





Virtual Workshop Tuesday 18 May 2021

### Introduction

On 18th May 2021, EPSRC, AHRC, ESRC, and NIHR held a joint workshop to encourage interaction between a wide range of stakeholders and partners to discuss multidisciplinary and collaborative approaches to housing and social care research and practice. A key objective was to identify research challenges and opportunities for follow-on activity that aim to increase the capacity and capability in the area by identifying how multidisciplinary teams can work together to deliver improved outcomes for those who use, plan, and commission housing and social care services.

### **Participants**

The workshop was open to expressions of interest and participants were selected from the engineering, design, social and health and social care research communities, alongside those involved in commissioning or delivery of services.

Contact details of attendees and those who expressed interest in attending can be found in Annex 1.

### On the day

The workshop agenda can be found in Annex 2. The agenda was designed to give attendees a chance to meet and respond to a series of targeted questions through facilitated discussion sessions. This report summaries the outcomes of those discussions. The links to useful resources or papers shared on the day are included in Annex 3.

### Next steps

The workshop discussions will be used by the organisers to identify and prioritise opportunities for research and/or capacity building funding in this area.

The organising team would like to thank all participants for their time, enthusiasm and input, and hope that they were able to take home some useful insights on housing and social care research and practice.

#### **Executive Summary**

Housing is a critical component in better meeting the needs of individuals into the future. Good housing can support and facilitate models of social care, in the broadest sense, that maximise independence and prevent ill health. A better understanding of the needs and preferences of people, their families, and communities when it comes to housing and social care is needed to facilitate better solutions, that can adapt to people's needs over time. Getting this right has the potential to reduce demand on hospital admissions and reduce associated costs, but also to improve quality of life for people, patients and carers alike, powering the economy, society, and individual health and wellbeing – however, a strong evidence base is needed to ensure these outcomes are achieved.

Housing and social care was identified as an under-researched area, and one which could benefit from collaborative and concentrated funding efforts. Workshop participants highlighted how critical it is that end users are driving the production of research and evidence – involving Local Authorities, the NHS, and social care providers in research is key.

Coordination and collaboration between people undertaking housing and social care research, regardless of institution or discipline, is essential if meaningful change is to be achieved. Research and design must be developed with communities and must not be imposed on them. Users need to be heard and have control over their home environment, as well as being represented to any changes to future research agendas that can adapt to their changing needs over time. Technological advances need to consider integration between different technologies and operating systems within homes and will benefit from simplification, putting user-friendliness at the forefront of any design choices. New advances will also offer new opportunities for data collection but raises serious challenges around the ethics of data collection that need to be carefully considered.

Funding to support research, development, and implementation needs to be rapid, responsive, and accepting of risk. There are already pockets of research in this area, however, there is still work needed to ensure that the research and evidence required is accessible to, and can be used by, those who need it and that it answers the right questions. Participants welcomed the event and highlighted that continued co-operative efforts to bring these research communities and key stakeholders together are required, ensuring they are supported and enabled to generate ideas and solutions that can enable improvements in the provision of housing and social care to improve outcomes for individuals, families and communities.

### Summary of workshop discussions

A summary of the key points from the panel and breakout discussions are presented below. Two breakout sessions took place: the morning session explored the limitations of current approaches in health and social care research and identified opportunities and challenges for research; the afternoon session sought to identify barriers and opportunities to conducting multidisciplinary research and discuss how funders could best support research activities in this area. For both sessions, participants were assigned to one of four groups, each with a focus on a specific topic (see list below). Despite considering different topics, common themes emerged across the breakout group discussions. To avoid repetition, this report summarises the key themes raised across those sessions.

- **Group 1: Maintaining independence at home** through adaptations of existing homes, development, acceptability and user-friendly design of technologies (communication, self-care apps, entertainment and smart devices), innovations in assistive technology, artificial intelligence and wearables.
- **Group 2: Maintaining health within the home** providing thermal comfort, enabling adequate ventilation, noise protection and sufficient space.
- Group 3: Enabling care readiness through innovative design of new buildings and integration of technologies (beyond interventions in individual homes) facilitation of community building through design, architecture for healthier living, and promotion of community wellbeing.
- Group 4: Enabling informed decisions on housing and care choices through the design of new tools and collection of data – supporting better decision making for end users, providing in-depth analysis, monitoring and visualisation of data, and supporting the delivery of health and social care services in the community.

Each of the four groups was primed to consider the following cross-cutting themes:

- Co-production involving those with lived experience of social care, housing, and technology and providers is essential.
- Affordability solutions must be affordable for homeowners, local government and health services.
- Sustainability solutions must contribute to the UK's 2050 net zero target.
- Equality and Diversity it is essential to consider how determinants, experiences and outcomes will differ for people from different groups and communities.
- Ethics technological development and the collection and use of data including the regulatory approval of technologies and evidence of acceptability and to inform implementation – must be underpinned by ethical approaches.

#### Research and innovation evidence gaps

This section outlines the key topics which emerged through group discussions as areas requiring greater multidisciplinary research.

Evidence to support informed choice – enabling informed decisions on housing and care choices through the design of new tools and collection and analysis of data

There needs to be a connection between research and policy to provide the evidence required to inform decision-making by policymakers, commissioners and individuals about current and future housing and care decisions. Research is needed to understand housing

and social care choices that are already available, and how people navigate these decisions. Forward looking research is also needed to establish what a suitable vision of housing choice looks like and what design and commissioning interventions are needed to achieve this. Understanding shifts in the housing market might provide benefits for local authorities in terms of understanding how to use current housing stock more effectively, which could be more cost-effective than building new housing. Further analysis of market data and a better understanding of people's attitudes and expectations for the future is required.

Improving the management of already adapted stock requires smarter allocation systems, a collective understanding of needs and performance, and an understanding of best practice in the utilisation of schemes such as the national Disabled Facilities Grant (DFG) scheme.

# Inclusive design (social, technological, and architectural) – enabling care readiness through innovative design of new buildings and integration of technologies and health in the home

Designing accessible and adaptable housing for the future requires systems of support to adapt to the needs of residents. Housing and social care needs, transitions and outcomes need to be considered, alongside the wider determinants which drive them to build greater community resilience. There is a need for design to put technology and science to effective use, providing tangible, evidence-driven, and transformative outcomes for people that matter most to them and their families. Testing new technology and ideas in real-life situations (e.g., using exoskeletons to support care workers and reduce injury when lifting) is important to drive policy change to improve quality of life for people in different housing settings. Design research can be used to have a positive impact, supporting the integration of care systems and creating retrofit solutions that are suitable for housing throughout the life course.

#### **Affordability**

Creating products and services that are affordable and scalable for the market remains a challenge. Solutions need to be affordable for all, including homeowners, local government, and health service providers, to avoid widening inequalities. Product development and testing needs to include cost-effectiveness and cost-benefit analyses to support decision makers and commissioners.

Participants flagged the need to balance research and innovation to support the building of new homes which are fit for purpose, both now and into the future. The specific care and support needs of ageing populations will need to be carefully considered, as well as questions of sustainability and community health and well-being.

However, focusing on the building of new homes is not sufficient – research is also needed to understand how retro-fit solutions can be used within current housing stock to protect against changing demographics. Moreover, a coordinated effort is needed to generate more data on housing supply and demand at a local and national scale, considering the impacts of policy interventions, such as Right to Buy, on existing housing stock, among other recent policy interventions.

#### The role of technology in supporting independence

When considering the role of different technologies in the home, they must be considered as 'aids', recognising the limits to what technology can achieve and what outcomes matter most to people. It should be considered how technology can best be used to support people to live their lives and remain as independent as possible, for example providing

prompts or safeguards rather than necessarily 'doing' tasks for people. Used correctly, technology and design can be used to prompt behaviour, prolong independence in a home setting and facilitate people to engage in the activities that are meaningful to them.

#### Research opportunities and challenges

This section outlines the opportunities and challenges to funding research in this area.

### Ensuring that the needs of evidence users are at the heart of research – from the outset

Participants, particularly those from policy and practice, flagged the importance of ensuring end users are driving production of research and evidence – bringing Local Authorities, the NHS, and social care providers into research. There are already some good examples of relationships in place, but these are fragmented and lack single coordinated efforts to bring Local Authorities and other stakeholders into the research arena.

It was also clear that there are significant research activities ongoing in this space that use different approaches and perspectives. In some instances, these activities result in siloed working or not addressing the questions that decision makers have. However, in other areas there are good examples of providing the evidence needed to support decision makers and for those requiring housing and care. Funders should consider how they can bring research together, and, in particular, support coordination and collaboration between people and groups undertaking housing and social care research, regardless of institution or discipline.

#### Co-production, multidisciplinary teams and stakeholders

To facilitate meaningful change in this area, co-production must be at the heart of research and development. This point came through strongly in the discussion groups, as a way of ensuring that funding and the research itself is focussed on matters that are most important to people, that solutions are implementable and support and measure the right outcomes. Communities, citizens, and underrepresented populations all need to be involved, putting people at the heart of research and innovation.

A cross-sectoral approach must be encouraged to ensure that funding and research includes Local Authorities, building regulators, the NHS, academics, businesses (from housing developers and investors, designers to architects), the social care sector and community organisations.

### Equality and diversity – meeting the diverse needs of individual and communities over time

To fully understand the research needs, funders and researchers need to listen to what matters to a diverse range of people with lived experiences and to not assume the issues are already known. There are different cultural associations around what 'home' means for people from different ethnic minority groups – and there needs to be a better understanding of what the implications of this might be for housing and social care policy and practice.

This kind of research takes time and requires a long-term commitment to understand the differences that are relevant to differing communities. Consideration is needed of how to best support underrepresented groups and underserved communities and devise practical solutions to meet their needs and preferences. Research and design must be developed

with these communities and not 'done to' them. Users need to be heard and have control over their home environment and the research agenda.

Issues of inequality need to be considered in data driven research and analysis as well as in primary data collection. Further work is needed to understand what drives inequalities in housing and social care outcomes and what can be done to reduce them.

The needs of individuals and communities change over time – both as people age, but also in response to cultural and societal shifts. This presents a challenge for policymakers and individuals, and highlights a need for this to be considered in research and evidence, to be able to future proof against changing needs.

#### **Technology**

Technology, both better using and applying new and existing technologies, presents both an opportunity and a challenge for housing and social care research. There is a need to ensure that any new technologies are integrated into existing systems when retrofitting; this has been a problem to date as there is currently little integration between the different technologies and operating systems in place in many houses. Technological products can benefit from simplification, putting user-friendliness at the forefront of design – this is especially true for those with cognitive impairments. New technologies also need to be future-proofed to ensure that they continue to be useful and used, otherwise their benefits will not be fully realised.

There are many lessons to be learnt from the Covid-19 pandemic in the way that many organisations and individuals have had to use and adapt to more technologies very quickly. There is an opportunity to explore the practical implications of this sudden change to help inform the future direction of implementing technology to improve the way care and support is delivered in the home.

# Better using and generating data – combining and leveraging data from different sources - and doing so ethically

Participants felt that there is scope to better use the data that is routinely collected to provide insight to inform housing and social care decisions, e.g. housing market data. There could also be more coordinated approaches to identifying where new data collections are needed and seeking to fill these gaps.

Technology also offers new opportunities for data collection and use - e.g. from sensors or wearables. The ethics of data collection and use needs to be carefully considered, and can be done through close working with people, services users, and carers to understand what they think is acceptable, necessary and what drives these attitudes. There is a need to pay attention to what data are being collected and how the data are being used. Users should have control over their data to maintain privacy and security, especially for vulnerable groups.

# Research Funding – what do funders need to do to support the research and innovation needed?

Funders need to champion multidisciplinary working from the outset, encouraging subject areas to collaborate and overcome siloed working. This multidisciplinary mindset should be bolstered by funders who have a shared interest in this area, working together to provide spaces where researchers and stakeholders can step outside of usual processes and think creatively. Communities, especially underserved populations, must be involved,

and industry partners should be actively encouraged to take part alongside policymakers and commissioners.

Funders could look to focus funding around particular problem-based issues, supporting research via rapid funding, embedding the need for co-production, collaboration, and co-research to solve complex issues. More agile funding processes that are both responsive and can support local interventions to scale at speed are needed; this could include multiphase schemes to build from promising ideas into larger scale projects. There needs to be consideration of how projects such as these will be assessed and how to support the involvement of other stakeholders in the research process, to ensure ideas do not just originate from the academic community. To ensure inclusivity, language used in funding calls should be carefully considered.

Participants welcomed the collaborative event and highlighted that housing and social care is a pressing issue, in need of a concentrated effort on research and evidence. It was recognised that there was substantial work going on in this area, but that there is still work needed to ensure that the research and evidence required is accessible to, and can be used by, those who need it.

#### **Next steps**

#### Short-term

- Further work to understand what peoples' priorities are, where these priorities align, and where the opportunities for collaboration are;
- Understand who the interested parties and key stakeholders in this field are;
- Bring researchers together in a network, creating a space for discussion and to formulate ideas for multidisciplinary research;
- Bring different agencies and organisations together, e.g., planners, social care providers and people/service users to further scope research and evidence needs;
- Work with academics and the end users to support synthesis, dissemination and mobilisation of existing evidence;
- Ensure that people, service users and carers are at the heart of funded research.

#### Medium-term

- Based on collaborative networks, test ways of working and pilot schemes that bring people together, followed by evaluation (what went well, what did not, who worked well with whom) and disseminate results;
- Scope opportunities for funding mechanisms that support and encourage coproduction;
- Look for opportunities to fund research that can enable the sector to make the information and data that are collected routinely both accessible and useful;
- Ensure that use of the Government's Levelling-Up Fund is carefully considered in any future research funding;
- Provide funding opportunities for the translation of technology into real-world settings, taking proof of concept to testing and embedding technologies into housing, building on innovation partnerships from Local Authorities.

Colleagues from UKRI and NIHR will be reflecting on the discussion from the workshop to identify areas where we can collaborate to support the research and evidence needed. A key message from the event was that this needs to be a long-term programme of work, but that we might need to consider mechanisms for responding quickly to research opportunities and needs as they arise.

### Annex 1: Attendee List

|                  |           |  | Attendees                              |  |
|------------------|-----------|--|--|--|
| First<br>Name(s) | Last Name | Institution/Organisation               | Email Address                          | Area of Expertise Keywords   |
| Alison           | Wallace   | University of York                     | alison.wallace@york.ac.uk              | indoor air quality, social housing, IoT<br>sensors, health, wellbeing  |
| Alison           | Benzimra  | Whiteley Foundation for<br>Ageing Well | alison.benzimra@whiteleyvillage.org.uk | development of wearables and assistive<br>technologies, Social care, Housing, Co-<br>production, Community   |
| Andrew           | Harding   | Lancaster University                   | a.harding5@lancaster.ac.uk             | ethnography/anthropology, Information-<br>giving on housing ageing, Decision-making<br>on housing and ageing, Ageing and<br>dementia research, Research practice |
| Anita            | van Mil   | St Mungo's                             | anita.vanmil@mungos.org                | Age-friendly environment, care needs people experiencing homelessness, care needs elderly rough sleepers, homelessness prevention, recovery from homelessness    |
| Anthea           | Tinker    | King's College London                  | anthea.tinker@kcl.ac.uk                | Commissioning, Older people, technology, ethics, participation   |

| Doug      | Sheperdigian | Atlantic Customer<br>Solutions        | doug.sheperdigian@atl-cs.com          | Procurement and Commissioning,<br>Independent Living at Home, Outcome<br>Based Commissioning, Supported Living,<br>Extra Care Housing                      |
|-----------|--------------|---------------------------------------|---------------------------------------|--|
| Francesca | Ribenfors    | Manchester Metropolitan<br>University | f.ribenfors@mmu.ac.uk                 | Ageing and environments, Supported<br>Living, Residential care, Housing, Quality of<br>life  |
| Gráinne   | McGill       | University of Strathclyde             | Grainne.mcgill@strath.ac.uk           | Ageing, ventilation, healthy housing, thermal comfort, environmental architecture  |
| Heba      | Lakany       | University of Liverpool               | heba.lakany@liverpool.ac.uk           | Co-Design, artificial intelligence and machine learning, robotics and autonomous systems., signal and image processing, human and brain machine interfaces |
| Inge      | Daniels      | University of Oxford                  | inge.daniels@anthro.ox.ac.uk          | Human-Robot Interaction, housing infrastructure, wellbeing, safety, community  |
| Isaiah    | Durosaiye    | University of Sheffield               | i.durosaiye@sheffield.ac.uk           | ageing, Built Environment, Health and wellbeing, Population ageing, Urbanisation   |
| Jason     | McCulloch    | Royal Greenwich<br>Council            | Jason.McCulloch@royalgreenwich.gov.uk | Health promotion, Supported Housing,<br>Learning Disabilities, Housing Strategy,<br>Quality  |

| Jo       | Johnson     | North Lincolnshire<br>Council               | jo.johnson@northlincs.gov.uk  | Housing, Regulated Services Oversight,<br>Strategic Housing for vulnerable adults,<br>aiming for continuous improvement and<br>development, want to make a difference |
|----------|-------------|---|-------------------------------|---|
| Judith   | Phillips    | University of Stirling                      | dp.researchpa@stir.ac.uk      | Ambient Assisted Living, Housing and Home, Social Care, Caregiving  |
| Karen    | West        | University of Bristol                       | karen.west@bristol.ac.uk      | Housing, Social Care, Housing, Choice,<br>Ageism  |
| Leon     | Cruickshank | Imagintion Lanaster<br>Lancaster University | L.Cruickshank@lancaster.ac.uk | Social care research, Open innovation, post-participatory design, Social housing, Socio-technical bridge  |
| Lynne    | Baillie     | Heriot-Watt University                      | l.baillie@hw.ac.uk            | Housing, Assistive Living, User Centered<br>Design of Rehabilition Technology, Human-<br>Computer Interaction, Socially Assistive<br>Robotics                         |
| Margaret | Edwards     | ageproofhomes ltd                           | margaret@ageproofhomes.co.uk  | Social Care Services, housing, age-<br>proofing, accessibility, dementia  |
| Maria    | Horne       | University of Leeds                         | M.Horne@Leeds.ac.uk           | Sociology, Public health, Behaviour change, Housing and health, Digital technology and health   |

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|----------|--------------|---|---|--|
| Martin   | Hodges       | Care & Repair England   | martinhodges@careandrepair-<br>england.org.uk | housing, Adult Care, Health, Research<br>Partnerships, Co-production   |
| Mauro    | Dragone      | Heriot-Watt University  | M.Dragone@hw.ac.uk                            | Ecosystem Mapping, Assistive Robotics,<br>Internet of Things, Autonomous Systems,<br>Human-Robot Interaction   |
| Nicholas | Pleace       | University of York  | nicholas.pleace@york.ac.uk                    | Inclusive design for ageing, supported housing (and housing related support), Homelessness and housing precarity/exclusion, Housing First, Sheltered housing |
| Nicola   | Brimblecombe | London School of<br>Economics and Political<br>Science            | n.s.brimblecombe@lse.ac.uk                    | Community led housing design, Mixed-<br>methods, Longitudinal secondary data<br>analysis, Inequalities in care/unmet need<br>for care, Unpaid carers         |
| Paul     | Jones        | Northumbria University,<br>Newcastle upon Tyne,<br>United Kingdom | p.jones@unn.ac.uk                             | Adult Social Care, Ageing, Modern Methods of Construction, Place-making, Smart Environment   |
| Phillip  | Whitehead    | Northumbria University<br>at Newcastle                            | phillip.whitehead@northumbria.ac.uk           | Occupational Therapy, Housing,<br>Randomised Controlled Trials, Intervention<br>development and evaluation research  |
| Rachel   | Hale         | Cardiff University  | haler3@cardiff.ac.uk                          | social work with older people, Science and technology studies, Health and wellbeing, Sustainable home energy and heating, Ethnographic research              |

| Tim              | Sharpe    | University of Strathclyde       | tim.sharpe@strath.ac.uk  | Embedded Systems, health, ventilation, indoor air quality, design  |
|------------------|-----------|---------------------------------|--------------------------|--|
| Tom              | Inns      | University of Strathclyde       | tom.inns@strath.ac.uk    | Building Physics, Design Tools, Facilitation,<br>Collective Impact, User needs   |
| Yuanyuan         | Yin       | University of<br>Southampton    | Y.Yin@soton.ac.uk        | Supported Living, ethnographic user study,<br>smart design for healthy ageing, user<br>interaction design, industry 4.0                      |
| Yun              | Gao       | University of<br>Huddersfield   | y.gao@hud.ac.uk          | Housing, sustainable architectural design,<br>Cultural difference on living conditions,<br>Indoor thermal comfort, overheating<br>residences |
| Hannah           | Gill      | Local Government<br>Association | Hannah.Gill@local.gov.uk | low energy housing, Public health, Digital<br>Technology   |
|                  |           |                                 | Expressions of Interest  |  |
| First<br>Name(s) | Last Name | Institution/Organisation        | Email Address            | Area of Expertise Keywords   |
| Alisoun          | Milne     | University of Kent              | a.j.milne@kent.ac.uk     | Fire setting/arson and housing needs., family carers, dementia, care homes, mental health in later life                                      |

| Amit      | Singh    | University of Essex     | a.k.singh@essex.ac.uk        | Housing, IoT devices, Wearable devices,<br>Energy optimisation, Performance<br>optimisation   |
|-----------|----------|-------------------------|------------------------------|---|
| Arash     | Beizaee  | Loughborough University | a.beizaee@lboro.ac.uk        | Adult social care, Thermal Comfort,<br>Sustainable Buildings, Overheating, Energy<br>Demand   |
| Carine    | Baker    | Bradford Council        | carine.baker@bradford.gov.uk | Commissioning housing services, Learning<br>Disabilities, Autism, Mental Capacity,<br>Mental Health   |
| Clare     | Skidmore | NHS England             | clare.skidmore@nhs.net       | Micro-econometrics, Adult social care,<br>Integration, Personalisation, Telecare and<br>the role of technology in housing, health,<br>and social care |
| David     | Coley    | university of Bath      | d.a.coley@bath.ac.uk         | Design Engineering, active buildings, passivhaus, housing for mobility and ageing, thermal comfort and heat stress in a warming world                 |
| Elizabeth | Hurren   | University of Leicester | eh140@leicester.ac.uk        | Education disadvantage gap, Social<br>History, Old Age, Loneliness, Health<br>Inequalities  |

| Gary    | Simpson            | South West Yorkshire<br>Partnership NHS<br>Foundation Trust   | gary.simpson@swyt.nhs.net            | Links between housing and social care/health, Equality of opportunity to access housing provision for vulnerable service-users with a forensic history who otherwise would remain in prison or hospital., Reduction in delayed discharge from hospital or delayed release from prison for people with learning disabilities of autism., Secondary care mental health., Autism and offending. |
|---------|--------------------|---|--------------------------------------|--|
| Gina    | Netto              | Heriot Watt University  | g.netto@hw.ac.uk                     | Health and social care, Social Care, Health,<br>Digital technology, Ethnicity  |
| Grace   | Manyika            | University of Stirling and<br>Parkhead Housing<br>Association | gcm00014@students.stir.co.uk         | social care, Advocacy, Housing<br>Caseworker, Housing Options Manager,<br>Generalist advisor   |
| Helen   | Ricketts           | NHSE  | h.ricketts1@nhs.net                  | Digital Living, design standards, Funding,<br>Housing regulation, market shaping   |
| Javiera | Cartagena Farias   | London School of<br>Economics (LSE)                           | j.f.cartagena-farias@lse.ac.uk       | Thermal comfort, long term care, administrative data, unpaid care, inequalities/deprivation  |
| Jelena  | Milisavljevic Syed | University of Liverpool                                       | j.milisavljevic-syed@liverpool.ac.uk | Social Care, Smart Packaging, Complex<br>System, Intelligent and Expert Systems,<br>Design Processes   |

| Jo    | Hutchinson | Education Policy Institute                                | jo.hutchinson@epi.org.uk         | social inclusion, Educational exclusion,<br>Special Educational Needs and Disabilities,<br>CYP Mental health and wellbeing,<br>Children's social care |
|-------|------------|---|----------------------------------|---|
| John  | Marginson  | East Riding of Yorkshire<br>Council                       | john.marginson@eastriding.gov.uk | smart healthcare technologies, sheltered<br>housing, Demand mapping, Extra Care<br>housing, Housing to reduce/delay<br>residential care admissions    |
| Jon   | Glasby     | University of Birmingham                                  | j.glasby@bham.ac.uk              | commissioner, Community care,<br>Personalisation, Partnership working,<br>Evidence-informed practice  |
| Karen | Hedge      | Scottish Care   | karen.hedge@scottishcare.org     | Council tenancies, leadership, governance, co-production, finance   |
| Kay   | Rogage     | Northumbria University                                    | k.rogage@northumbria.ac.uk       | Building performance measurement,<br>Building information, IoT, Digital<br>dashboards, Data mining  |
| Kevin | Lomas      | Loughborough University                                   | k.j.lomas@outlook.com            | building, Homes, Summer time overheating,<br>Health and wellbeing, Older people   |
| Matt  | Bennett    | University of Sheffield<br>(CIRCLE, CaCHE, and<br>IMPACT) | m.r.bennett@sheffield.ac.uk      | Ageing-in-place, Housing, Technology,<br>Ageing, Quantitative methods   |

| Paul     | Willis   | School for Policy<br>Studies, University of<br>Bristol | paull.willis@bristol.ac.uk          | Housing, sexuality, ageing, loneliness, social care  |
|----------|----------|--|-------------------------------------|--|
| Rachel   | Creaney  | James Hutton Institute                                 | Rachel.creaney@hutton.ac.uk         | ageing, housing, rural, ethnography  |
| Rani     | Rooke    | East Riding of Yorkshire<br>CCG                        | Rani.Rooke@nhs.net                  | transforming care, learning disability,<br>independent living, housing                       |
| Rhiannon | Hughes   | Southwark Group of<br>Tenant Organisations             | Hughesrhiannon@hotmail.com          | Leasehold, Temporary Accommodation,<br>Health, Politicians                                   |
| Richard  | Jack     | Build Test Solutions                                   | richard.jack@buildtestsolutions.com | Building physics, Data analysis, Energy<br>performance, Damp & mould growth risk<br>analysis |
| Rodger   | Edwards  | university of Manchester                               | rodger.edwards@manchester.ac.uk     | energy, monitoring, modelling, patterns  |
| Ryan     | Woolrych | Heriot-Watt University                                 | r.d.woolrych@hw.ac.uk               | Housing and home, Health and wellbeing,<br>Participatory research, Coproduction              |

| Steven           | King      | Nottingham Trent<br>University | steven.king@ntu.ac.uk        | Tramps, Adult Social Care, Welfare,<br>Workhouses |
|------------------|-----------|--------------------------------|------------------------------|---|
|                  |           |                                | Invitees                     |   |
| First<br>Name(s) | Last Name | Institution/Organisation       | Email Address                |   |
| Sanjay           | Thakrar   | The Dunhill Medical<br>Trust   | sanjay@dunhillmedical.org.uk |   |
| Sarah            | Allport   | The Dunhill Medical<br>Trust   | sarah@dunhillmedical.org.uk  |   |
| Susan            | Kay       | The Dunhill Medical<br>Trust   | susan@dunhillmedical.org.uk  |   |
|                  |           |                                | Panel                        |   |
| First<br>Name(s) | Last Name | Institution/Organisation       |                              |   |
| Rachel           | Cooper    | Lancaster University           |                              |   |
| Emily            | Grundy    | University of Essex            |                              |   |
| Glen             | Garrod    | Lincolnshire County<br>Council |                              |   |
| Jeremy           | Porteus   | Housing Lin                    |                              |   |
| Paul             | Rodgers   | University of Strathclyde      |                              |   |
| Phil             | Collis    | Patient and Public Involvement |                              |   |

|                  |           |                          | Organisers                     |   |
|------------------|-----------|--------------------------|--------------------------------|---|
| First<br>Name(s) | Last Name | Institution/Organisation | Email Address                  |   |
| Alex             | Sklan     | EPSRC                    | Alexandra.Sklan@epsrc.ukri.org | _ |
| Claire           | Kidgell   | NIHR                     | c.kidgell@soton.ac.uk          |   |
| Emily            | Bultitude | AHRC                     | Emily.Bultitude@ahrc.ukri.org  |   |
| Evie             | Bate      | ESRC                     | Evie.Bate@esrc.ukri.org        |   |
| Kate             | Regan     | DHSC - NIHR              | Kate.Regan@dhsc.gov.uk         |   |
| Leanne           | Dew       | DHSC - NIHR              | Leanne.Dew@dhsc.gov.uk         |   |
| Matthew          | Weaver    | EPSRC                    | Matthew.Weaver@epsrc.ukri.org  |   |

### Annex 2: Workshop Agenda

#### Tuesday 18th May 2021

| 9:30 – 9:45   | Welcome and opening address                           |
|---------------|---|
| 9:45 – 11:15  | Panel introductions and perspectives, followed by Q&A |
| 11:15 – 11:35 | Break   |
| 11:35 – 11:55 | Introductory Session                                  |
| 11:55 – 12:35 | Breakout Session                                      |
| 12:35 – 12:55 | Feedback from the breakout sessions                   |
| 12:55 – 13:10 | Panel's reflection on feedback                        |
| 13:10 – 13:40 | Lunch   |
| 13:40 – 14:10 | Opportunity for Networking                            |
| 14:10 – 14:50 | Breakout Session                                      |
| 14:50 – 15:10 | Feedback from the breakout sessions                   |
| 15:10 – 15:25 | Panel's reflection on feedback                        |
| 15:25 – 15:30 | Closing remarks and meeting close                     |

#### Annex 3:

### **Useful Links**

Cambridge Centre for Housing & Planning Research - Understanding supply, demand and investment in the market for retirement housing communities in England report <a href="https://www.cchpr.landecon.cam.ac.uk/Research/Start-Year/2019/housing\_market\_wider\_economy/understanding-supply-demand-and-investment">https://www.cchpr.landecon.cam.ac.uk/Research/Start-Year/2019/housing\_market\_wider\_economy/understanding-supply-demand-and-investment</a>

Centre for Ageing Better – Information <a href="https://cop.ageing-better.org.uk/members">https://cop.ageing-better.org.uk/members</a>

Centre for Patient Reported Outcome Research (CPROR) - Information <a href="https://www.birmingham.ac.uk/research/cpror/index.aspx">https://www.birmingham.ac.uk/research/cpror/index.aspx</a>

Department for Communities and Local Government – Estimating housing need report

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/6338/1776873.pdf

Good Things Foundation – Information <a href="https://www.goodthingsfoundation.org/">https://www.goodthingsfoundation.org/</a>

Government - New measures to deliver value to society through public procurement <a href="https://www.gov.uk/government/news/new-measures-to-deliver-value-to-society-through-public-procurement">https://www.gov.uk/government/news/new-measures-to-deliver-value-to-society-through-public-procurement</a>

Housing LIN -

**Diversity Matters reports** 

https://www.housinglin.org.uk/Topics/browse/HousingOlderPeople/DiversityMatters/

Health and housing: building the evidence base review <a href="https://www.housinglin.org.uk/Topics/type/Health-and-housing-building-the-evidence-base/">https://www.housinglin.org.uk/Topics/type/Health-and-housing-building-the-evidence-base/</a>

Housing for people with dementia report

https://www.housinglin.org.uk/Events/Launch-APPG-HCfOP-Housing-Dementia-Inquiry-Report/

Housing our Ageing Population: Learning from councils meeting the housing needs of our ageing population report

https://www.housinglin.org.uk/Topics/type/Housing-our-Ageing-Population-Learning-from-councils-meeting-the-housing-needs-of-our-ageing-population/

Intergenerational Housing

https://www.housinglin.org.uk/Topics/browse/Housing/HousingforOlderPeople/intergenerational-housing/

Pretty Vacant: Vacancy chains and Extra Care Housing. Stimulating local housing markets Factsheet <a href="https://www.housinglin.org.uk/Topics/type/Pretty-Vacant-Vacancy-chains-and-Extra-Care-Housing-Stimulating-local-housing-markets/">https://www.housinglin.org.uk/Topics/type/Pretty-Vacant-Vacancy-chains-and-Extra-Care-Housing-Stimulating-local-housing-markets/</a>

Strategic Housing for Older People Analysis Tool <a href="https://www.housinglin.org.uk/Topics/browse/HousingExtraCare/ExtraCareStrategy/SHOP/SHOPAT/">https://www.housinglin.org.uk/Topics/browse/HousingExtraCare/ExtraCareStrategy/SHOP/SHOPAT/</a>

The Business Case for Extra Care Housing in Adult Social Care: An Evaluation of Extra Care Housing schemes in East Sussex case study <a href="https://www.housinglin.org.uk/Topics/type/The-Business-Case-for-Extra-Care-Housing-in-Adult-Social-Care-An-Evaluation-of-Extra-Care-Housing-schemes-in-East-Sussex/">https://www.housinglin.org.uk/Topics/type/The-Business-Case-for-Extra-Care-Housing-schemes-in-East-Sussex/</a>

Imagination Lancaster – My Mainway project <a href="http://imagination.lancaster.ac.uk/project/my-mainway/">http://imagination.lancaster.ac.uk/project/my-mainway/</a>

IMProving Adult Care Together (IMPACT) - Centre information <a href="https://more.bham.ac.uk/impact/">https://more.bham.ac.uk/impact/</a>

National Data Guardian (NDG) - Information

https://www.gov.uk/government/organisations/national-data-guardian/about

Social Care Institute for Excellence - Role of housing in the future of care and support <a href="https://www.scie.org.uk/housing/role-of-housing">https://www.scie.org.uk/housing/role-of-housing</a>

The Dunhill Medical Trust -

Funding information <a href="https://dunhillmedical.org.uk/apply-for-funding/#apply-now">https://dunhillmedical.org.uk/apply-for-funding/#apply-now</a>

Webinar: suitable living environments and communities for an ageing population <a href="https://youtu.be/LcJ28t72n6Y">https://youtu.be/LcJ28t72n6Y</a>

UKRI – Healthy ageing research announcement <a href="https://www.ukri.org/news/ukri-announces-nearly-11m-funding-for-healthy-ageing-research/">https://www.ukri.org/news/ukri-announces-nearly-11m-funding-for-healthy-ageing-research/</a>

University of Stirling - Designing Homes for Healthy Cognitive Ageing: Co-Production for Impact and Scale (DesHCA) project <a href="https://www.stir.ac.uk/news/2021/march-2021-news/stirling-researchers-to-transform-housing-design-for-dementia/">https://www.stir.ac.uk/news/2021/march-2021-news/stirling-researchers-to-transform-housing-design-for-dementia/</a>