

User Experience of Renewables in Social Housing



The Open
University

Context

- Council new build with significant new technologies
- 3 Sites in Aberdeen
- PV and solar thermal
- ASHP
- Grey water recycling
- Mechanical heat recovery
- High levels of insulation
- Existing literature short on the lived experience



Context

- Snagging and maintenance
 - Key concern and motivation for participation in the project
 - During household walk-arounds many interviewees reported ongoing ‘problems’
 - Handover as a source of concern



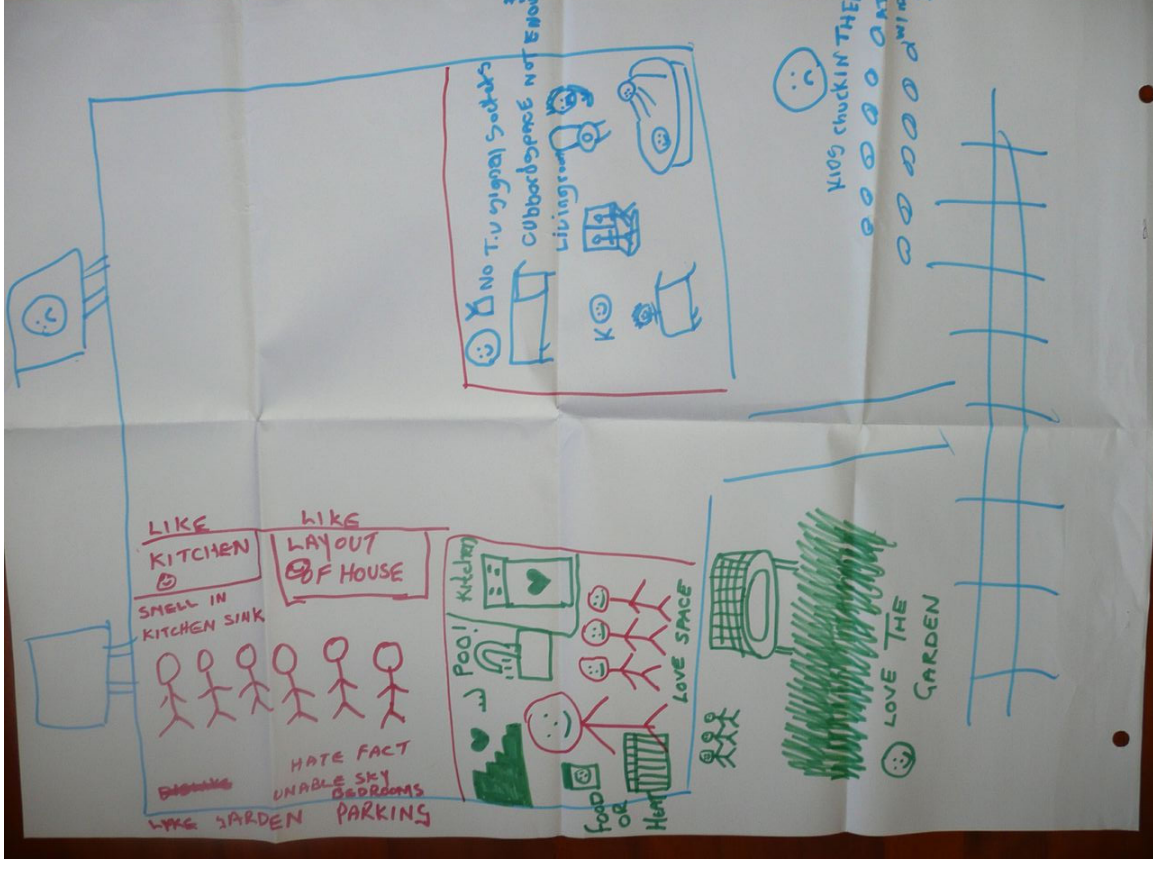
Purpose

- **3 Objectives**
- **Value for Money**
- **The User Experience**
- **Adaptation and Learning**



Methodological Approach

- Grounded approach
- Post Occupancy Study
- Lived Experience
- Move beyond technological problems to user experience



Methods

- Research Period – Jan 2012 – June 2013
- Initial group meetings
- Survey
- Interviews
- Further group meetings
- Technical data



Findings “Cost”

- *Also the electric bills are very expensive even though we were promised to save 60% but at present it is costing us more than our gas and electric in our old house.*
- *Ok yir rent'll be dearer but yi will save sixty per cent on yir electric and its, no, or electrics gone up a vast amount and our rents gone up by 40 quid a week*
- *I'm not seeing any benefit from them. I'd like to see how we're benefiting from the solar panels*
- *Three-quarters of respondents agreed with the statement 'I moved into this home because I thought that energy costs would be lower'.*

- **Group work**



Findings “Control”

- *Yeah, I got a manual.it just gets far too confusing. It can't just be like a normal gas boiler where you just go, “yeah, put it on, I want a boost, go!” It's just so confusing.*
- *I think when I was having all those problems when it was winter time, and it was quite a cold winter as well, I think along with other neighbours that I've spoken to, I think that we'd have preferred if we'd just been able to turn up a radiator ... I think we'd missed this*
- *I only understand how to put it on and off when I want heating, and put the hot water on and off, because I was told by a guy from Dundee when I had no heating to do that, but I know other people have got it timed and things like that, but I didn't want it timed because... different days, you know there's different*
- *Almost twice as many households disagreed with the statement ‘I feel I have control over the energy settings in my home’, as agreed.*

Findings “Comfort”

- *This flat must be one of the best insulated buildings I've been in. To retain the heat and insulation and so on. Triple glazing, wonderful ... for sound and to keep the heat in.*
- *Temperature, control and comfort creep*
- 70% agreement with the statement ‘I feel warmer here than in my last house’,

Household	Average Temperature (Living Room)	Temperature Range
Site A (1)	22.96	20.0 to 24.6
Site A (2)	21.9	19.1 to 24.4
Site A (3)	22.58	20.3 to 24.8
Site B (1)	22.66	20.9 to 25.2
Site B (2)	24.1	18.8 to 27.2
Site B (3)	21.93	18.6 to 24.9
Site C (1)	19.13	14.6 to 23
Site C (2)	19.43	14.4 to 23.8

Findings “IAG”

- *The information pack we got when we moved in here ... it was like ... it was like 'War and Peace'*
- *No one seems to know what the boiler does, everyone tells you like three different ways of doing things, and it's not going to be worth it.*
- *Em, Council Representative did go through the actual heating the timing and things like that em but to be honest I did'nae, because she only showed us the once I couldn'ta tell you how to go and like you know set times and things like that that*

Findings Adaptation and Learning

What have you learned about the technologies?

- *A wee bit, a would'nae say that I understand how the whole thing works*
- *Em, it, it's very high tech, an' very unpredictable*
- *Em well I have'nae had tae really learn anything [pause] it's all set, I don't really have to learn anything, it's all done*
- *.*

Findings Adaptation and Learning

- **Interviewer:** *Okay, so how did you learn how to work all that then?*
- **Interviewee:** *Because the engineers came in so often and I was watching what they were doing. (Site A, interview participant)*
- *like all of us fae here go down 'ere tae [Named Resident], we all gossip and speak if I went out and said, oh 'ers some'in wrong ... they would say oh try 'is, or try 'at, or they maybe had it, d'you know I I mean.*

Recommendations

- The choice and design of systems needs to account for the way people live their lives.
- There is a need to maintain confidence of the residents
- The contribution of each technology to any potential savings in energy use and cost needs to be assessed carefully
- There is a need to recognise that residents will require support to adapt to these new systems.
- Creating effective IAG is an ongoing and developmental process.

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