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Call for Evidence

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Summary: The following evidence gathered is of particular relevance to strategic pathway planning towards a decarbonised society where focus is placed on the design of environments rather than the design of buildings only. Building buildings is only one tool within a toolkit capable of improving and enhancing environments. The call for evidence suggests a narrow focus driven by potentially one-dimensional sustainable outcomes such as need for adaptation measures to building with little or no consideration for alternatives to building. Greater focus is needed on evidence that supports alternatives to building; new methods and new measures that account for social and cultural dimensions in evaluating sustainability in the built environment, and the embracing of multiplicity and diversity that allows for reskilling and knowledge-sharing in a meaningful way.

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Questions 4,9 and 10 outlined in the call have been responded to as below using numbered paragraphs. In addition, further evidence not limited to questions posed in call has been included as below. Evidence described below has been drawn out of expert panel discussions within the RAPS Initiative.

Question 4~ What role can the planning system, permitted development and building regulations play in delivering a sustainable built environment?

- **Certification, regulatory measures and environmental assessment modelling-Challenges associated with emphasis on quantifiable measures:** Ongoing emphasis placed on quantifiable measures to assessing sustainability in the built environment is potentially obscuring other, diverse ways of delivering sustainable designed and not only built environments. The focus on building only in much of the regulatory and legislative terminology also suggests a continued approach to use of nature-based as well as human resources. Evidence is needed on modes of design and construction that places focus and emphasis on the design of environments that includes social, behavioural and cultural dimensions of space alongside built elements.
- **Planning officer CPD training** that reinforces a holistic approach to the design of environments that will enhance decarbonising policies generated at a national level
- Opportunities for diversifying means of assessment and regulatory landscape development
- **Evidence is needed on modes of assessment and delivery of sustainable designed and built environments** that place less reliance on quantifiable assessment and instead include qualitative, artistic, design based and culture and social based values and behaviour.

Question 9~ How should re-use and refurbishment of buildings be balanced with new developments?
The inquiry notes government's target for 300,000 new homes a year (MHCLG 2018) as well as the need to comply with Future Home Standard with demand for cooling likely to increase. Setting clear guidelines for sustainable construction will need to be considered in relation to increasingly challenging infrastructural issues of energy governance, digital equity and spatial inclusion (Oliveira et al., 2021). Consideration of both social and spatial context as well as cultural diversity, critical in studies of interrelated complex phenomena, are missing from housing and energy use research (Maalsen 2020). There is a pressing danger, that the cross-cultural multidimensionality of digital and energy home transformation processes will continue to be overlooked, making considerations of energy justice and digital equity a set of one-dimensional outcomes and policy factors (Maalsen and Dowling 2019). Dominant ways of knowing and categorising residents and homes within one-dimensional spatial frames, through which energy and ambient data are consumed and generated, obscure many socio-material encounters between residents, spaces and the technologies they shape and are shaped by, narrowing the scope for intervention to the provision of information and technology.

Without significant new insights and better theoretically informed research, there are wide concerns that policy attention will remain targeted towards the 'knowable' and quantifiable technical and economic attributes of digital technology and energy consumption. There is a need for evidence that helps explain:

- **The social and spatial factors that enable digital equity and collective as well as individual energy governance** especially in housing sector
- **Balancing of retrofit and new-build within a coordinated social and spatially informed energy and data infrastructure regime**

Question 10~ What can Government do to incentivise more repair, maintenance and retrofit of existing buildings?
The government could support Reskilling of the sector and inclusive accessible Knowledge sharing. Reskilling is identified as being required across the sector with potential for new roles and hybrid professional knowledge and skill development that places importance on multidisciplinarity and multiphenomenon problem solving.

- **Developing hybrid multidisciplinary skills and knowledge** in communicating and obtaining influence and support from the wider supply chain.
- **Enabling attitudes of aftercare** especially with regards to handover approaches and follow up (Oliveira and Marco 2018).

- **Business model innovation** to enable innovating procurement methods including partnerships to limit issues with developing new modes of sharing 'repair' knowledge, material passports, evidence of building social and environmental capital for instance.
- **Knowledge Sharing:** Though much progress has been made especially in light of efforts made by the Anthropocene School, ACAN and LETI- there is still a paucity of knowledge sharing and innovation within the sector. Evidence is needed on approaches to effective knowledge sharing across the sector within industry, academia, government and communities.

Added Evidence~ Research and Development on Methodological Innovation needed:
Overall a number of areas are identified as needing further research and development including (see also Thürriedl et al., 2021(forthcoming)

- **Methodological Innovation:** There has been an established reliance on the known and quantifiable in policymaking and strategy forming. There is a dearth of published empirical experimental and risk-taking studies that provide visionary methodological and theoretical analytical tools well suited to study of complex interrelated phenomena.
- **Understanding of contextual needs across different community, climatic and social settings:** There is little empirical evidence available and even less discussion that relates to differences between different levels of need and contextually driven localised approaches that can be learnt from, shared and accessed easily through a shared portfolio of case studies, examples, inspiration at a regional, national or international scale.
- **Guidance for good practice on working across virtual/physical environments** that support sustainable outcomes is needed.

Added evidence~ Need for new terminology, culture and vision

- **New visual and narrative lexicon** - There is little understanding into modes of visualising sustainable outcomes in the built environment. Architectural drawing and representation cultures have not evolved a shared sustainability lexicon that enables effective and transformative communication across modes of practice.
- **New culture** – There is an accepted understanding that sustainable outcomes in any setting depend on values, attitudes and behaviour. Yet little of that focus is placed within design and construction curricula or practice- much greater emphasis on developing a new culture driven by sustainable designed outcomes and environments is needed.
- **Visionary approaches** – Historically there have been visionary approaches to tackling cultural, social or environmental global crisis. Evidence is needed on design and research driven visions that embrace multidisciplinarity and complexity in an inspiring manner

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References

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