 social housing units

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Background

- 36 Social housing constructed for low income aged residents
- Estate mix of concrete block and timber framed with bevel backed weatherboards
- Questionnaire administered to 36 residential units
- Environmental monitoring inside 6 homes
- Units 46m²

Demographics

Gender:	72 % female
Ethnic:	83% NZ European
Age:	77% 65-85 yo
Income:	60% <\$25,000, 5% \$25,000-\$50,000, 35% not specified
Hours spent at home:	50% 18-24 hrs 20% 12-18 hrs

Characteristics

Length of tenancy:

- 1-4 years 35%
- 5-9 years 15%
- 9+ years 30%

Occupant / households:

- 90% households 1 person

Dwelling construction: timber framed 55%

- concrete block 45%

When heating used

Characteristic	% of households	No. of occupants
Was heating used when it was cold		
Yes, always	35%	7
Yes, most of the time	25%	5
Yes, sometimes	40%	8
No	-	-

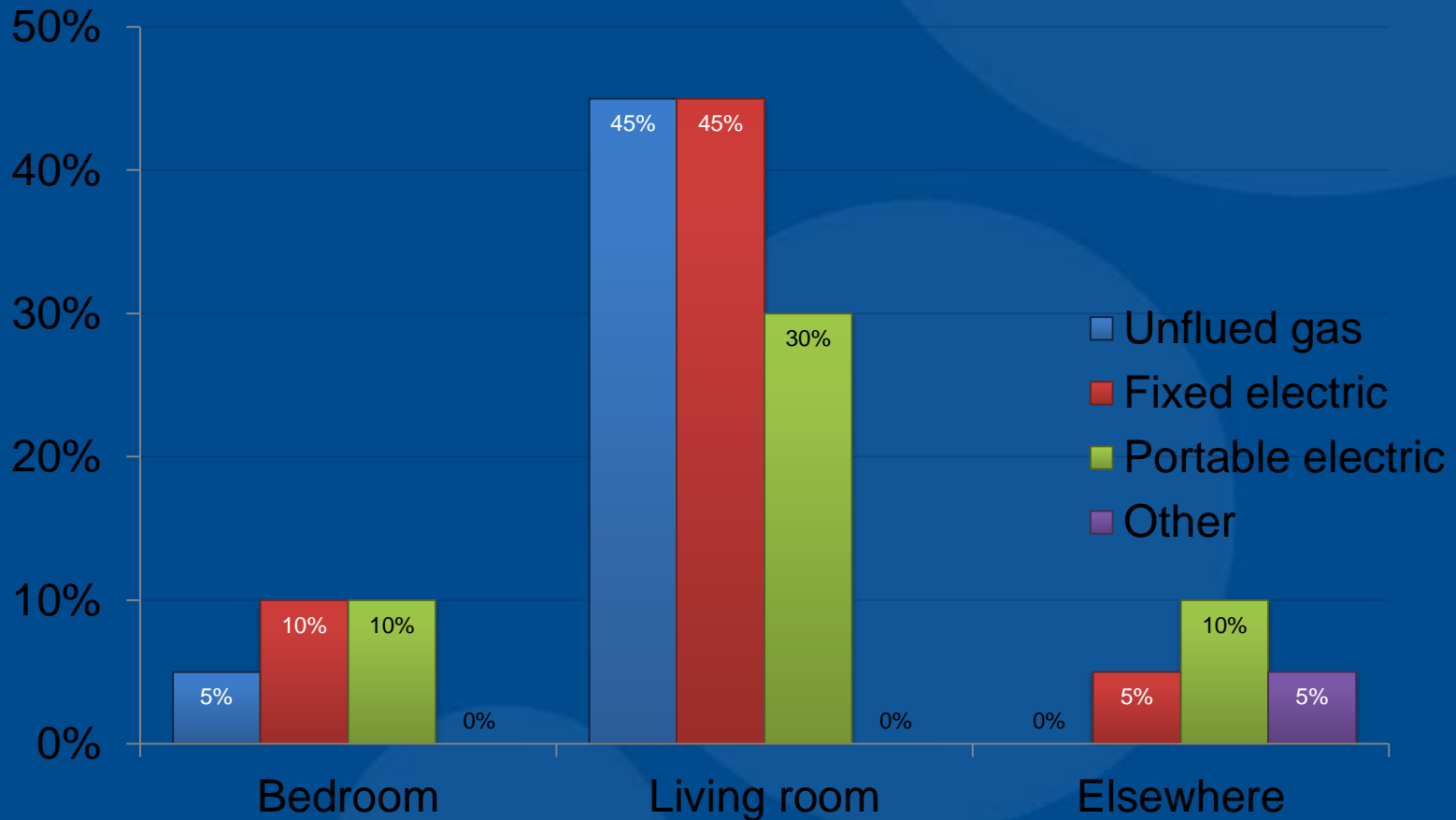
Did your heating make you comfortable		
Yes, always	25%	5
Yes, most of the time	30%	6
Yes, sometimes	40%	8
No	5%	1
Reason for having house colder than you like [†]		
N/A my house was never colder than I liked	15%	3
Cost	45%	9
Heat disappears	25%	5
Like windows open	25%	5
Healthy to have your body cool	10%	2
Only have a heater in one room	55%	11



Characteristic	% of households	No. of occupants
Was your house ever colder than you would have liked		
Yes, always	30%	6
Yes, most of the time	20%	4
Yes, sometimes	20%	4
No	30%	6
Other	-	-
How many times was it cold enough that you shivered*		
Four or more days/nights	15%	3
Two or three days/nights	30%	6
One day/night	-	-
Never	50%	10
How many times did you 'see your breath'		
Yes, always	25%	5
Yes, most of the time	30%	6
Yes, sometimes	40%	8
No	5%	1



Heater usage



Reasons for UFGH

Characteristic	% of households	No. of occupants
Cheap	25%	5
Easy to budget	45%	9
Convenient	50%	10
Looks	10%	2
Portable	25%	5
Heats the whole house	10%	2
Gives 'instant heat'	35%	7
No other choice	40%	8
• n>20 due to occupants being able to select more than one reason		

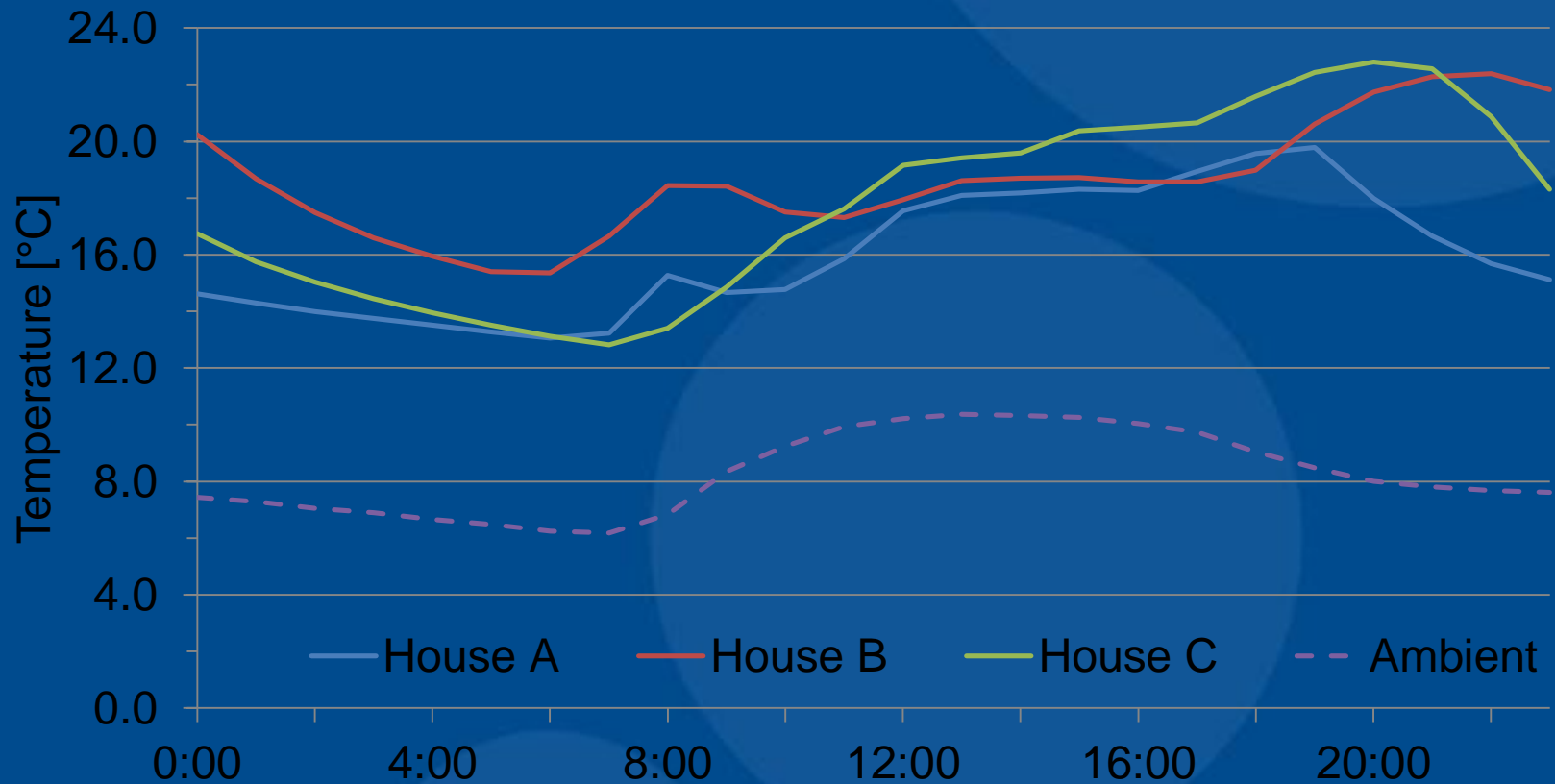
UFGH & ventilation

Characteristic	% of households	No. of occupants
Did you ventilate your living room while using a UGH		
Did not use a UGH	55%	11
No, my house has enough draughts	10%	2
No, that would make the room colder	5%	1
Yes, sometimes opened window/door to outside	10%	2
Yes, always opened window/door to outside	10%	2
Yes, sometimes opened window/door to rest of house	5%	1
Yes, always opened window/door to rest of house	5%	1

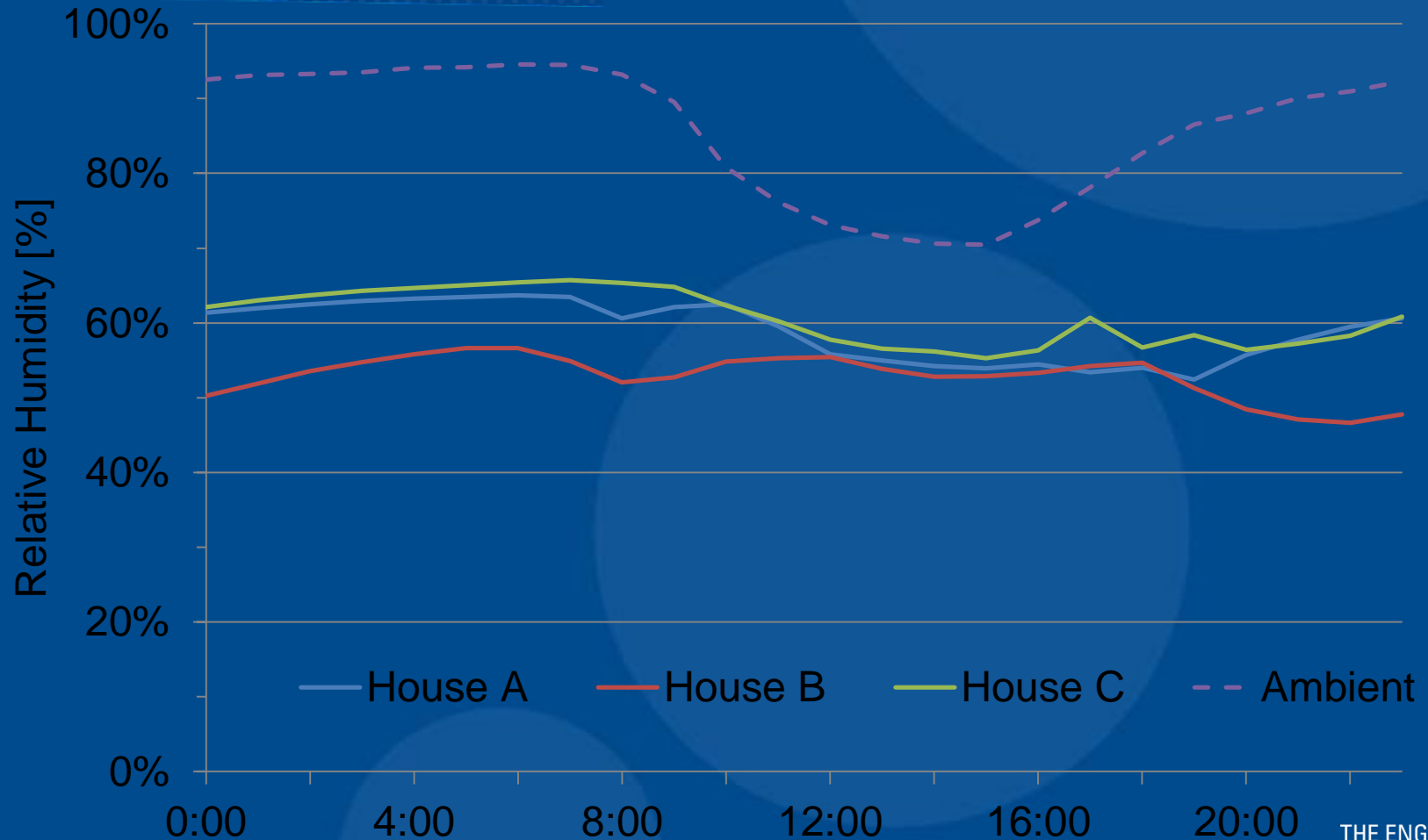
Reducing heat loss

Characteristic	% of households	No. of occupants
Did you use curtains in the evenings		
Yes, thermal drapes	90%	18
Yes, non-thermal drapes	-	-
No	10%	2
Did you use draft-stoppers in the evenings		
Yes, on the living room door	15%	3
Yes, on outside doors	30%	6
Yes, on bedroom doors	5%	1
No	50%	10

Temperature monitoring



RH Monitoring



Conclusions

- A very high level of sensitivity was required to conduct researching on this population as they were fearful that they would face rent increase or lose their accommodation
- 50% reported feeling cold always or most of time
- cost and only having a heater in 1 room being the primary reasons
- 45% shivered 2 or more days/nights per week
- 55% could see their breath most of time or always



Conclusions

- 45% used an UFGH with budgeting and convenience being the primary reasons for these heaters
- Small house volume and north orientation were critical for thermal comfort