

Border conditions of transitional housing: centering the lived experience of residents

Reflections on social innovation from a UK case study

architecture
social innovation
housing
comfort
edge conditions

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Local governments in the UK are experimenting with innovative modular housing solutions as a way to provide transitional accommodation for the most vulnerable amidst an unending housing crisis. Praised as a quick if not temporary fix, such solutions are often appraised for their sustainability performance, yet their impact on residents' lives and socio-technical legacy remains unclear. This paper is envisaged as a first step in unpacking residents' perceptions of comfort in the transitional setting - at the frontier of housing precarity - across boundaries of outdoor and indoor spaces. A conceptual contribution, it focuses on the relationship between expectations of design and delivery, dignity and resilience for end-users; with research methods involving two phases of discovery and reflection.

The initial phase was based on narrative methods that explored perceptions of comfort involving eight residents living in a modern methods of construction (MMC) development built in 2020 in England. The second phase involved recorded dialogues and reflections between the authors on the socio-political dimensions embodied within the research insights gained in phase one. Through a dialectical exchange, and co-analysis of an assemblage of concepts in literature review and in the field, a set of reflections emerged. The outcomes of both phases led to two key findings. First, the research helps articulate expectations of comfort as embodied between diverse social boundary transitions experienced through different spatial scales (outdoor and indoor, macro and micro). So far literature on perceptions of comfort has tended to focus on specific settings - indoor or outdoor with transitions and boundaries viewed mainly through a physiological rather than social lens. Second, the paper emphasises the need for qualitative indicators, to appraise social innovation in the built environment, beyond performative examples.

1. BACKGROUND

Globally, municipalities are struggling to provide adequate housing solutions for the most vulnerable (Madden and Marcuse, 2016). In the UK many are increasingly developing rapid solutions that take advantage of innovative construction and modular techniques. Such innovations in the social sector sit within a broader field of what has been described as “compensatory” homemaking to have emerged in the post 2008 context that includes micro-living and co-living; often prefabricated, temporary and mobile accommodation offered to homeless and vulnerable families by local governments (Harris et al., 2019). While these homes have been praised as a quick fix to home vulnerable citizens in lieu of more permanent housing solutions, they lay bare the fragile nature of housing supports, and fragmentation of societal housing infrastructure in the wake of the neoliberal turn in new public administration that has set the system in a state of permanent crisis (Harris et al., 2019). Inconsistencies in the provision of social housing across UK municipalities create situations for dwelling at the frontiers of society; where remnants of public land are sites for testing new types of housing construction and provision. This paper considers the border situation of a transitional housing development rapidly constructed at the margins of a public car park – taking cautious steps to reveal insights based on the lived experience of residents in this edge condition.

The housing crisis in Britain represents the biggest single barrier to young people in accessing the housing security needed to start long-term relationships and families, particularly impacting key workers in precarious sectors. Harris and Nowicki (2020) note that while housing trends may be responding to the increase in single adults, this is also driven by the housing crisis. The growth of micro-living and related transitional housing as sustainable solutions to the crisis overlooks the significance

of social dimensions of such concepts - and their ability to impact the long-term security and comfort of inhabitants - even in light of their often good environmental performance on sustainability measures. Through a two phased qualitative approach, this study attempts to shed light on the lived experience of inhabitants and their experience of comfort in their homes. Positioned as innovative solutions to the housing crisis, how do these homespace impact individuals’ well-being and sense of belonging; comfort and control; dignity and resilience; and do they offer a sufficient basis for residents to develop sustainable long-term pathways for living that allow for necessary accrual of social capital? When considered alongside extant literature on neoliberalism and the housing crisis, important questions are raised about comfort and dignity in societal housing, and the nature of sustainable developments for vulnerable communities at risk of homelessness.

This paper focuses on a housing development in England, seen to take an innovative housing approach to forming a healthy, sustainable, self-managing community in which individual young people can thrive. The development that acts as a case study, was built according to modern methods of construction (MMC), and located at a councilowned car park. It consists of affordable and low-carbon, modern design apartments, installed as a (semi)permanent living space for young workers and vulnerable households (at risk of homelessness). Lovell understands (2012) modern methods of construction (MMC) as a process that involves off-site manufacture of components for house building in a bespoke factory. MMC typically refers to two main product areas; panels (ready-made walls, floors, and roofs often produced with wiring and plumbing inside) and modules or pods (comprising ready-made rooms, that can be pieced together, where fittings already added in the factory). While prefabricated housing has been used in the United

Kingdom since the postwar period, problems arose over the quality of building materials and poor workmanship, leading to negative public perceptions. Lovell (2012) notes that many of the benefits of contemporary MMC for housing are as yet unproven or contentious. Green (2022) notes the ambiguity in definitions for MMC, noting its relationship to earlier forms of prefabrication and industrialisation in the production of mass housing, how that it is only through critique that the label can be properly defined and its limits exposed. That author cautions however, that decisions made in the name of MMC have long-lasting material consequences for building users.

The findings of this study shed light on the need for meaningful and ongoing investment in the housing sector, and question the value of sustainability - where focus is placed mainly on environmental, economic or technical aspects, overlooking dimensions of social sustainability and related performance of such developments in affecting the resilience of individuals at risk of, or experiencing homelessness.

2. NEOLIBERALISM AND HOUSING CRISIS. BUILDING ASSEMBLAGES OF HOME

2.1 Homelessness and Dignity: housing vulnerable populations

Public health officials have found that trends in homelessness remain stubbornly high despite policy initiatives to end homelessness, necessitating a complex systems perspective in research that can provide insights into the dynamics underlying coordinated responses to homelessness (Fowler et al. (2019). In order to achieve broad and sustainable reductions in housing insecurity, homelessness prevention must be fully integrated

into existing service networks through prevention-oriented policies that extend the housing first philosophy. Indeed the authors note how rights-based housing policies provide the most conducive framework for broad-scale prevention, citing duty to assist legislation enacted in Wales that ensures households seeking housing supports receive best effort responses, which include counselling plus short-term housing only if necessary (Mackie, 2015). For Fowler et al., (2019) homelessness represents a global public health challenge, in which opportunities for prevention are missed due to an overwhelming pressure on the service system. They found that feedback processes challenge efficient service delivery, and proposed a system dynamics model that tests assumptions of policy interventions for ending homelessness.

In an ecological survey of families in transitional housing, Teo and Chiu (2016) note how the home is not just a physical dwelling as it influences one’s feelings and relationships, while at the same time, the feelings and activities occurring in that lived space make it a home. Following other researchers, they see homelessness as a psycho-social-spatial entity. They note how the experience of homelessness can be described as a lack of comfort, freedom, privacy, independence, and control over one’s daily activities. Findings from a Canadian study on associations between perceived quality of living spaces among homeless and vulnerably housed individuals indicate that housing policy should prioritise access to high-quality housing that takes into consideration individuals’ subjective experience of their living spaces, in addition to their health care needs and the physical conditions of their living spaces (Magee et al., 2019). In a longitudinal study, Magee et al.’s (2019) key finding was that, over time, both higher mental and physical quality of life were associated with more positive perceptions of one’s living spaces, as reported by a sample of individuals who were homeless and vulnerably

housed at baseline. Perceived social and physical qualities of living spaces vary, meaning that someone who is homeless may have more positive perceptions of their living spaces compared to someone who is housed. The authors explain how a homeless person living in a tent city may feel safer and more socially connected compared to someone living in a single room occupancy hotel or rooming house, suggesting a focus on housing an individual with a greater consideration of quality of life and subjective experience (Magee et al., 2019).

Indeed embedded stigmatisation of homelessness and the acuteness of the housing crisis has led to widespread criticism of systems of housing production - associated with calls for more dignified solutions. In a paper on new organisations for housing justice in neoliberal Sweden, Listerborn et al., (2020) frame the resistance of housing deprivation as a cry for dignity, citing an earlier contribution from bell Hooks (1991) on the importance of understanding the sites of resistance, seeing ‘homeplaces’ as sources of dignity, agency, and solidarity from which resistance can be conceptualised and organised. Listerborn et al. (2020) emphasise the equally important meaning of place and

social relations that are forgotten in the act of displacement, recalling Davidson (2009) on the spatial re/dislocation of individuals in literature on gentrification. For those authors, the concept of homeplace refers to a site of comfort, safety, and grounding, but also of dignity. “Reinforced by structural economic, social, and political inequalities and power relations, people are exploited, marginalised, and denied dignity and respect by the dominant culture” (Listerborn et al., 2020:125). As a basis for more socially innovative housing policy, they note health research demonstrating that marginalised populations experiencing a cumulative lack of dignity suffer from poorer health, citing Jacobson et al.’s belief (2009) that a geography of dignity can be mapped onto every urban geography.

An important aspect to consider when approaching this research was equally the location of the modular solution examined in the borderlands of a car park, notions of situated dignity, and in this case the capacity for the development to be integrated in a community setting. For Rabello Lyra (2021) a dignified home embraces the emotional dimension of a healthy structured neighbourhood and

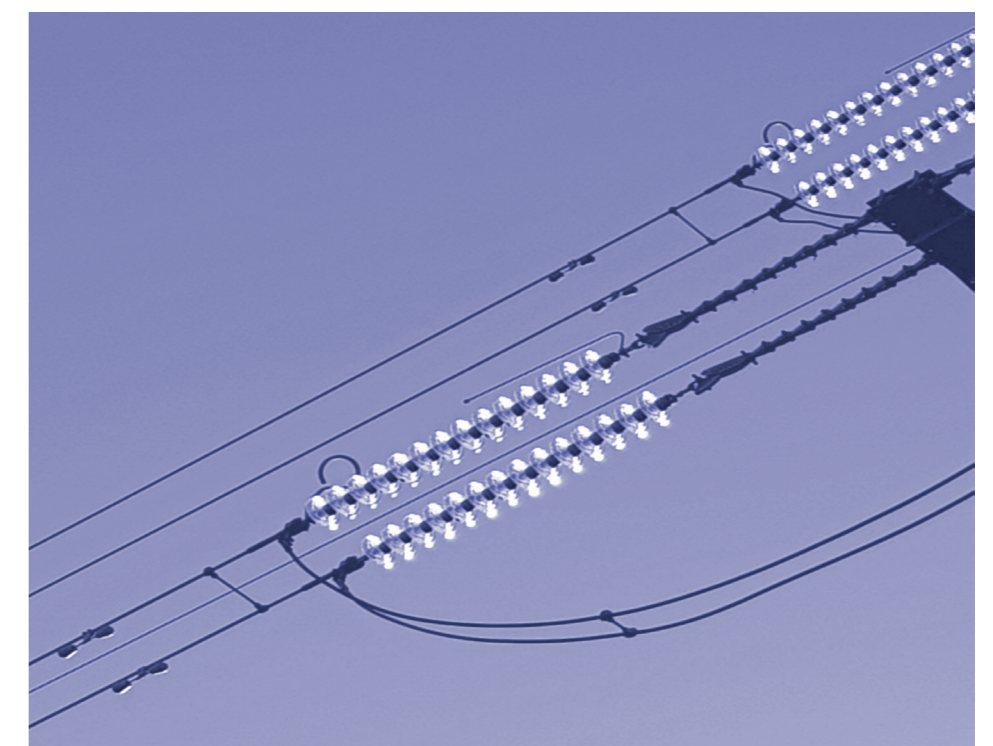


Fig.1 - Border connect - disconnect.

house altogether: the family needs in the framework of a neighbourhood context matter for the emotional wellbeing of a place people can call home (Alexander and Davis, 1985). She raises important questions regarding social aspects that define home within the urban dignity design search of social housing, particularly how can the needs of socially vulnerable families be translated to their neighbourhood morphology; and how can that scenario assure them a sense of community and pride they can call home? Rabello Lyra (2021) proposes design in which physical characteristics imply empathy as an emotional space (Van Liere and Dunlap, 1981). In fact homelessness and trauma can be interconnected among people who have experienced long-term homelessness: because the incidence of previous trauma among homeless individuals is very high; and the experience of long-term homelessness itself can be traumatic due to the inherent dangers of sleeping unsheltered and the risks of victimisation (Bollo and Donofrio, 2022). Trauma among people who have experienced long-term homelessness is endemic, and has brought about a set of Trauma-Informed Design (TID) principles, the first known set coming from

the Committee on Temporary Shelter (COTS) (Farrell, 2018). The principles include recommendations to: reduce or remove known adverse stimuli; reduce or remove environmental stressors; engage the individual actively in a dynamic, multi-sensory environment; provide ways for the individual to exhibit their self-reliance; provide and promote connectedness to the natural world; separate the individual from others who may be in distress; reinforce the individual's sense of personal identity; and promote the opportunity for choice while balancing programme needs and the safety/ comfort of the majority.

In a study on architectural design characteristics in permanent supportive housing McLane and Pable (2020) looked to apply TID principles, including safety, trustworthiness and transparency, peer support, empowerment, and choice, in spatial design. They note a growing realisation that the built environment is critical to the healing experience: that affirmative relationships developed within the designed settings of transitional housing may play a role in countering negative tendencies; and that spatial analytics can provide an understanding of how specific interior spaces,

key to the recovery process, might be improved. McLane and Pable (2020:35) promote design principles that acknowledge that *"the effects of strife and adversity in a person's life significantly shape their perceptions and actions concerning homelessness and its attendant issues"*, as they reject "top-down, authoritarian approaches to social support and reemphasises physical, psychological, and emotional safety". Following (McCracken, 1989), hominess can manifest through the architectural design of home, and mediates relationships between an individual and society by empowering the individual to select or refuse cultural meanings and social roles. McLane and Pable (2020) add that hominess is associated with cleanliness, citing research on how perceived cleanliness affects the sense of dignity and self-esteem for persons who have experienced homelessness. The inability to remain clean is closely linked to stigmatisation of those experiencing vulnerable housing situations, and is understood to perpetuate a feeling of inferiority and social exclusion. They cite research which suggests that cleanliness denotes whether individuals have a sense of a personal stake in a place or not. Importantly, McLane and Pable's (2020) work on trauma-informed design indicates that personalisation is key to a person emotionally investing in a place and creating a sense of ownership. They propose that personalisation in the context of transitional housing might imply unique art, decorative objects, clocks, or policies that make allow residents a sense of control; feeling less restricted in a transitional (liminal) setting.

2.2 Comfort, choice and control: independent living

Comfort and its social and environmental perceptions in domestic indoor environments have been widely studied. There have also been studies of comfort in outdoor environments as well as transitions between both,

however, mostly from a technical or physiological perspective. Whilst literature on perceptions of comfort is comprehensive and valuable, for the purposes of this paper, discussion below focuses primarily on boundaries and scales of comfort as examined in social studies of domestic environments. Previous studies identified various boundary factors influencing occupants' perception of comfort, adaptation, and the performance of buildings. Age of occupants, number, and gender are important factors influencing how people evaluate the performance of buildings (Spataru, Gilliot, and Hall 2010). Also, level of income (Preiser 1994), impact of the building on the environment (such as materials used for construction), interest of occupants, energy consumption, and costs (Spataru et al., 2010) can influence how occupants perceive comfort, adaptation, and performance of a building. Comfort has also traditionally been studied from the perspective of the physics of the environment and the physiology of the occupant, in terms of four factors: thermal comfort, acoustical quality, air quality, and visual quality (Ortony et al., 2005). There are numerous disciplinary definitions of comfort from the perspective of healthcare, ergonomics, IEQ amongst others. For the purposes of this study the definition suggested by Heijs and Stringer (1987) is drawn upon. They suggest a definition of comfort particular to the domestic context highlighting the need for understanding comfort as perceptual, interactive and personalised related to the context that enables inhabitants to give meaning to their home.

In contemplating energy use in the home, sociologists such as Elizabeth Shove have conceptualised comfort (and its relationship to cleanliness) using everyday practices as a way to categorise how individuals experience comfort. A theory of co-evolution of comfort, informed by three scales that delineate socio-technical drivers and the interplay between them (Shove, 2003). For Shove (2003), there is more to comfort than space heating and cooling - while these two processes

account for the majority of domestic energy consumption. Her research identified a gap in literature on how domestic technologies and products *"cohere, sociotechnically and symbolically, in shaping the meaning of what it is to be comfortable or to keep oneself and one's clothes appropriately clean"* (Shove, 2003:397). For those in semi-permanent or otherwise vulnerable housing situations, Shove's (2003) work emphasise the role of individual motivations and choices, shaped by sociological processes at the micro-meso-macro level within society. Following Crowley (2001), Shove (2003) identifies a relationship between comfort and a self-conscious satisfaction between body and physical environment, providing a descriptor for food, furniture, climate, clothing and other conveniences. She reminds us that in the built environment, new construction is typically designed to provide a narrow band of scientifically determined, resource intensive "comfort conditions". Shove warns that there are definite commercial interests engaged in advancing a particular standard of comfort; and interests inclined on further optimising conditions for productivity - maximising opportunities for refinement, adjustment, and control. As there are no fixed measures of comfort, cleanliness, or convenience, future concepts can be less environmentally demanding than those of the past (Shove, 2003).

In a study looking at the influence of long-term thermal history on thermal comfort and preference, Jowkar et al. (2020) found that overall, when exposed to the same thermal environment, participants with a warmer thermal history felt cooler compared to their counterparts in the similar-to and colder-than-UK thermal history groups. The study confirms that long-term thermal history influenced perceptions of thermal comfort, with cold thermal dissatisfaction was experienced at lower indoor operative temperatures for the cooler climatic background group compared to the warmer climatic background subjects. Heightened sensitivity

to cool and warm conditions was also confirmed in this work for the warmer and similar/cooler climatic background groups, respectively. For the purposes of this research it was important to side step the significant literature on comfort in the home, and to use assemblage thinking (established in qualitative studies on dwelling) to focus more on the lived experience of residents - and the contribution of the housing actors and infrastructure involved to their resilience and general well-being. Thereby, the following section discusses the appraisal of such infrastructures and approaches taken to social innovation solutions.

2.3 Infrastructure and appraisal of social innovation solutions

Writing on the hotelisation of the housing crisis and the experiences of family homelessness in Dublin hotels, Nowicki et al. (2019) argue that the housing of homeless families in hotels exposes how they are made to feel out of place in the city, even in the spaces allocated to house them - and provides an important lens with which to understand the experience of those in such precarious housing situations. Through qualitative interviews the research shares the devastating physical and mental health implications for homeless families living in hotels. While assumed to be politically neutral sites, hotels are increasingly entering public consciousness in relation to housing and housing crises (Lee, 2016). Writing on hotelisation, Nowicki et al. (2019) demonstrate the ways in which those living in insecure, inappropriate accommodation, are rejected and designed out of societal structures - and how public infrastructure is increasingly celebrated for "designing out" what are deemed to be anti-social behaviours of homelessness (Mitchell, 1997; Petty, 2016). Nowicki et al. (2019) found that the exclusion of homeless people from spaces to which they are considered not



Fig.2 - Within and across the comfortable.

to belong can also occur within the very spaces in which they are housed, in this case the hotel. The study informs on one mother's defiant act of putting on bedsheets that were not standard issue from the hotel constituted its own rupturing and resistive performance - and attempts to create home. *"The determination to strive for a sense of home, even in emotionally destructive and precarious situations, reflects the importance of the banal and everyday in continued resistance against marginalisation and the maintenance of dignity and sense of self (...). For homeless families, then, hotels are experienced as disruptive, a rupturing, rather than restorative, break from the everyday routines and rituals that help to ground familial life and identity"* (Nowicki et al., 2019:318).

Increased reliance on hotels in the provision of emergency accommodation is a consequence of decades of neoliberal intervention in housing markets - where housing is understood as a source of profitability and economic productivity rather than a pathway to provision of secure homes. Such narratives are enabled through decades of neoliberalism's positioning as a normative condition, rather than a particular ideology and reveal the politics of spatial production in addressing 'wicked problems' in contemporary society (Horgan and Dimitrijević, 2020). In this and other research, Nowicki et al. (2019) follow Tyler and Slater (2018) in arguing that in order to analyse and challenge the stigmatisation of people experiencing homelessness (PEH), its role in productions of power, stigmatisation must be understood as constructed by, and in the interests of, institutions and states. The research on hotels highlights the importance of engaging in research that brings to the fore the lived experiences of homelessness and life in hotel accommodation. This case study seeks to add to further illuminate the experiences of end-users - who themselves remain largely absent from public discourse (Nowicki et al., 2019). Building on other research, they note that to improve the treatment of homeless families, the only

longterm, truly adequate solution lies in increasing the construction of genuinely affordable social housing (Harris et al., 2019).

Elsewhere, collaborating researchers have used assemblage theory to consider aspects of comfort and home (un)making in temporary accommodation in London's Lewisham (Harris et al, 2020). Their paper looks at life in PLACE/Ladywell, a "popup" social housing scheme providing temporary accommodation for homeless families: housed there for a maximum of two years, after successfully bidding for permanent social housing (Harris et al. 2019). In response to a temporary accommodation emergency, Lewisham Council has been using prefabricated construction methods to build cheaply and at speed (Harris et al. 2019). The stories of families in PLACE/Ladywell reveal how a lack of control over the fixtures and fittings needed to "make home" does significant damage to people's sense of self. Using assemblage thinking to interrogate the micro space-times of everyday life; the authors consider how through interactions with objects, or indeed, their absence, residents experience instability (McFarlane, 2011). *"Despite residents' attempts to fix assemblages of home into stable configurations, the senses of home they manage to create remain precarious (...). that this is due to a politicised, ideologically driven distribution and governance of materials that deprives people in temporary accommodation of their capacities to make home effectively"* (Harris et al, 2020:1306).

The study found that certain objects constituted vital elements in negotiations between fixity and impermanence in temporary accommodation: the absence of door locks reduces privacy; restrictions on hanging pictures and other measures must be circumvented by the use of wall stickers, and other decorative accessories to build a sense of home in a temporary setting. The use of assemblage thinking to understand homemaking under these time-limited and constrained

circumstances - fixture and fitting - offers reflections on their status as vital elements in negotiations between fixity and impermanence in temporary accommodation (Harris et al, 2020).

3. METHODOLOGY

3.1 Context for research

Taking a two-phased methodological approach (Tracy, 2019), this study seeks to build on the themes raised in literature review in order to achieve a more holistic understanding of perceptions of comfort for residents in rapid developments of transitional housing built by modern methods of construction (MMC). Phase one involved study of residents' perceptions of comfort drawing on visual techniques. Perceptions are viewed as the subjective process of acquiring, interpreting and organising sensory information (Lavrakas 2008). Informed by phase 1 insights as well as key studies identified in literature review, phase two approach to analysis uses assemblage thinking to attribute meaning to objects; architectural components; fixtures and fittings (McFarlane, 2011; Harris et al., 2020).

3.1.1 Case study: Realisation of a MMC transitional housing project in England

Bent Flyvberg (2006, 2011) has written extensively on the importance of the case study, noting their value when combined with statistical methods and quantitative research. The setting for the research involves an innovative low carbon modern methods of construction housing development built in England in 2020/21. The development consists of one or two bed pods with 13 residents built upon an operational Council owned carpark within a metropolitan urban context. The homes are promoted to be optimised for energy efficiency with the lowest possible running

costs including solar panels to generate renewable electricity in the day, quiet running micro air-source heat pumps for low-energy heating, controlled ventilation which recovers usable heat from inside the building whilst bringing in fresh air, triple glazing, LED lighting and energy efficient appliances. The ambition for the development that involved multiple partners including the local authority was for the one-bedroom homes to be allocated to mix of young people (18-35) and the two bed properties to 'community builders'. 'Community Builders' (individuals recruited by a civic-society partner into a voluntary community-cohesion role) or allocated to individuals committed to the values of the development.

Assessment of the performance of the modular housing solution has been positive, focusing on the novelty of the construction methods and public private partnership. The purpose of our research is to illuminate perceptions of comfort based on the lived experience of residents, and to narrow down on relevant themes for future research in this area (focused more on social performance or impact).

3.2 Data collection

A key data collection method in this project is participant-led photography (Shortt and Warren, 2020) since the focus lies with participants' perceptions and experiences of comfort. Also the method offers the participants an opportunity to both engage and explore the less tangible 'aspects of everyday living.

Participants were asked to share via email 2-3 photos that for them captures what a comfortable home is to them, how comfort is experienced in their current home and what is most important for a home to be comfortable.

Following sharing of the photos, photo-interviews were held with the contents of the images guiding the questioning. Examples of the questions used in a photo-interview were grouped under key themes including:

- Seasonal Comfort perceptions (included questions on what their home was like in winter and summer months, how heating or ventilation was adjusted and what awareness/information they may have had on knowing how to operate their home).

- Perceptions of a comfortable home (in this instance participants were asked to talk through photos submitted explaining what a comfortable home looks like to them/why certain photos were selected/what it meant to them).

- Making your home comfortable (included discussion on what participants did to make their homes comfortable/what part of their home they enjoyed the most and what they find least comfortable).

In total 13 participants were contacted - and 8 took part in the study. Out of those 4 participants shared images and photos in advance of the interview (See also Table 1). Some of the participants also had additional 'community building' roles in the development.

ROLE	HOME TYPE
PARTICIPANT 1	POD 1 bed
PARTICIPANT 2	POD 1 bed
PARTICIPANT 3	POD 1 bed
PARTICIPANT 4	POD 1 bed
PARTICIPANT 5	POD 2 bed
PARTICIPANT 6	POD 2 bed
PARTICIPANT 7	POD 2 bed
PARTICIPANT 8	POD 1 bed

Table 1 Data Collection Sampling.

3.3 Data analysis

Once all the interviews were completed and transcribed, the analysis focused on rereading the interview accounts to gain an understanding of all the key issues and developments. Thematic analysis is the process of identifying patterns or themes within qualitative data Braun & Clarke (2006). Braun & Clarke (2006:84) distinguish between two levels of themes: semantic and latent. Semantic themes *'...within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written'*. Scales of comfort, as offered by Shove (2003) and outlined in literature review above, can be helpful when seeking to understand have

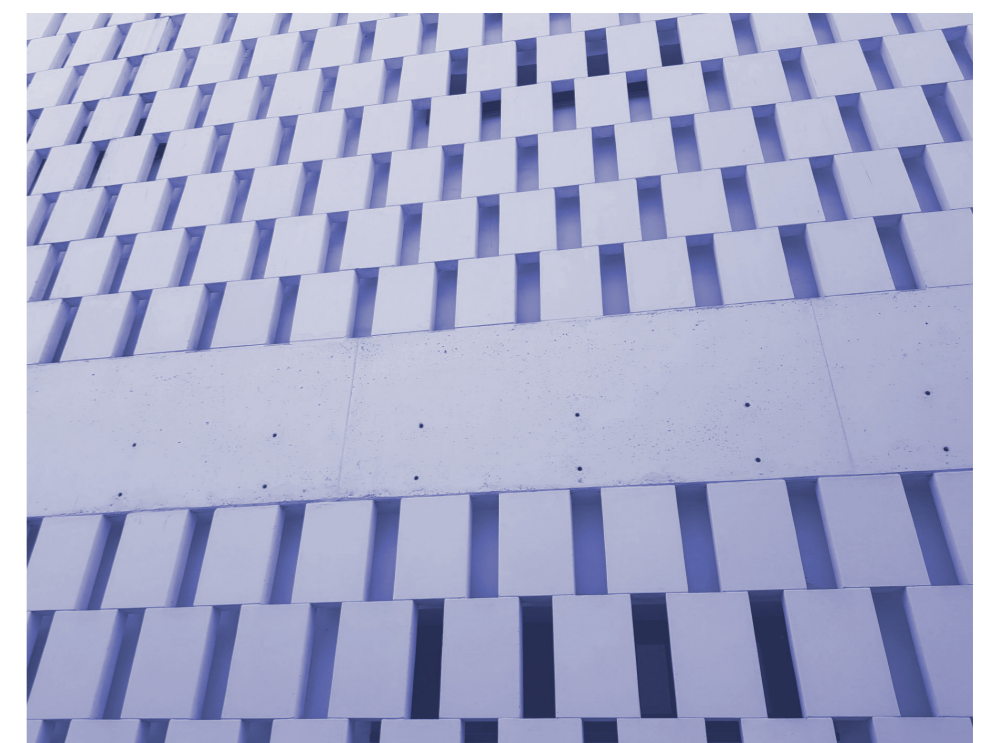


Fig.3 - Modularity - singularity?

comfort is perceived within the home, neighbourhood and wider city. The literature review confirms the relationship between comfort and cleanliness etc., and when considered in the context of those with vulnerable housing situations, new meaning is conveyed. In this research, we only begin to deconstruct how these might influence perceptions of residents in transitional housing.

Emerging points of discussion raised in the initial exchange between authors focused on the boundaries involved in the journey of arrival and living, centering a dialogue on whether or not the rapid construction solution represents a dignified solution. Informed by a process taken by others in other studies (Nowicki et al 2019, referenced above), a process of assemblage took place sifting through the qualitative findings to consider residents engagement with architectural and spatial elements such as the car park; the kitchen sink, cabinet drawers and oven; bedroom window that can't be opened; tomato plants; meters, gates and other interfaces. The photographs shared by participants to support the discussion (of how comfortable their home feels) were deemed to revealing of the context to include in this article.

Overall, 2 key themes were found related to residents' perceptions of comfort. When asked to discuss their arrival on site, their experience or knowledge of the development and their expectations of their new home, most participants discussed wider issues related mostly to the wider development location and appearance. This theme conveys comfort at the macro scale and consists of several subthemes including: circumstances/family/site overall/first impressions/life experiences. A number of participants discussed their circumstances as informing or in some way shaping their expectations of their new home.

Circumstances/ Family/Life experiences

Some of the participants conveyed their past experiences and circumstances of not having a stable home environment and needing to move a lot as shaping their initial feel of the site.

'I've been in nice well-kept houses. I've been in gross houses that have fallen apart. And you know, I think that it's more about how you feel. And I don't think I could ever say what matters because I've never really like had a home. I've moved around a lot' Participant 2.

For others their circumstances and past experiences were often brought up as a way to discuss expectations of a home as not being what is inside a home but rather how they feel about a place. Participant 4 discussed how for them a 'comfortable home' was not based on a home and not based on what is inside but rather something one feels.

'I'm not that materialistic; you know when you watch a film and see that's a brilliant home- you kind of want that feeling; its just what it (the home) says to you.' Participant 4.

Participant 5 conveyed their constant home moving as informing much of what a home felt like to them – unsafe and insecure. Moving to the development felt exciting as it meant a place of safety and less moving on.

'It was really exciting; I moved house 5 times last year- to know I was coming into a place that I don't have to move out very soon; that was really exciting' Participant 5.

Site overall/First impressions

When asked to describe their initial impressions of the site, many participants conveyed a sense of initial perceived positivity and warmth when arriving.

'It was kind of like, there should be more of them around I, I was, I'd say I was because of how fast they managed to kind of, you know, build it and prepare it and how colourful it looked. It looked very inviting. Like, it was kind of a staple piece of

the area that we always use, but it's going it's still neat. Yeah, I was I was, it was good. It was a good thing to see.' Participant 3.

For participant 4 moving to the development meant less worry – having viewed many houses in the past they felt all the basics were in place and there was less to think about.

When asked to describe living in their new home, how warm or cold it felt, what they did to make it comfortable and what space felt most or least comfortable, most participants discussed micro scale factors. This theme consists of several subtheme including Spatial arrangements/Connectivity/Views out/Control/Adaptability/Inner self.

Spatial arrangements/ Adaptability/Control

For all participants the kitchen was discussed as a key space around which everything revolved. For many the kitchen spatial arrangement and lack of workspace as well as storage was found to impact on their sense of comfort overall and in some instances their impression of the development and attitudes towards them. Participant 3 discusses their love of cooking and needing to have cooking equipment

'Without having to... without without having to kind of you know, I can't get anything cooked because I can't eat cooked food in that new space. That's why I'm currently struggling with this...right now that I can't afford to get started. I like to cook...I want to be able to have like, a decent amount of space in the kitchen so...I don't have to keep packing away. I want I just want more space in the kitchen.' Participant 3.

Other describe cooking dinner and not being able to do this simply due to lack of hobs; similarly not being able to wash pots and pans in the sink. Participant 1 discusses how the design of the sink in the kitchen has been particularly upsetting referring to this as not being considered 'from a perspective of a person'.

'I feel like a lot of people that have worked on this project to set the tone of 'it's not about the people that actually live here'. And, yeah, that's what makes me so upset, because all of the people here are really invested in building the community. And, you know, there's so many issues and problems and things that I wouldn't expect.' We know what regular houses look like, you know, what a regular kitchen looks like. And it would be nice to see that reflected in the build... even though it's so modern, I feel like they've pushed the way of going super modern and forgotten about the fundamentals.' Participant 1.

Adaptability was also found to be important in addition to spatial arrangements of particular activities in the home such as cooking as above. For many being able to decorate their home and paint the walls was found to be important. Having white walls was found by some to be uncomfortable and a constant reminder of their lack of control over decorating their home.

'Yeah, me I kind of want to be greeted, I want to... I want to kind of have a sense, like, it's like a warm, you know, it's kind of fulfilling, when you have kind of like (your own space). All blank white, it tends to kind of take on kind of muddy environments, like, you know, if you're cooking stuff. But I feel like if we had like a darker colour, it will you will, it's still kind of fresh and kind of, you know, vibrant. As opposed to just having like a big white blank space.' Participant 3.

When asked to describe if their homes felt too hot or cold, there was variability in participants' responses. Those living in the 2bed pods described being very cold at times and having to rely on having the oven on to keep warm. Those living in the 1bed pods described feeling too hot and stuffy and not having sufficient windows to be able to control or

'Well, so, when it gets hot upstairs, there's not really any way to sort of relieve that apart from a small skylight and it doesn't open up that much. And then when there's a tiny bit of sun, the whole house is

buoyant.' Participant 8.

Participant 4 notes how they could safely open in the bathroom and that whilst having the balcony door, they did not feel safe leaving it open so often relied on keeping the bathroom window open all year round.

'You can't open the windows that much; I have my bathroom window open all the time- the only other actual window in the house is the skylight – if I open it it will rain in my bedroom.' Participant 4.

Connectivity/Views out/Inner self

For many views and connection with outdoor environment was reflected upon as critical. For some their bedroom window was seen as a sanctuary and providing calm. Participant 4 discusses their bedroom as their most comfortable space- as one to retreat to and be 'nourished'. For other the lack of windows and connection to outside especially the nearby park, was seen as critical.

'I would have preferred it if the actual view we had was on the other side; it makes no sense to me- we just look at the main road its not very nice. A view makes a difference because they could do it- you could switch it around and see the park because it nice, greener and more entertaining.' Participant 4.

For some the lack of separation between the living and bedroom area was seen as problematic – whilst separated by different levels the lack of doors separating the spaces was viewed as difficult to manage.

'The bedroom is the same space as the living room- there is no separation – its all connected.' Participant 2.

Whilst discussing the importance of views and connection to the outside, many reflected upon it making a difference to challenges faced during the Pandemic- for some this meant working at home in challenging circumstances

without support or necessary equipment – noise separation was also seen as problematic with the open plan arrangements especially when working from home. When considered alongside concepts identified in literature review, a number of themes present, which warrant further consideration in discussion, and which could be useful in structuring a framework for subsequent research.

4. DISCUSSION

The discussion contained within this article represents a first attempt to develop an approach with which to better understand socially innovative qualities of contemporary housing solutions, delivered in response to the acute housing crisis. It situates important lines of inquiry related to the architectural and spatial design of spaces of transition – tracing the borders of the housing crisis, and frontier conditions to which vulnerable citizens are regulated. Questions of scale, boundary, and transition abound when thinking of these peripheral housing conditions, their relationship to comfort, dignity and resilience - and the social outcomes for residents of these spaces.

Findings from literature review, suggest wide variations in which concepts of comfort, home and homeliness are understood, and reveal the relation between perceptions and previous experience. Research on comfort and housing has recognised for some time that residents' ways of life in addition to material, spatial and thermal standards influence energy use and perceptions of comfort (Hagbert 2016). Issues of scale, however, have not been brought to the forefront of research in housing and comfort. Yarker's (2017) study offers a theoretical framework for the analysis of belonging in local communities, drawing attention to the importance of neighbourhood and build scales. Yarker (2017) argues the point that experiences of local belonging (or otherwise) are related to a person's sense of comfort is a persuasive one, though current

conceptualisations do not always adequately reflect this contention. Yarker (2017) presents an empirical examination of comfort and local belonging amongst residents of a social housing estate in the North-east of England, and explores comfort as it is expressed through acts of confidence, commitment and irony.

Built environment literature on comfort is vast and valuable to our contribution of understanding of technical performance of buildings. Shifting attention to more anthropological readings of comfort, the notion of comfort, and of being comfortable, is strongly associated, in the wider literature with feelings of belonging. Here, comfort manifests itself as a sense of familiarity rooted in long periods of residence, safety, security and an ability to identify with those around you. Although useful, these existing conceptualisations of comfort afford only a limited understanding of the nature of belonging. They do not necessarily provide us with a way of understanding belonging in the context of mobility, change and diversity – factors which have come to characterised contemporary society. They also give us little appreciation of how residents may experience comfort in homes built often in a unitised approach such as MMC paying close attention to buildability, cost, pace and function of each unit, with less attention devoted to their placement next to each other and within a neighbourhood and site. A wide set of literature has engaged in comfort from a social perspective - but not at different scales. Social practice theory excludes notion of scales, but as residents' reflections reveal, perceptions of inside-outside-threshold-transitions - and indeed of the liminality or sense of belonging inherent within these spatial conditions are closely aligned to comfort. Further research therefore could focus on how residents perceive comfort at various scales and settings (informed by historical experience); but also what architectural devices at each scale facilitate independence or control for residents - or not (as the case may be). Both literature review

and qualitative findings reveal that perceptions of comfort are relative - often based on individual previous experience or encounters with notions of home. Home can be experienced as a feeling psycho-socio-spatial, meaning that for those with negative experiences of home (homelessness, vulnerability and displacement), home can be associated with damaging personal experiences, situations and psychogeographies.

Emerging research proposed integrating trauma informed design principles into the design and planning process of transitional housing solutions for vulnerable people, recognising the importance of sense of control and ownership, and how these might help create a sense of comfort. Qualitative findings described kitchen facilities designed without consideration of "the perspective of a person", not large enough for cooking to accommodate appropriate cooking utensils. In this case, residents need to "keep packing away" their belongings, suggesting a suspended period of settlement, meaning that despite being accommodated in semi-temporary accommodation, residents feel that they have "not fully arrived".

In the academic discussion, the authors reflected on whether the innovative building design was truly user-centred: whether the needs of vulnerable individuals have been adequately considered over those of the municipality, contractors and developers; or whether the end user is valued as a worthy client (or if they should simply be happy what they get in terms of a societal housing offer)? Importantly, residents interviewed for this research were quick to remind researchers that they, "know what a real house looks like", and therefore would easily differentiate between a quick-fix solution of inferior quality and a market turn-key solution built for profit. The placement of this project development close to a park was seen by many residents as a place of retreat and safety, however, the lack of windows opening up to the park was problematic and difficult to appreciate leading

in some instances to feelings of 'not belonging' and 'not being considered'. The lack of windows also led to feelings of loss of control, being unable to adapt their home environment when feeling too hot or stuffy. At the scale of the development, past experiences and circumstances tended to shape expectations of arrival and welcome with many participants conveying excitement and hope. At the scale of their home, a micro level of reflections tended to occupy the discussion with much focus placed on the kitchen lack of storage, or sink placement or number of hobs.

Reviewing perceptions of the solution in the interviews, we notice qualitative aspects at three scales of Macro - Meso and Micro - that can act as determinants of comfort (Shove, 2003). At the macro level, these concern the placement of the building within the carpark, access and integration with the wider neighbourhood, aspect and views from and onto the site. At this neighbourhood scale residents questioned why the residents overlooked a main road, and why they had not been afforded a view to a park opposite - which would have required the building being flipped. Other residents felt unsettled due to issues with parking their own vehicles on site - itself a local authority car park. At the meso scale, that of the building itself issues presented with noise relating to interior partitions that were defined by the modular design, and thus ineffective. Concerns regarding the inability to control heating or ventilation would appear contrary to trauma-informed design principles, while a lack of spaces for socialisation provoked discussion among researchers as to the effectiveness of the building as one to support sustainable transitional life pathways for vulnerable citizens. At the micro, personal scale of the unit itself, qualitative findings again encouraged discussion as to the nature of control and adaptability - and the how the lack of capacity for personalisation within the building could impact perceptions of comfort. Reminded of the Harris et al.'s (2019) Lewisham study, the inability to paint white walls

or add other decoration inhibits sense of ownership, and potentially stimulates a psycho-social-spatial experience of instability, prolonged transition and liminality. Similar to the related findings on hotel accommodation, the perceived lack of spacious cooking facilities may also prevent residents from making comfortable home. Harris et al. (2020) follow Speer's (2018:11) understanding of homelessness as the condition of having "no fixed location and being continually forced to move between sites", impacting a sense of belonging, comfort and control for those experiencing same. Through their application of assemblage thinking they argue that as a disaster situation homelessness adds, "*heightened sensitivity to the capacities of materials and objects to afford or deny homemaking, as well as to the politicised distribution and governance of those materials by human actors*" (Harris et al., 2020:1289).

Within the context of this research, the notion (and embedded irony) that in this case the municipality is "parking the problem" of the housing crisis in a literal council car park is not lost on the authors of this paper. Ultimately, without long-term sustained investment in housing for key workers, vulnerable citizens and young people locked out of the housing market, off-site solutions are nothing more than a "sticking plaster". Equally, in their appraisal of the Lewisham case (described above), Harris et al., (2019) recognise PLACE/Ladywell as a site of hope, for its temporary inhabitants (and for partners seeking solutions within a seemingly uncontested neoliberal model), their assessment shows how affective experiences of precarity persist for residents, and in fact accumulate around the 'solutions'. The authors describe a setting in for vulnerable persons, "around whom the affective atmospheres of the housing crisis congeal and develop unevenly" (Harris et al., 2019:29). For them, there can be no neoliberal solutions, understanding that the depth of the crisis itself (and lack of sustainable investment in durable

solutions) is proof of the failure of neoliberal social and spatial policies to address it. Reflecting again on the case, further research could focus on whether the building fabric, and rapid construction methods produce a building in which the impermanent response to the housing crisis is laid bare; and if perceptions of comfort are related to same.

Themes of transition and liminality ranging from the experience of those transitional housing itself, to the specific and details of arrival and homemaking occurred frequently during the second phase of authors' discussion, and warrant further examination in more detailed research. These reflections on the housing complex as liminal space - which probe individual notions of outside/inside; stories of arrival, home and home (dis)comforts, views in and views out, caring and not caring, them and us - offer a point of departure for the next stage of inquiry. Glynn and Mayock (2021) use liminality as a framework to understanding the housing transitions of young people leaving care, employing a core theory in youth studies which is used to consider young people's transitions to adulthood. It follows that there are three distinct phases associated with any transition – separation, the liminal phase, and reintegration – at which point an individual is recognised as a full member of society (Furlong et al. 2018). Glynn and Mayock (2021) found that for those young people with vulnerable housing backgrounds, secure and stable housing is essential to their well-being and prospects of a sustainable housing future. Writing on displaced people searching for a home in a liminal space, Perez Murcia (2019) describes how displacement makes the location of home considerably complex for those in transitional housing, home becoming a contested and ambivalent site. Home becomes something which itself can be refashioned on the move, and experienced either as "a state of tension created between the place left behind and current inhabited cultural settings" (Perez Murcia, 2019:1527). As a proposed next

stage, the researcher envisages using these and other precepts to develop a framework for which to approach an even more holistic understanding of experiences of comfort and belonging in transitional housing solutions. These could include looking at themes of comfort and home as they pertain to dignity and resilience in housing, and could accommodate the assemblage of concepts raised in this preliminary study.

A number of authors have published papers on transitional and emergency housing in the wake of the COVID-19 pandemic, having reflected on lessons learned during the global shutdown. Johnson et al. (2023) observed positive housing outcomes as a result of a stabilising and health-affirming temporary accommodation; and that in this case, avoidance hotels provided a sense of security, privacy, comfort, and access - offering a lower-barrier access point to housing for hitherto discouraged by the social experience of congregate emergency shelters. Importantly, innovations in temporary accommodations cannot be successful without the support and alignment of frontline workers, working closely with accommodation staff (Johnson et al., 2023).

The findings of an Australian study that examined interventions during the peak of the pandemic questioned whether more coordinated responses arose out of concern for the health of people experiencing homelessness; or more likely, because their situation increased their risk to the general public (Parsell et al., 2021). The pandemic highlighted the need for urgent systems change, with early studies showing that through cross-sectoral partnerships; increased government support and resources, homelessness can be addressed simply by housing people in safe, dignified settings (Parsell et al., 2021). More detailed investigation could illuminate reasons for why the hotel model worked well in some situations during this period, and provided a more dignified, healthy, quick, and efficient way

to keep people safe in a pandemic (Aitken, 2021; Fitzpatrick et al., 2020). Bringing findings from literature review and qualitative research together, what is clear is that lessons learned during the pandemic are key to understanding how comfortable, dignified and resilient housing solutions for vulnerable populations can offer sustainable scaffolding and support for citizens to live productive lives in the long term; and that parking the problem of homelessness through neoliberal procurement of transitional housing will only displace the systemic issue to future (less-well-resourced generations).

This study whilst limited in sample size presents important insights of the social and structural factors mediating how approaches to 'commit to a place' was experienced differently whilst residing in homes that were identical in spatial arrangements, décor and construction. Future studies could further explore understanding of the scale of the local at both the site boundaries and within the home itself as one of circumstance, adaptability and connectivity at scales within in which people feel 'at home'.

5. CONCLUSION

Using a case study of a modern methods of construction (MMC) project delivering transitional housing for a local-authority site in England, this research considers the innovativeness of rapidly constructed solutions, and their impact on residents' life pathways in the long term. The article is intended as a first step in conceptualising notions of comfort in transitional housing, seeking to unpack the lived experience of the housing solution for residents. While the concept has received praise for its technical novelty, residents' perception reveal that in practice, the units fall short in some respects - in terms of allowing occupants to make home, and are considered to be lacking in terms of their layout, internal arrangements and detailed specification.

Insights from this study

demonstrate that despite the innovative methods of construction and delivery, occupants inhabitation and use of spaces (both macro and micro) are potentially insufficiently well considered in a growing context whereby housing decisions tend to favour ease of assembly over comfortable dwelling. This framing questions the value of the concept in the long term, and whether such quick-fixes provide the necessary housing infrastructure that allow vulnerable citizens to lead sustainable, independent lives in legacy. When viewed alongside extant findings in emergent literature, the perceptions of those housed within the development examined verify a neoliberal policy context which favours populist short-termist investment in pop-up housing solutions, over more meaningful investment in durable infrastructure and policy reform.

This research has demonstrated the importance of bringing together

qualitative data to illuminate the lived experience of residents, alongside other evaluation criteria when considering the innovativeness of contemporary housing solutions. Given the depth of the housing crisis, and the apparent inability of the neoliberal system to accommodate the resultant challenges, social innovations that focus on building resilience within individuals and communities themselves necessitate new appraisal mechanisms and novel quality indicators.

Note: Due to ethical approval conditions set out on the project, the specific location of the development as well as any drawings, further identifying information etc. could not be published to ensure full anonymity of the participants. This was agreed when research was conducted in the field.



Fig.4 - Scales and perceptions within boundaries of comfort.

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