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Experiencing Eco Home Open Day events: hosting, attending and learning

>working paper_

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Abstract

Eco Home Open Day (EHOD) events are often advocated as a means to inform and empower householders to conduct their own eco-retrofits, helping to lower residential energy use and carbon emissions. This working paper aims to investigate how EHOD events are actually experienced by both attendees and hosts, using in-depth semi-structured interviews. We found that people tended to host open day visits because of associations with the community group organising the events. Many attended these events because they wanted a benchmark for their own retrofit activities, had a general interest in the subject, or targeted more desirable levels of thermal comfort. We also explored what and how the hosts and attendees learnt about retrofit technology, from which three findings emerged: (1) environmental concerns were not driving people to consider retrofitting their home, (2) learning was an ongoing process, and (3) that there were implications of attending EHODs for practical know-how of retrofitting. Indeed, whilst there is a clear need to reframe our expectations of those attending EHODs, we argue that EHODs have the potential to equip attendees with various forms of practical knowledges that may help in conducting eco-retrofits. We also suggest that more research is needed on the ways different actors (e.g. promoters, organisers, funders) 'do' EHOD or similar events.

Keywords

Retrofitting; domestic energy consumption; low energy housing; thermal comfort; knowledges; community groups; public engagement; practices.

1. Introduction

The UK has set challenging climate change mitigation targets, with the UK's annual greenhouse gas emissions in 2050 set to be 80% lower than 1990 levels (HM Government, 2008). Currently, the UK's residential sector is responsible for almost 17% of emissions (2013 provisional figure) (DECC, 2014). Therefore, to achieve the challenging 2050 target – especially without constraining emissions from other 'priority' sectors (e.g. flights) – significant reductions are required (HM Government, 2011). However, the UK's housing stock is one of the oldest, and hence most energy inefficient, in the world (DECC, 2013). Thus, reducing residential emissions represents a considerable retrofitting challenge. Eco Home Open Days (EHOD) events have been presented as a means to inspire more households to invest in residential retrofit (both energy efficient and low carbon) technologies. For example, this assumption is the basis for the UK's Department of Energy and Climate Change (DECC) funding the Green Open Homes network (2014), which aims to support EHOD events across the country.

EHOD events have also been referred to by other names, depending on who is organising them. UK examples include Bristol Green Doors (2014), Colchester Green Homes (2014), Brighton and Hove's Eco Open Houses (2014) and the SuperHomes network's Open Days (2014). Many international networks are organising similar events, such as the International Passivhaus Open Days which includes open homes in Chile, the US, China, Japan and New Zealand,

amongst others (iPHA, 2014). An EHOD event involves householders opening their homes to share their eco-retrofit experiences with attendees. EHODs are intended to inspire people to retrofit their own homes, through exposing them to innovative retrofits and an opportunity to ask questions of those who have already done it. We argue that the expectation here is that this will remove the barriers (e.g. associated with not having sufficient/appropriate knowledge) that prevent householders from retrofitting. If we continue with this position, then the removal of such barriers could thus be argued as representing an inspirational moment, which would mean that EHOD attendees are considerably more likely to conduct their own eco-retrofits.

In a similar way to how the open day events are marketed more widely, research has often assumed that a key reason why householders are not retrofitting their homes is because of a deficit in their knowledge, i.e. they do not know enough (e.g. Bergman et al., 2009; Palmer et al., 2013). Thus, EHOD events are commonly argued as a means to fill that deficit, through providing the 'right' sort of information. Moreover, many researchers would also posit that the open days themselves may inspire and enthuse attendees, provide motivation, and ultimately change their beliefs and attitudes towards eco-retrofitting as a whole (as per the 'Attitudinal Fix' (Hyde, 2014)). Both perspectives imply linearity: from attendance, whereby one is said to 'learn', to retrofitting (Figure 1). As such, there has been much EHOD research on 'learning' (e.g. Berry et al., 2014), with a dominant focus on retrofitting knowledge or on changing one's attitudes to retrofitting.

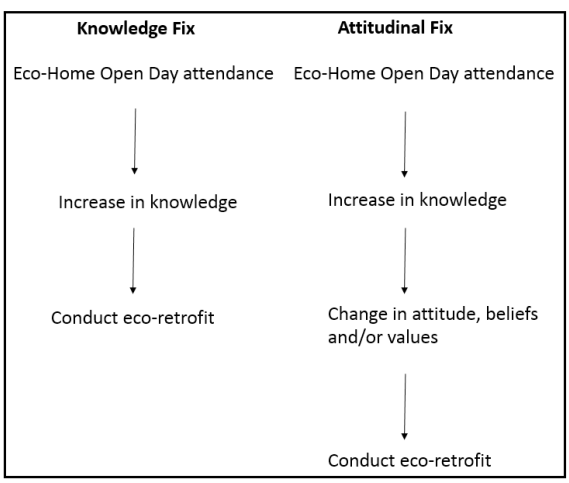

Figure 1 – Typically assumed linear decision-making models for individuals attending Eco Home Open Days

However much of the sociological literature considers retrofitting to be products of everyday life and what people do (not think) (e.g. Judson and Maller, 2014; Vlasova and Gram-Hanssen, 2014), and thus would argue for a re-framing of how and why people participate in such events, as well as what exactly they learn through this participation. We believe this needs further exploration in the context of EHODs. We also note that, as far as we are aware, no research has been conducted into the hosts' experiences of such events, with the EHOD literature focusing on householders who occupy non-retrofitted properties (i.e. EHOD attendees) (e.g. Fawcett and Killip, 2014).

This working paper therefore aims to investigate how the EHOD events are experienced by both the attendees and hosts participating in them. This aim has three constituent objectives (that also form the core structure of this paper), which specifically explore:

1. Why do hosts participate in an EHOD event?
2. Why do guests participate in an EHOD event?
3. How does such participation contribute to learning regarding retrofit technologies?

2. Methodology

Using a case study approach, we explored the EHOD concept by studying one specific initiative: Cambridge Carbon Footprint's (CCF) annual EHOD event. CCF began conducting its EHOD event in 2008, and has since begun accumulating a steadily growing audience. A series of five in-depth interviews were conducted with six event hosts during July 2014 (22-110 mins, average 44 mins). The interviews were semi-structured and usually involved the householder taking the interviewer on a tour of their home, during which they reflected upon their EHOD event experiences. Of the six EHOD event hosts, all but two had attended at least one of CCF's previous EHOD events, which allowed for two main experiences to be investigated: event hosting and event attendance (see Table 1). In this working paper, interviewees are referred to using randomly assigned numbers (1 – 5), as a means of preserving anonymity and adhering more widely to best practice ethical considerations.

3. Findings and discussion

3.1 Why do hosts participate in an EHOD event?

When the rationale behind hosting these events was raised with the open day hosts themselves, most seemed to justify it was because of their home being "eco". However, it became clearer that across our interviewees the term, "eco", had contrasting meanings and expectations attached to it (this supports the findings of others, such as Taufique et al. (2014)). Further to this, most participants had never considered their homes to be "eco" until CCF approached them:

> *'I was approached by CCF and they said would you like to open your house into the Open Eco Homes, and I said it isn't an eco-house, and they said oh yes it is, and I said, oh do you think so, oh alright then.' (1a)*

Once homeowners realised their homes classified as "eco", the interviewees seemed to imply that it was logical or almost their 'duty' (as "eco" homeowners) to open their homes. This was certainly the case for one particular interviewee, who had acquired a considerable amount of experience (doing his first eco-retrofit in 1983), and described himself as a pioneer helping to 'create' the eco-retrofit market, as well as inspiring others to do so through the open days:

> *'I'm sure one day there is going to be a better way of doing [eco-retrofits]. So essentially I've been waiting for the market to pick up, but now I kind of find myself being potentially one of the creators of the market [through helping others to follow my lead and retrofit their homes too].' (4)*

However, whilst this duty to inspire others was a significant influence for one of the open day hosts, this was not the case for our other interviewees. Indeed, whilst they may have argued that they were opening their homes to 'give something back' (3) through helping to educate interested parties on how they did their retrofit and achieved their "eco" dream, this argument was

Table 1. Household and dwelling details for Eco Home Open Day (EHOD) interviewees

Participant reference no.	Single/joint interview	Times attended EHODs	Times hosted EHODs	Gender	Household size	Tenure	Property type	Property age
1a	Joint	0	5	Female	2	Owner-occupier	Semi-detached house	Victorian
1b	Joint	0	5	Male	2	Owner-occupier	Semi-detached house	Victorian
2	Single	3	1	Male	1	Owner-occupier	Terrace house	1930s
3	Single	1	1	Male	4	Owner-occupier	Detached bungalow	1920s
4	Single	1	1	Male	2	Owner-occupier	Semi-detached house	Victorian
5	Single	2	1	Male	2	Owner-occupier	Terrace house	Victorian

inherently contradicted by those same interviewees acknowledging that they never thought of their homes as "eco". Since their stated ("eco") rationale did not accurately reflect why they participated as open day hosts, it is likely that other, perhaps unconscious, influences underlie their participation. This sort of response in the interview may also be a product of standard interview methodology biases (e.g. associated with trying to 'please' the interviewer).

All of our interviewees had prior affiliations with CCF before hearing about (and hence becoming involved with) the EHOD events. It was this affiliation that was central to participants volunteering as hosts:

> *'I volunteered for CCF technically, so they knew me personally, and they knew I was having a lot of work done, so they said you know, would you like to be an open home and up until that point I hadn't even considered that we were an eco-home.' (1a)*

> *'Well I think a big influence [for hosting] is I've been loosely associated with Cambridge Carbon Footprint.' (2)*

We are unable to determine why this affiliation played such a key role in recruitment. It could, for instance, be due to a sense of obligation (e.g. personal relationships made it harder to say no), and/or they may have simply been supportive because they shared the same values and visions as CCF, which could have been both a product of and reason for them joining CCF in the first place. This thus begs the question: what do CCF, or other similar organisations, want to get out of organising EHOD events?

3.2. Why do guests participate in an EHOD event?

If we assume the linearity implied by much of the EHOD rhetoric and research is true, we would assume that attending the event will make it considerably more likely that one will conduct an eco-retrofit themselves because of it (1) filling a gap in an individual's knowledge, and (2) inspiring an individual to apply that new knowledge.

However, for half of the interviewees, the event itself did little more than provide a benchmark for work they were in the process of completing (and thereby supports the findings of Berry et al. (2014)):

> *'I already knew about most of it. We'd already planned most of the aspects ourselves. So it was more about confirming, looking at what other people had done, just to sort of compare notes before we actually started doing our building work.' (3)*

Since these interviewees were already undertaking their own retrofits, they were arguably already sufficiently 'inspired', in addition to already having an understanding of what and how to do a retrofit. Therefore attendance was usually more about satisfying an interest. The event provided the time and space to explore the retrofit topic in more depth, even though they had already completed their eco-retrofits. As one participant remarked:

> *'[I am interested in attending] because I've been following the [eco-retrofit research] literature for thirty years or more.' (4)*

This particular participant was so knowledgeable on eco-retrofits that when he attended one home as a guest, he ended up talking more and offering more advice than the EHOD host himself. This was despite the guest having no professional experience. The guest was simply very interested in retrofitting and thus attended open days as part of being exposed to enjoyable conversations on a topic for which he was passionate. This particular example challenges the assumption of hosts being 'all-knowing' and guests attending these events to soak up that knowledge.

Therefore attendees are not necessarily attending the open days with a particular outcome in mind (e.g. doing a retrofit). Some are attending to satisfy a general interest in retrofitting or eco-buildings, which may or not have been nurtured through being members of the CCF organisation. But for the few that did attend the open days to learn how they could go about retrofitting their own homes, it was not the retrofit technologies that they were interested in. Instead, it was often what the retrofit technologies could practically offer their everyday lives, in particular with regard to thermal comfort.

3.3. How does such participation contribute to learning regarding retrofit technologies?

This section is based around three salient learning-related themes. Specifically, we talk here about learning as a product of participating in the EHOD events, through which new knowledge is gained on retrofit technologies, and this explicitly includes when the retrofit technologies are not actually the direct focus. However, whilst both hosting and attending of EHOD events are both implicitly considered in this sub-section, there were more emergent findings from the attendees-side, perhaps because of

the EHOD events fundamentally being about imparting new knowledge to that 'audience'.

Firstly, learning was not about how to be "eco" or to deliver an "eco-friendly" house. Learning about retrofitting instead usually translated to learning how to achieve thermal comfort within one's home. The technologies typically found in these non-retrofitted homes were seemingly not providing the households with desirable levels of thermal comfort. These technologies included both the more structural technologies associated with the thermal envelope of the home (e.g. foundations, walls, roofs, windows, insulation) as well as the non-structural technologies associated with the home's space heating (e.g. boiler system):

> *'It was the comfort factor. I'm a real wimp when it comes to cold, but it was a draughty old house, and the old boiler system could not heat it.' (1a)*

> *'It isn't necessarily a real eco house as such. The motivation wasn't to create an eco-house; we just wanted a well-insulated family house that would, you know, suit our needs... its warm, comfortable and lower running costs so maybe the eco aspect was secondary, but we definitely wanted it to be well insulated.' (3)*

Such was the dominance of thermal comfort that the interviewees almost always spoke of it when discussing insulation upgrades, although there was much lesser discussion of thermal comfort in the context of renewable technologies, which only emphasises that technologies gain significance because of how and what they are used for.

It is thus interesting to note how retrofitting technologies, and the knowledge associated with installing and operating them, were sought to rectify households' concerns about thermal comfort. This is a stark contrast to either re-negotiating what they deem to be thermally comfortable (e.g. aim for lower indoor temperatures), or re-negotiating how they achieve that thermal comfort (e.g. wearing more clothes). Perhaps there was a preference for learning about retrofitting because it more easily maintained the status quo of everyday life.

Secondly, we found learning to be an ongoing process, as opposed to being shaped by single moments of inspiration. For our participants, there appeared to be a series of influences that led them to either conduct an eco-retrofit and consequently host an EHOD, or consider an eco-retrofit and consequently attend an EHOD. It was not therefore that EHOD attendance was linearly leading them to retrofit their homes. Indeed, for most attendees, the process towards conducting eco-retrofits began well before attending the open days themselves, with the EHOD event only one of many contributing influences within a much wider and complex process of ongoing learning:

> *'We were already well underway planning [for our] house, so I knew a lot about much of the stuff... We bought [our house] really with a view to doing it up. We knew we wanted to live in it as it was, and we'd already done a lot of planning. I remember asking [the host during an EHOD visit] some questions about a few finer details, because they were relevant to what we were thinking of doing.' (3)*

EHOD events are therefore not only about inspiring individuals, although could be, for some, about providing a baseline for what could be done. These comparisons between an attendees' home and a specific open day home were allowing the attendee to gain further knowledge on potential institutional and technological struggles (e.g. local contractors, supply chains, preferred products, operational difficulties).

Thirdly, there are many calls for the rise of initiatives that provide people with the necessary "know-how" (*practical* knowledge, often acquired through experience) to save energy (e.g. Royston, 2014), which is markedly different from the traditional focus on "know-what" (*theoretical* knowledge, often acquired through information from an expert). Thus, Wilhite and Wallenborn (2014, p. 62) argue that energy policies need to expose people 'to new ways of doing things, such as demonstration home projects allowing people to observe and experience new technologies and life in low energy houses'. However, we have found here that these particular EHOD events have not being providing much know-how to their attendees due to the open day visits largely consisting of a walking tour that almost exclusively involved the host talking at and lecturing the guests (know-what). It was therefore more about 'knowledge transfer', rather than a more interactive form of 'knowledge exchange'. To provide know-how, these visits would need to be more engaging and experiential, so that the guests could tacitly acquire the skills of how to practically use these retrofitted technologies (rather than just have a good understanding of what they could theoretically do).

We also suggest that, whilst vital, we should not regard know-how as a magic bullet solution either, as has been shown by our thermal comfort discussion for instance: people will not automatically opt to retrofit their homes on the basis of having enough knowledge (be it practical or theoretical) about retrofits.

4. Conclusions

This working paper investigates how EHOD events are experienced, by both the attendees and hosts participating in them. Through EHOD participant interviews, we explored: why hosts open up their homes; why guests attend these open days; as well as what and how they learnt about retrofit technologies through this participation.

We have found that the proposed linear relationship between one attending an EHOD event and one retrofitting their home is false. Indeed many of those attending the events are actually already involved in the retrofit process, which sometimes led to the attendees (not the host) playing the part of the 'teacher'. Further, while "eco" ideals may have been an afterthought (a set a values that could have even been created by the doing of the retrofit itself – c.f. Hards, 2011), it was the mundane desires and expectations relating to thermal comfort that were mainly responsible for engaging most people with the open days. Therefore thermal comfort was much more of an influence than any "eco" aspirations in householders considering to retrofit their homes (and then subsequently attend or host an EHOD). Another key influence in choosing to participate in these open days, and in particular host, was a close association with the community group that was organising the series of events.

Therefore, there is a need to re-frame expectations of those attending, so as to appreciate that attendance is not a lone and powerful stimulus in convincing someone to retrofit their home. We have found that EHOD events are often just one potentially useful step within a much wider and longer process of learning, and thus the expectations of many 'eco-related' policies relating to sustainable architecture and consumption in the built environment need to be adjusted accordingly. Furthermore, initiatives aiming to reduce energy consumption and/or carbon emissions (such as EHOD events) often place an emphasis on the term "eco", which we have shown here to hold relatively little

traction with householders. Indeed, even those who were closely associated with a local environmental group tended to spend much of their interviews talking about thermal comfort and its implications for an 'improved' everyday life, as opposed to how retrofitting fulfilled long-lasting "eco" aspirations.

Nevertheless, EHOD events could be useful in developing more practical knowledges of how to retrofit one's home and then operate those new technologies accordingly, but only if steps are taken to ensure it is as interactive and experiential as possible (i.e. that it is not a lecture and that there is some degree of exchange and active engagement). As part of this, an additional contribution of EHODs could be attendees learning more about the institutional landscape and how best to manage it, including the sourcing of materials, components and contractors in local supply chains.

In developing this line of research, we advocate more research on the different ways in which different actors participate in (and 'do', albeit in different ways) EHOD or equivalent events. Too much emphasis is traditionally placed on a particular target audience (e.g. generic householders who we need to start retrofitting their homes), which is in spite of an array of interconnected actors that are experiencing, and thereby potentially being influenced by, the initiative in their own particular ways. For instance, how do the event funders, organisers and marketers experience such retrofitting initiatives? Moreover, why do these participants wish to become involved and what are their expectations of the events? Whilst we can only speculate for this specific case study, by marketing the events around the "eco" home concept, they perhaps assumed that environmental aspirations were a sufficient 'hook' to convince people to attend and consider retrofitting. It would thus be interesting to explore potential 'fictive' visions that organisers have of the "eco" concept, as well as those hosting and attending these open days. To reiterate, such initiatives involve many different actors in usually complex and interconnected ways – which is much messier than the oft assumed linear relationship between host (teacher) and attendee (student) – and thus further research needs to more systemically account for shared experiences.

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