

Edge Debate 136 - Housing Adaptability: More than (but essential to) climate issues?

Debate notes.

27th February 2023 – Online

Chair: **John Palmer**, Department for Levelling Up, Housing & Communities, UK

Introduction: **Elanor Warwick**, Clarion Housing Group, UK

Speakers: **Jyrki Tarpio**, Tampere University, Finland
on The value of adaptability to residents
Astrid Smitham, Apparata Architects, UK
on Adaptable housing to accommodate life's changes
Marta Smektala, Wrocław University of Science and Technology, Poland
on Do we know what inhabitants need?

Responses: **Kirk Archibald**, Think Three
Amy Burbidge, Homes England
Philip Graham, University of Cambridge

Debate held in collaboration with Building & Cities journal

See videos of the debate on <https://www.buildingsandcities.org/journal-content/special-issues/housing-adaptability2.html> & <https://edgedebate.com/edge-events/edge-debate-136-housing-adaptability>

Debating topic

An in-depth examination of the need for housing adaptability and the barriers to its provision.

Why:

There are increasingly important issues of the adaptation and flexibility of our homes – especially given the decreasing size of dwellings and changing nature of work and education. The existing building stock will be retrofitted for climate change, so there is an opportunity to address climate mitigation and adaptation, as well as social issues to ensure that dwellings are fit for purpose in the broadest sense.

How:

What can policy-makers, planners, clients, developers and designers do to make new and existing dwellings more adaptable?

Can a small additional initial investment in adaptability maximise a building's value throughout its life – if so, what is holding us back and what needs to change?

Introduction

Edge Debate 136 was held to launch the special issue of *Buildings and Cities on Housing Adaptability* edited by Elanor Warwick and Sofie Pelsmaker and freely available online at <https://www.buildingsandcities.org/journal-content/special-issues/housing-adaptability2.html>.

The debate interrogated housing adaptability and flexibility across spatial, social, environmental, economic, time and multi-use and multiuser needs and preferences.

The 'adaptable and flexible home' has long been a holy grail for housing design. Flexibility being the ability to change now and adaptability being the provision for future change.

While we have often celebrated the flexibility and adaptability of our Georgian and Victorian terrace housing, the discussion was brought into sharp focus in two articles by Andrew Rabeneck in *Architectural Design* in 1973/74. These were driven by two factors: "*space standards for public housing were under pressure from government and rampant inflation in the wake of oil price rises was causing a serious diminution in standards*

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for typical housing offerings in both the public and private sectors.” Does this sound familiar today?

Elanor Warwick opened the discussion with an overview of the history of flexible homes, pointing out that, as Rabeneck has calculated, flexibility required more ‘slack space’ whereas tighter space standards demanded specific rooms types. This may have been acceptable until events such as the pandemic which exposed the limitations when homes had to become offices and schoolrooms as well.

We now have to add climate resilience, including matters such as over-heating, which will only increase, as our summers get hotter.

The other point Elanor raised was that the adaptable home could make it more possible up up-size or down-size and so encourage people to remain in their neighbourhoods, supporting greater community and social cohesion. Exactly how these changes to homes could be made was the subject addressed by the two speakers who followed.

Jyrki Tarpio looked at the issues from the residents’ perspective and the extent to which adaptability had added value, which translated into a willingness to pay for it. His examples of the flexibility showed how dwellings can respond to inhabitants’ changing circumstances – in particular, the fluidity of number of household members. For example, family homes can have separately accessed studio accommodation for teenagers or elderly parents or tenants. The plans showing how it could also enable continuity for the children of divorced couples whereby the children retained their original home spaces while the parents each had adjacent independent living spaces were compelling. The concept of dual access flats (i.e. two different entrances) was new to me and it would be

interesting to understand this better along with the differences between UK and Finnish building regulations, fire safety requirements and so on. A further benefit of a second entrance is enhanced safety (= two means of escape) in a fire.

What Jyrki’s research showed is that potential residents needed to have the flexibility explained and demonstrated to them. The use of virtual reality allowed people to ‘see’ the possibilities in a way they could understand and, in turn, appreciate the added value and savings it provided. This opens new design and marketing possibilities for developers.

Astrid Smitham explained the design strategy to create flexibility in a new residential building in East London - the House for Artists. The architect had found ways to overcome the usual internal corridor, single aspect flats that are so commonly on offer by creating shared external walkways, which also overcame fire safety issues, and the ability to create cross-ventilation so that a combination of this with the walkways meant that when 2022 summer temperatures reached 39°C, the flats remained at an acceptable 26°C. Post occupancy evaluation showed that the residents found multiple benefits including improved mental health. They didn’t report any issues with other residents crossing their stretch of the walkway, which also doubled up as their private open space.

The building provides 12 affordable, rental apartments and it would seem that this is the ideal scenario to ensure like-minded tenants who welcome the benefits that this adaptable building offers.

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Drilling down more deeply into the value residents put on their private balconies, **Marta Smektala** reported on her research on how inhabitants use their dwellings and particularly their balconies. After 3000 interviews, she concluded that people did not necessarily understand the benefit of integrating inside and outside spaces until, of course, Covid 19 and lockdowns raised the importance of access to outdoor space. As a result, balconies become a 'must have' solution to this but research showed that they were not designed to be the multi-functional spaces that the users wanted from hanging our washing, providing space for children to play, for pets to live, for small gardens or just places to sit.

Responses:

In response to the research outlined, **Kirk Archibald**, questioned how to leverage this to demonstrate these additional attributes to valuers so that lenders would be willing to lend. Kirk also considered that, not only did the sales team need to be convinced, but also the law makers and policy makers that taking a different approach to housing design was necessary, viable and feasible and then tell the market to get on and do it. He also put up a flag of concern about possible social engineering.

Amy Burbidge pointed out that local authorities have to opt in to nationally prescribed space standards and that anything in 'policy' is done and if it is not in 'policy' then it need not be done. At the same time, 'national space standards' are not really 'national' and would benefit from being so and thus provide that desirable 'level playing field'.

Philip Graham advised that potential users might well see the value of adaptability but often could not afford to pay for it. Estate agents did not have it on their agenda to sell the concept. The lenders, especially the

green mortgage industry should support the concept as it could reduce the impacts and real costs of needing to find alternatives if present housing was no longer fit for purpose including: the cost of moving, welfare costs, old age care, reduction in church and the break up of communities.

Discussion:

Discussion followed with the audience with a number of questions and comments. Several people were in favour of 2.7m floor to ceiling heights. Could greater adaptability such as making homes work for home working and so on reduce travelling be fed into the 'net zero carbon' budget?

Do people (the general public) need a better understanding of what they should look for in a home, both the building itself but also the wider context? When individual homeowners 'adapt' their properties, it is possible to make them too bespoke and therefore of limited benefit to subsequent owners – therefore should 'specialised designs always try have an exit strategy?'

Conclusions

This has been an interesting topic to explore. Lessons from lockdown, working from home and increasingly smaller dwellings show that fresh thinking and solutions are needed. The challenges presented by several speakers (based on their research) points to constructive solutions. But can the array of actors in finance, development, planning and marketing embrace more flexible housing? Many changes will be needed in policy and practice if this is to become a reality. As Elanor mentioned, any large scale programme to retrofit our dwellings should also consider residents' needs.

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There is a question around home ownership. Does this approach work better for rented accommodation where there can be a degree of co-management? is the UK particularly caught on the concept of home ownership as a sign of success and security going to be a barrier to adaptability? Would flexibility in rented accommodation make it a more attractive option in the future?

Various Questions, comments and references

Reference #1.

<https://www.usablebuildings.co.uk/UsableBuildings/Unprotected/FlexibilityAndAdaptability.pdf>

Response AB:

Marmalade Lane also has my favourite repurposing. From car park to chicken coop. Enabled by only leasing parking spaces not selling them with the dwellings. So as no one wanted to lease those spaces, they could be released for chickens in the pandemic

Audience member A:

- Q: Bit of a dull question, but as the walls are adapted and moved, are there issues about fire safety?
- A: Elanor Warwick:
Astrid's House for artists shows how a close understanding of the fire regulations can enable both adaptability and fire safety

Audience member B:

- Q: Great to see the long-term benefits of adaptability being articulated so eloquently, thanks @EleanorWarwick for setting the scene! Wonder what your thoughts are on balancing f2c heights for mitigating overheating and contributing to long-term adaptability vs its cost in terms of ££, operational energy use, and embodied carbon... Maybe others will touch on this too?
- AmC In my experience taller ceilings don't increase operational energy as they facilitate passive systems, e.g., natural light and ventilation
- AmB: Architects always seem to prefer high ceilings but find it very hard to persuade investors that they are worth it.
- AmC: Yes, because the building may lose a lettable or saleable floor.
- AmB: That is an important reason why existing older housing is so valuable. We are never going to be able to build to those f2c heights again...
- AmC: We need to if they are to be truly sustainable. One of the reasons for tight floors is planning restrictions. Warmer European countries tend to have buildings with taller floors, or at least their vernacular did.
- AmD 2.7 m min high in Italy - a ceiling fan can be installed
- AmC: 2.7 is so much more adaptable than 2.4.
- AmE: 2.7m Lovely!! I live in a Victorian Railway workers cottage and without my 2.8m ceilings it would feel quite poky - the height makes a massive difference to the light quality too. Back to the idea (below) of housing quality as part of our education!!

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Audience member C:

Q: Does the quantity surveyor have a role in making British buildings being so ungenerous? I certainly found this when I was a designer: generosity can be affordable if you keep things simple.

A: Elanor Warwick:

I've not followed up on the early Camden housing - but you can see examples of its legacy, and the legacy of Walter Segal housing in RUSS housing in south London (<https://www.theruss.org>)

AmC: PSSAK in Camden Adelaide Road is still there, but to my knowledge the adaptability potential has not been exploited since handover (but was before - see Andrew Rabeneck's article above). Beeban Morris also wrote an article in the AJ in the 1970s about the adaptability of Victorian terrace housing.

AmF: Jyrki - what would be the process for reorganising the internal spaces? Would it require people to move out while the spaces were changed?

A: Jyrki Tarpio:

Often so. However, at some occasions it is possible to close one wall (to separate the studio or 1 br), which does not take much time, so people may continue living in the larger part.

AmG: Great project and really thoughtful design @Astrid, it would be great to learn if there are any acoustical issues with the shared spaces openings.

AmH: Are there planning issues about the adaptations i.e. if the flat is max'd out for bedrooms do additional cycle spaces kick in?

AmA: Astrid - did the affordable rental make it easier to have shared external walkways? Would it be different with private buyers?

AmE: Marta - did you benchmark any of your 3000 to the London Housing Design guide which was pretty forward thinking setting minimum space standards in 2010 (e.g., 1500 deep) and in 2022 retained this with min overall 5m2? and whether other countries/cities have similar?

AB: Wonder if the adaptability to enable working from home and the resultant reduction in carbon spent in transport might be an easier argument to offset the extra costs of extra space?

Audience member D:

Q: Can adaptability / flexibility aid the stated objective of 'levelling up' and also respond to life (family) changes over time?

Audience member A:

Q: So much housing to buy seems poor in many ways, do we need to introduce more at school level so that there is greater housing literacy along with climate and ecological literacy? People seem to ask more about the performance of their cars than the performance of their housing

AmC: Housing procurement is all wrong.

A: Elanor Warwick:

I'll dig out my copy of the old CABA Homebuyers Guide, which set out to flag up exactly the kinds of issues you mentioned in an attempt to educate

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AmJ: Absolutely agree that people need more education regarding housing if we are ever to achieve decent housing. A digital building logbook for every building would be a good start

AmE: <https://placealliance.org.uk/research/research-home-comforts/>

Audience member D:

Q: How can valuers and the valuation process engage with design qualities like flexibility and adaptability?

Audience member A:

Q: Marta - I wondered if your research showed that the balconies provided enough 'open space' to satisfy occupants or are they happy with their balconies because they also have nearby parks etc. for more green space

A: Smektala Marta:

'Open space' has various meanings, one of my responders, who was on video with his family with large balcony 1.5m x 10m, is very satisfied with it, he does not need more, or he would not change it to house, because he loves spending time out from home in parks, zoos, and take advantage from all these cities facilities. A house would isolate him from it.

Some estates I have observed have common courtyards, with different types of greenery, some attractive with playgrounds, some not so much. One estate with large apartments did not have a common yard with a playground, but had a common rooftop, and attractive surrounding with riverside and trees. It also matters. One balcony has open view... but she did not like it

because the view, although it was open, was at other blocks and parking lots

Audience member A:

Q: Jyrki - I was interested in the dual entrances - on balance did you find that people put more value on? Did you work out the cost difference?

There is an example in Cambridge where a terrace house conversion by an agoraphobic owner, has caused the house to be re-purposed with no direct views from windows...all roof lights. So, a very special, inflexible house for the future now that they have decided to sell it!

AmC: Specialised designs should always try to have an exit strategy.

AmA: What about percentage of storage space per occupant...most new housing doesn't have it

AmE: Storage is in the National Space Standards

AmA: Yes, but is it adequate?

AmE: Ah that's another question!!!

AmA: Private ownership

<https://www.theguardian.com/society/2015/aug/26/right-to-buy-margaret-thatcher-david-cameron-housing-crisis>

Sue James, March 2023