

Inclusive Living Toolkit: Inclusive Living Evidence Review

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**Innovation &
Future Thinking**



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Contents

5	Executive Summary
8	Homes of the Future Partnership
10	Project overview
12	The concept of Inclusive Living
13	Methodology
118	Social Inclusion and Equality
21	Physical Space and Design
25	Connections and Relationships
29	Overcoming barriers to Inclusive Living
31	Discussion
32	Case Study: Loreburn Housing Association
33	Case Study: Blackwood Housing Association
34	Recommendations and conclusions
37	References
46	Appendix 1: Mapping search strategy



The growing ageing population is more evidence of urgent need for housing investment



Foreword by Sally Thomas, SFHA Chief Executive

Figures from the National Records of Scotland (2019) show that the population of Scotland is projected to increase by 2.5% to 5.57 million between mid-2018 and mid-2043.

SFHA has highlighted new statistics that show Scotland's ageing population will continue to increase, which is evidence that supports a desperate need for more financial support for the housing sector.

The National Records of Scotland show the population of Scotland is projected to increase by 2.5% to 5.57 million between mid-2018 and mid-2043. The figures estimate that there will be 240,000 more pensioners over the next 25 years, an increase of 23.2%, while the working age population reduces by 7,000 people.

These figures once again highlight how vital it is to secure the investment needed for more homes that are fit for people's needs, both now and in the future.

There remains a significant, and increasing, demand for social housing, with around 160,000 households on waiting lists. In 2015, we called for the delivery of 60,000 affordable homes by the end of this Parliamentary term in 2021. The Scottish Government responded with an overall programme of 50,000 and that is well on the way to being reached.

However, the need continues to grow and ongoing Scottish Government investment in our sector is vital for its future and for the sustainability of communities.

Investment in housing is not just about building more homes but ensuring they meet people's requirement at every stage of their life.

The number of people needing their homes adapted to enable them to live healthier, more independent lives has increased substantially but the budget has been frozen by the Scottish Government for the last seven years, with the backlog of required work growing each year.

Our members urgently need to know what the Government's plans are for housing post-2021 to help them continue to build great homes in great places for the people of Scotland."

The concept of Inclusive Living gives a framework to think strategically in the Scottish housing sector about how we can plan for an ageing population.



Executive Summary

The Scottish Federation of Housing Associations instigated an ambitious Innovation and Future Thinking programme focused on the Home of the Future. The challenge for the Home of the Future includes bringing together the housing, construction and wider sectors to create a vision of future living. Inclusive Living can become this vision.

The concept of Inclusive Living has been co-produced with the Scottish social housing sector and wider partners to formulate a vision that can bring together diverse activities in the housing sector around social inclusion, inclusive design and building connections. The vision for the Home of the Future is about integrating fragmented elements to support accessibility, adaptability, flexibility and in-(ter) dependence within housing. The Home of the Future will be designed around individual needs and desires of the people living there, and will reduce isolation and support connectivity and independence through a framework that focuses on:

- **Social Inclusion and Equality**
Structural barriers, representation of all groups, co-production, safety and well-being
- **Physical Space and Design**
Accessibility, adaptability of internal and external environments, technology, sustainability, green spaces, quality, universal design
- **Relationships and Connections**
Social connectedness, relationships, partnership, transitions through spaces and supporting independent living

The framework and vision to support Inclusive Living was derived from the evidence of a systematic evidence review of 131 publications focused on literature and design guides currently used in the housing sector, including insights from areas including inclusive design, social inclusion, age-friendly design, ageing in place and age-friendly communities. In line with this review, we offer a separate tool for decision makers to consider different areas where inclusive design can support inclusion, connections and independence. This vision will make better homes for everyone that supports health, quality of life and wellbeing.

The Homes of the Future partnership are calling for the housing sector to reset and centralise important areas such as adaptations, accessibility and independent living. This will support housing decisions and development to be seen through the framework of Inclusive Living and bring inclusivity to the forefront of housing.



Key findings

The key finding from each research area are summarised as follows:

Key findings: Social Inclusion and Equality

- Removing physical and social barriers to social inclusion by developing intergenerational communities which enable people to age-in-place
- Inclusive design places an emphasis on the end user, co-production and co-design

Key findings: Physical Space and Design

- Accessible external environments (public space, green space) are important in creating a sense of community
- Design and technology that enables people to remain independent within their communities (ageing in place)
- Good design and communities essential to health, wellbeing and identity
- Importance of accessible and flexible design that meets the widest range of people (life-course perspective, future proofing)

- Flexibility in design is important in order for organisations to adapt to different contexts, situations and individual needs
- Adaptations are a key area to support independent living
- Good design has to acknowledge diversity and difference and meet as many needs as possible by identifying barriers and providing solutions to overcome them

Key findings: Relationships and Connections

- Social connectedness is key to healthy ageing, both access to material resources and social networks
- Attention must be paid to community places as well as the home
- Informal and formal community support is key to ageing in place
- Transport and the ability to remain independent is key
- New areas such as social prescribing have been emerging as new pathways for partnership and connections.



Recommendations and Conclusions

This review does not propose a new guide. We believe there is enough evidence to show what works, and does not work. What is needed is an approach that takes into consideration all 3 of our key strands: social inclusion and equality, physical space and design, connections and relationships. When one element of these are missed, a key area of support in living a long, healthy and independent life is left behind.

Therefore, the current standards that exist can be augmented and revitalised to take into consideration the integrated nature of housing design through the lens of Inclusive Living. We recommend:

1. A review of the current standards and regulation

Housing for Varying Needs guidance is one of the most used tools within the housing sector. However, what was clear through the review and consultation is that this must be reviewed and updated to include the wider elements and development. In particular, guidance on ageing and dementia (University of Stirling) and technological support (Blackwood) would help update the guidance to also support the wider elements outlined in this review around equality, relationships and connections.

2. The creation of an online cost/benefit indicator for the housing sector

The consultation has shown that the main barrier to the vision of an Inclusive Living approach is the perception of costs regarding accessible housing. We argue that there is a range of ways that you can integrate accessibility into both current housing and new builds. We would argue that small wins (focusing on good lighting, colour, etc) can be done quite quickly but acknowledge that fully integrated 100% accessibility would be difficult to achieve, especially in the short term. However, if someone makes the decision to do one thing that makes a home more accessible and inclusive this is still a step forward.

What would be useful to the housing sector is a more comprehensive tool (similar to perhaps the affordable rent setting tool from SFHA) that can assess the standard of a development or refurbishment programme on its level of inclusivity and relate that to indicative costs. As shown in the report, this information is simply not available in the current literature in a comprehensive way. We have had to rely on sector examples to highlight different cost implications on accessibility. This could be a key area of would be an area of future research and on that partners would fully support going forward.

3. Sharing the vision of Inclusive Living to break down silos between groups of people and types of housing

If the housing sector resets its stand point, the idea of Inclusive Living can break down silos and assumptions between groups of people and types of housing. Housing models that are simply focused on one group (e.g. dementia, older people) will become more integrated. We must not build remote islands of housing focused on one group in particular. The evidence shows clearly that all groups, all types of people benefit from connections and relationships with different people. In an era where social isolation is increasing, it is more important than ever to develop housing models focused on integration and inclusion.

The concept of Inclusive Living redefines the starting point in considering how to develop housing and the approach to adaptations, accessibility and independent living. The new framework that emphasises equality, connections and relationships as something that is considered alongside good design can be used to bring Inclusive Living to the forefront of the housing sector and improve homes and the wider environment for everyone.



Homes of the Future

This project and conceptual development of Inclusive Living has been co-produced with the Scottish social housing sector and wider partners. The idea and conceptualisation of Inclusive Living has been driven from a perceived need to bring together activities relating to diverse groups (for example older people, those living with dementia). The Homes of the Future group began this conversation around future innovation by thinking about adaptations, and how we can make innovative changes in the housing sector that support people's independence. What became clear is that good, inclusive design that enables connections and relationships between people and communities is simply good for everyone – regardless of age, health or support needs.

Areas of activity in the housing sector relating to these groups is fragmented, and the vision for the Home of the Future is about integrating all these diverse elements to support accessibility, adaptability, flexibility and in(ter)-dependence of housing. This vision aims simply make better homes for everyone that supports health, quality of life and wellbeing.

The Scottish Federation of Housing Associations instigated an ambitious and creative Innovation and Future Thinking programme that brought together social housing providers and a range of partners to develop new ideas and solutions for the future under three themes:

- **Homes of the Future,**
- **Tackling Poverty and Demonstrating Impact,**
- **Service Transformation.**

The Home of the Future brings innovation in design, construction and maintenance that will deliver higher standards and maintain affordable homes. The Home of the Future will be designed around individual needs and desires of the people living there, and will reduce isolation and support connectivity.

The challenge: Can the housing and construction sectors, and others, come together to create a vision of future living?

As part of this challenge, the Inclusive Living team have focused on producing a definition of Inclusive Living that can be used as a tool to help to design great places and services for everyone. We propose to use this research to inform a challenge which will develop new ideas to embed inclusion in our homes, communities and services.



The Homes of the Future partnership are working together to reset the way we think and approach important areas such as adaptations, accessibility and independent living. We do not wish to see these issues as an 'add on' to housing. We call for housing decisions and development to be seen through the framework of Inclusive Living. This report now presents the new framework and research base for the housing sector that can be used to bring inclusivity to the forefront of housing.



Homes of the Future: Inclusive Living partnership

The Homes for the Future partnership have worked together since May 2018 to explore the best ways to bring wide issues such as inclusive design, accessibility, and adaptations together to make sure the Home of the Future can support diverse and increasing health and social care needs. All these elements together ensure the best chance of the housing sector supporting healthy ageing, independence (and inter-dependence) and service integration.



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Project Overview

The Inclusive Living project is about creating a vision for the housing sector.

Scottish and UK Policy, as shown through the Industrial Strategy and Climate Change Challenge, is becoming more interested in three major areas that will shape the Home of the Future for the housing sector:

- **healthy ageing,**
- **technology,**
- **climate change.**

This project aims to explore a unified concept of Inclusive Living and present evidence for a framework that can support the housing sector in meeting these key challenges. The initial focus of the project was on ageing, but from the results of the literature review the Home of the Future partnership wish to promote a more universal and inclusive vision for the housing sector based on the idea that inclusion, inclusive design, connections and relationships are good for all groups from those with dementia to younger people living with physical disabilities and beyond. At the moment, the activity that is done in the housing sector to support these future challenges remains vague and unconnected. This study develops a systematic evidence base that explores literature around Inclusive Living and design, mapping key age-friendly design guides to present a framework and recommendations that would make housing practice less fragmented around these key areas.

The need to focus on Inclusive Living is a key priority co-designed and developed by the Home of the Future partnership group as the links between Inclusive Living and age-friendly design are often implied but never made exclusive. There are a range of age-friendly and dementia-friendly design guidelines currently in use within the UK and internationally. This guidance has in common the aim to promote inclusive design for an ageing population, for example, HAPPI1/2/3/4/5, Lifetime Homes Standard, Accessible Homes Standard, DWELL Accessible Housing standards, the Stirling Dementia Centre guidance (DSDC) and larger sets that cross international borders such as Age-friendly cities (WHO 2007), Centre of Excellence in Universal Design (<http://universaldesign.ie>) and age-friendly neighbourhoods (Government of South Australia 2012). The importance of neighbourhood design and design value has been noted (Serin et al., 2018), yet there is a lack of evidence around good design, impacts and what constitutes good design. Recent evidence (McCall et al. 2018a; McCall et al. 2017, McCall et al. 2018b) calls for a focus on integration of designing for ageing within the housing sector. The UK housing sector is still not prepared for ageing (Lords Select Committee 2013), with a lack of planning for age-friendly design and future focused planning in both urban and rural environments.



The aim and objectives of this project has been to:

Review the academic and grey literature around the concept of Inclusive Living and link this to 'age-friendly' design guidelines and:

- 1. define the concept of Inclusive Living in the housing and ageing context,**
- 2. map key 'age-friendly' design guidelines,**
- 3. explore the similarities and differences between 'age-friendly design' guidance,**
- 4. give recommendations for updating current design standards to take into account future planning for Inclusive Living.**

Through this project, the housing sector will have a resource to draw on to help understand the concept of Inclusive Living. Furthermore, the map of current design guidelines will offer support for organisations, including developers, to access resources to work towards Inclusive Living through age-friendly design.

This project harnesses existing knowledge through an evidence review and literature mapping exercise focusing on accessible housing design to make recommendations on how to streamline the concept of Inclusive Living into policy and practice.

A review of age-friendly guidance to develop Inclusive Living is essential to the housing sector in the context of service integration taken up with varying approaches within England, Scotland, Wales and Northern Ireland, with a weak evidence base in understanding what works (Kaehne et al. 2017). The current policy context in the UK focuses on supporting older people at home and at community level. For example, the Scottish Government's (2011-2021) strategy for reshaping care (Scottish Government 2011a) and housing for older people (Scottish Government 2011/2018) all holding an emphasis that changes the front-line from hospitals to an integrated delivery model directed at community level and people living in their homes for longer, which this review supports. The report now presents the emerging concept of Inclusive Living, followed by the methodology and evidence base that support the new framework for the housing sector.



The Concept of Inclusive Living

One of SFHA's Innovation and Future Thinking projects brought together a key partnership to develop and explore ideas around inclusive design. This evolved into the creation of the concept of Inclusive Living that includes a much wider vision around inclusive design that connects to tackling inequalities, encouraging social inclusion, connections and relationships.

Three key strands were clear within the literature review: Social Inclusion and Equality, Physical Space and Design, and, Connections and Relationships. These themes overlap, are integrated and inter-related. They provide a framework that highlights the holistic nature of housing and how Inclusive Living can work within the housing sector to support accessibility and living in-(ter) dependently. This report now outlines the literature that supports this framework.





Methodology

The key focus for the review is to define the concept of Inclusive Living in the housing and ageing context. Inclusive Living is multi-disciplinary and incorporates a large range of sub-themes, which are substantive areas of literature in their own right. Comprehensively mapping the research that has been undertaken within this theme is therefore challenging. The detailed approach to searching the research literature is set out in Appendix 1. This involved systematically searching four citation indices (SocIndex, Scopus, CINAHL Complete and JSTOR), conducting more focused additional thematic searches within the databases, hand searching key journals, and following the references and citations of research articles which were central to the focus of the theme. Although the searching process has been systematic, there will undoubtedly be omissions from the results presented here, as the returned results are dependent on arbitrary, but replicable, search processes.

The sub-themes discussed in this report were developed through engagement with the literature. As such it is shaped by the literature that has been returned through the searching strategy, and there are a number of areas of in need to development, which are outlined in the findings.

Overview of the mapping

In total, 131 publications were coded by sub-theme. A range of data was extracted for all publications including:

- Research question
- Method
- Country of focus

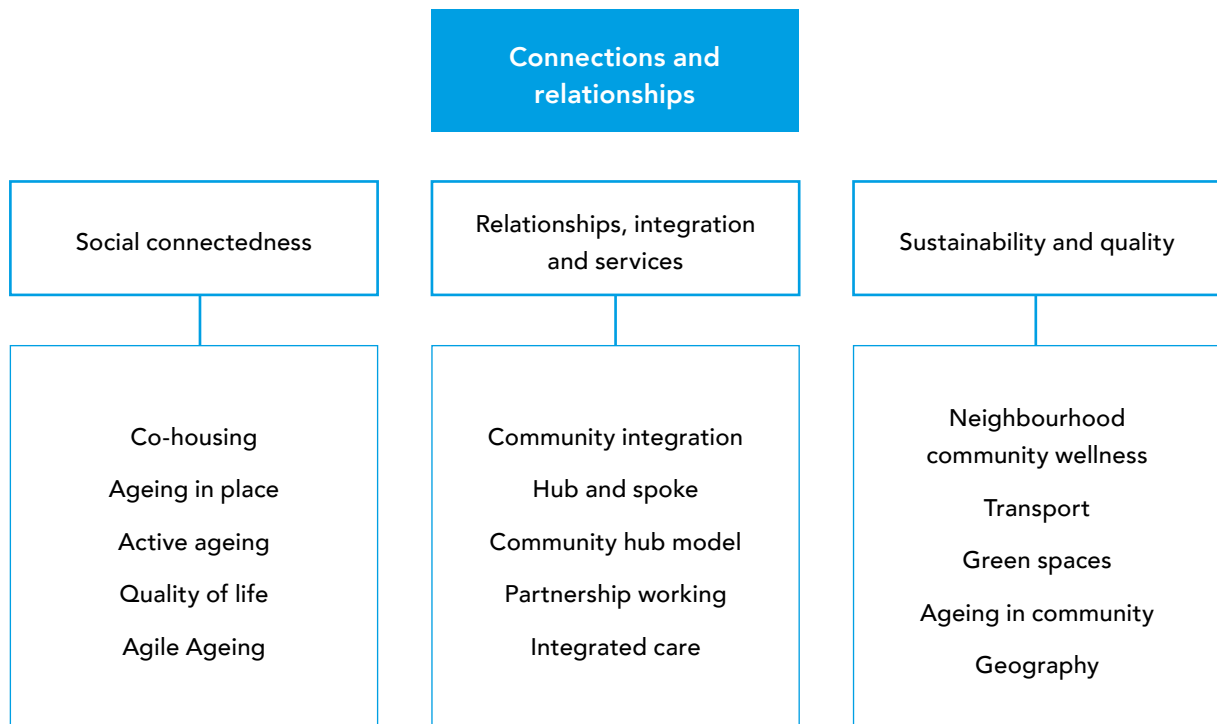
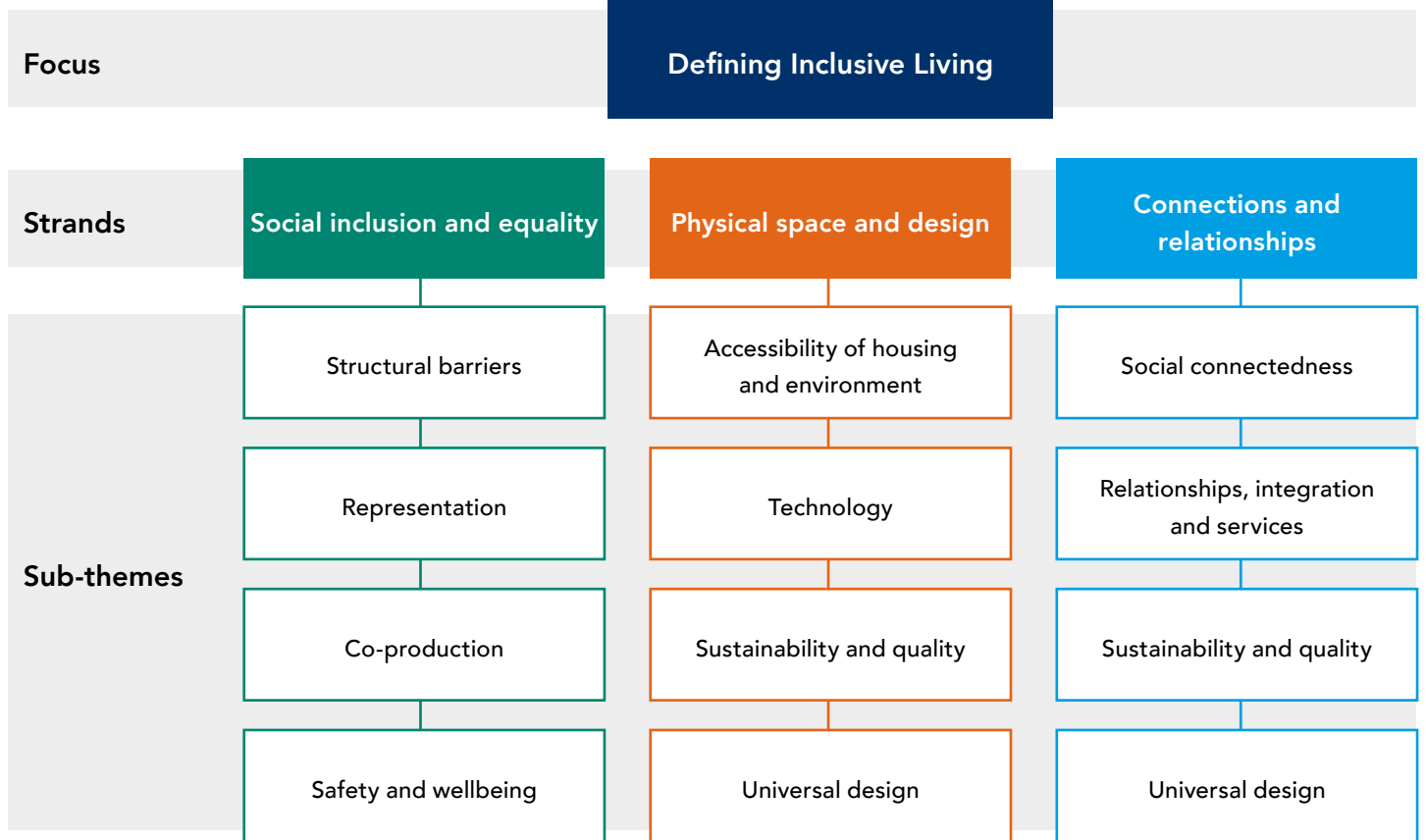
In addition, all publications were given a star rating to reflect relevance to the theme, with 1* denoting a marginal topic, and 5* denoting a string focus on central questions for the theme. Additional data were extracted for publications with a 3*, 4* or 5* rating (a total of 77 publications) including:

- **Key concepts**
- **Headline findings**
- **Quality of study**
- **Theme of focus**

These publications underpin the subsequent narrative presented in this report, although a number of additional publications from the broader mapping review will be used to illustrate areas that have been the focus of the research activities under the sub-themes, but which are slightly outside the central focus of the theme.

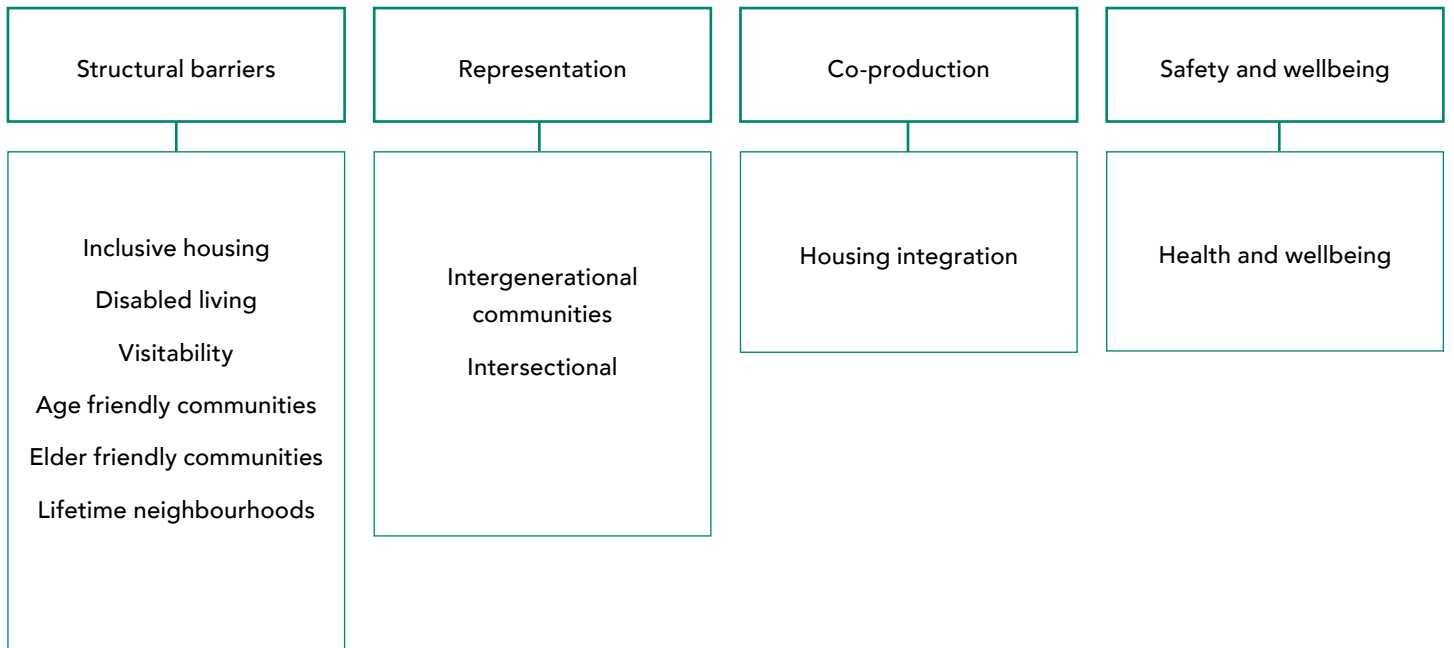
Considering the complete set of 131 publications coded for the mapping review, a small number of sub-themes clearly dominate the literature. Literature around age-friendly design, ageing in place and age-friendly communities are numerically dominant, with around half of publications including a focus on one or more of these areas. There is a strong interaction between these sub-themes and dementia friendly design, considering the interaction of these areas of design. Accessible design was also considered by a high number of publications, although the accessible design theme encompassed a diverse range of issues, from physical disability to design to support sight and/or hearing loss. Almost a quarter of publications focussed on inclusive design, social exclusion/inclusion, inequality and connectedness.

Bearing in mind this context, each publication was coded to a series of sub-themes, which were further refined through the coding process. The 'maps' on the following pages set out the sub-themes and key areas of research that fall under each of the categories.

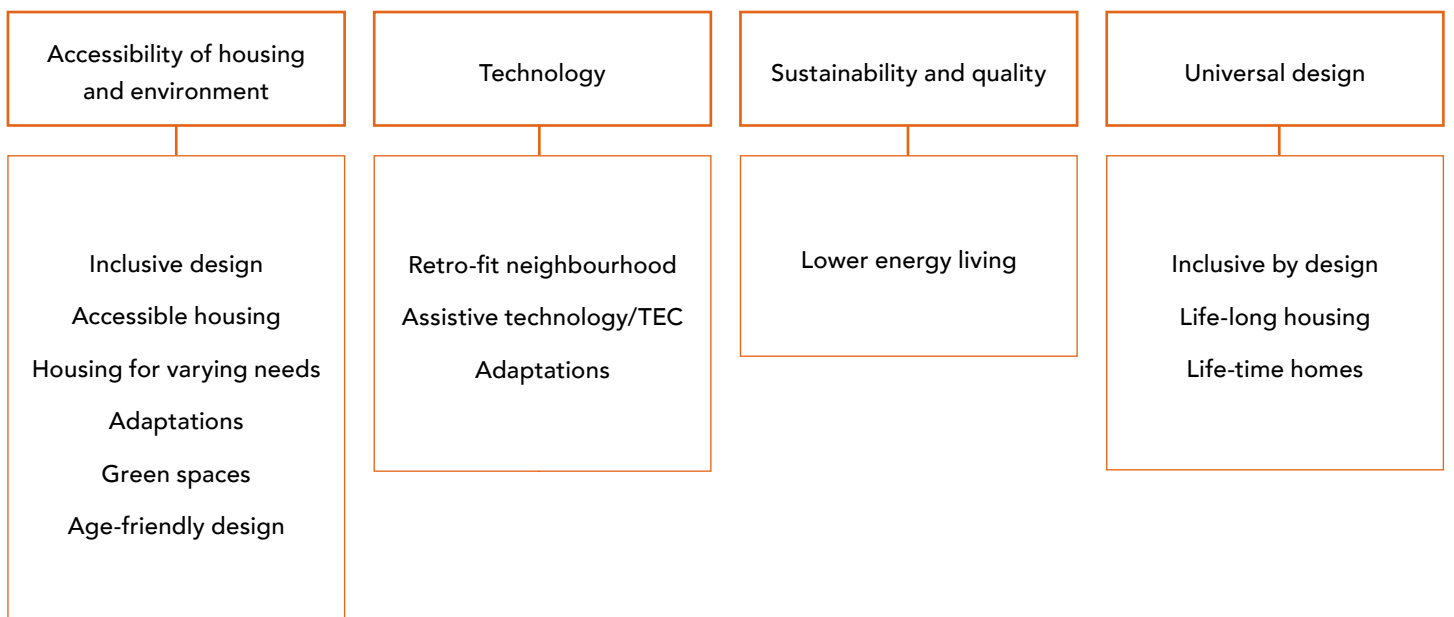




Social inclusion and equality



Physical space and design





From these concepts, some of the most popular were around age-friendly design, age-friendly communities and ageing-in-place. This was followed closely by accessible and inclusive design. Most of the concepts were discussed in a tenure-neutral way, although some specialised parts of the literature focused on elements such as co-housing (see figure 1, below).

What is clear by this list of concepts is the depth and breadth around the insights and approaches that can connect to Inclusive Living. This perhaps gives an indication to some of the barriers that the housing sector has faced in this area due to its development being wide, varied and fragmented.

There is also a clear dominance of research published in the last seven years. However, the volume of publications generally has increased over time; more people are publishing research articles across many topics.

This process explicitly included grey literature as fed in by the Homes of the Future partnership to capture design guides that are currently used in the housing sector. The date range captured was 1998-2019, showing that there are still guides from 1998 being used and implemented. A large issue with the literature and guidance available is that it is disparate and there are no guides that bring all elements of Inclusive Living together.

The review also captured service user involvement within current design guides. From the 35 reviewed for strand 2, only 39% noted if they involved a consultation process with service users. When looking for evidence of co-production, this was reduced to 24%:

On a positive note, the quality of the literature was high with 73 per cent rated as very good or excellent. Only 7 per cent of the literature was rated as poor with unsubstantiated results or missing vital information.

Figure 1: Primary focus of publications by sub-theme

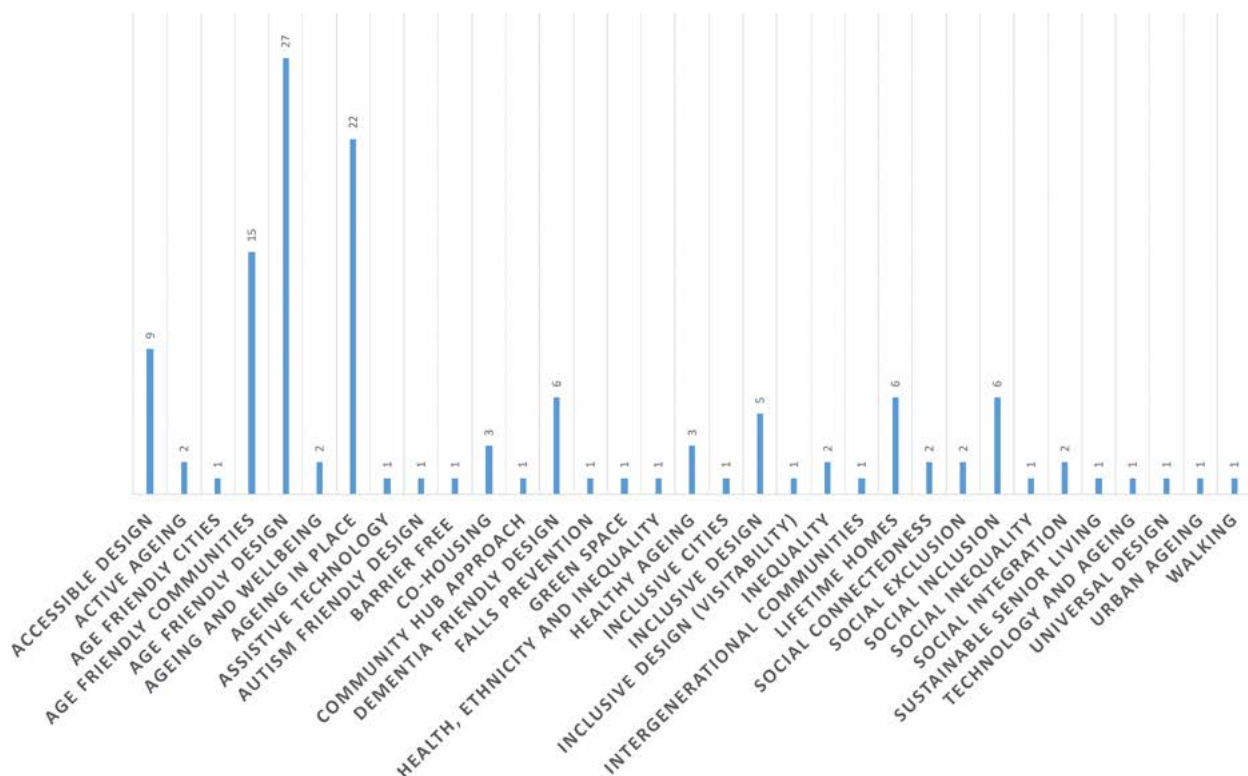
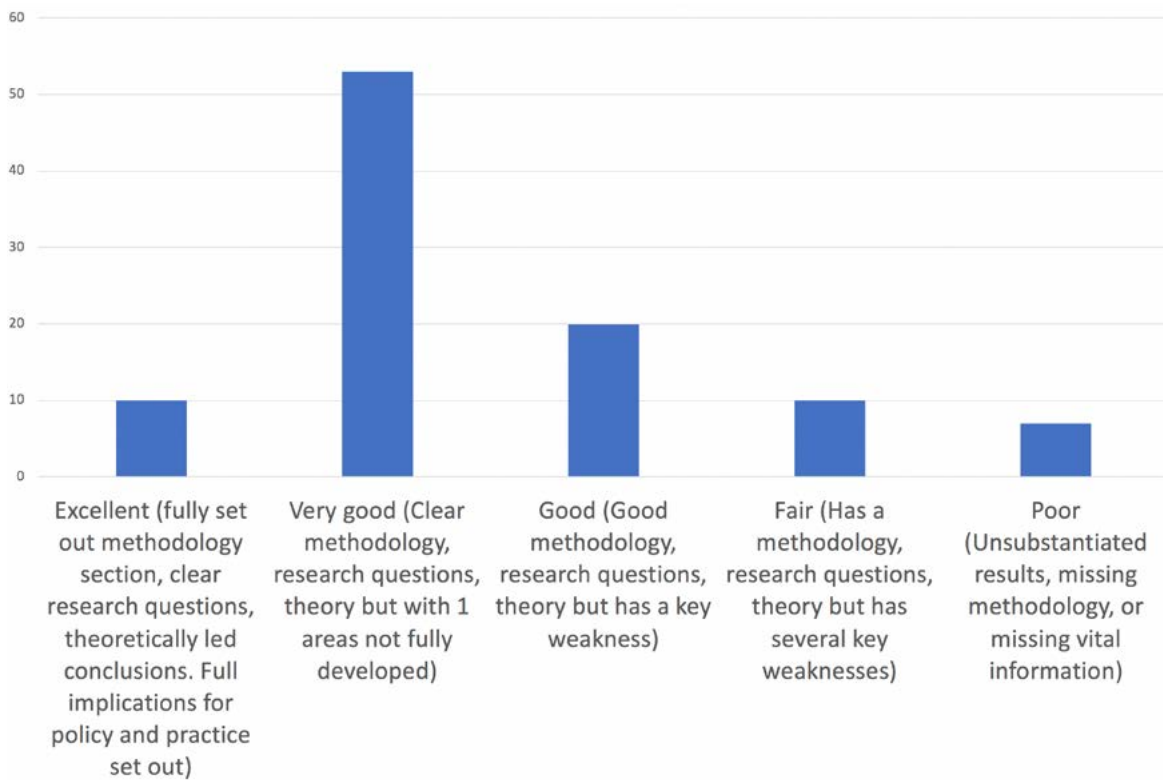




Figure 2: Quality of literature (%)



The following sections present a narrative discussion of the sub-themes in more detail.

Key research outputs are highlighted, particularly those that have advanced our understandings of these thematic areas. Gaps in the research literature, around which new research could complement existing research knowledge are also highlighted where relevant.

The substantial sections discussing each sub-theme are clustered under three themes: social inclusion and equality, physical space and design and connections and relationships. Whilst this is a convenient organisation of the research literature, there is considerable overlap between these areas. In practice, almost all of the research discussed here considers the interaction and relative importance of a number of sub-themes, for example the role of physical design on the ability to make social connections.



Social Inclusion and Equality

There has been a considerable amount of research around social inclusion and equality, focussing on structural barriers. Typically, these studies consider the relative importance of structural barriers to inclusion such as physical and social infrastructure and how these impact on access to the private and public realms, opportunities for social engagement and the impact on health and wellbeing.

Social Inclusion is important and linked to the idea of home, appropriate housing, belonging, place (Spicker, 1998). For Scotland, however, many disabled and older people live in homes that did not meet their requirements to live independently (EHRC 2018; McCall et al 2019; Anderson et al 2019). Spicker (1998) notes that people can be excluded from housing via:

- homelessness
- poor quality accommodation,
- housing tenure or type
- unsafe neighbourhoods
- restrictions around accessing housing
- poor transport links
- few job prospects
- inadequate facilities or poor access to services

Structural barriers to inclusion

Scharlach and Lehning (2013: 115) note that 'social inclusion can be understood not simply as a characteristic of individuals, but of the communities within which those individuals live. Physical and social contexts themselves can be inclusive or not either facilitating or serving as barriers to resource access, social integration and social support'. There is a large literature considering the importance of structural barriers to social inclusion for older people (Menec, 2017; Plouffe & Kalache, 2010; Ring, Glicksman, Kleban, & Norstrand, 2017; Scharlach & Lehning, 2013; Yeh et al., 2016).

The literature shows the importance of both physical and social infrastructure and how these impact on access to the private and public realms, and opportunities for social engagement and the impact on health and wellbeing.

Plouffe and Kalache (2010: 237) show that 'landscape, buildings, transportation system, and housing contribute to confident mobility, healthy behaviours, social participation, and self-determination, or, conversely, to fearful isolation, inactivity, and social exclusion'. The physical environment is also a key element of inclusion, especially for older people (Lawton, 1999). The Centre for Excellence in Universal Design has really taken this concept forward by their stance on promoting equality and inclusion through Universal Design, with the idea that if you build for those who are traditionally excluded, you building for everyone because "when home environments are people-centred in design, convenient and a pleasure to use, everyone benefits. Simply put, Universal Design is good design" (Centre for Excellence in Universal Design). Principles of Universal design include:

Principle 1: Equitable Use

Principle 2: Flexibility in Use

Principle 3: Simple and Intuitive Use

Principle 4: Perceptible Information

Principle 5: Tolerance for Error

Principle 6: Low Physical Effort

Principle 7: Size and Space for Approach and Use

<http://universaldesign.ie/Built-Environment/Housing/>

The Universal Design Guidelines for Homes in Ireland have comprehensive, free and downloadable guides that promote Universal Design and give details of the principles.



Representation of all groups

There is increasing recognition that planning for housing in later life is about ageing in place and staying in your home of choice for as long as possible (Phillips et al., 2018). Other concepts such as active ageing have also become mainstream. (Hanson, 2002).

The 'neighbourhood of the future' and 'society of tomorrow' has to work across all generations and embody fairness (Agile Ageing Alliance, 2019). A range of research has highlighted the importance of multi-generational, age-friendly communities to enable people to age in place (Kennedy, 2010; van Hoof et al., 2018). The focus on both of age- and child-friendly design, 'would militate for a dropping of both the rhetoric of age-specific and friendliness for all ages. Rather, we should build intergenerational spaces that recognise their use in line with at least three aspects of intergenerational relations' (Biggs & Carr, 2015: 108).

Maisel (2006) gives an interesting insight to how representation within the housing sector can look. Although the concept originated in Europe, this paper shows that in the USA, the concept of 'visitability' has developed to form a 'new inclusive design strategy'. This is an attempt to reframe the debate around housing to include everyone and emphasises that transitions and the built environment around homes and housing must also be inclusive. Focusing on the creation of accessible homes, the USA has seen pockets of this type of development that is framed as an accessible housing initiative to:

'...provide a baseline level of accessibility in all new home construction, in hopes of benefiting the entire population and creating accessible neighbourhoods. Visitability is an affordable, sustainable and accessible design approach that targets single family homes' (Maisel 2006: 28).

This research widens out the idea of inclusive design to a movement – one that can benefit everyone. It ensures that wherever you live, people can come to your home whether they are young, old or living with a disability. The concept helps to widen our understanding on inclusiveness in the housing sector.

Co-production

The Christie Commission (2011) in looking at the future of public services notes that services need to be "built around people and communities, their needs, aspirations, capacities and skills, and work to build up their autonomy and resilience."

In this context, ihub Scotland (2019) notes that co-production 'is about combining the knowledge, skills and experience of people who use services, deliver services and commission services, and working together as equals to achieve positive change and improve lives and outcomes. Co-production is about working with, rather than doing to, people and communities'.

Many studies highlighted the importance of end-user involvement in design (Dewsbury, Rouncefield, Clarke, & Sommerville, 2004; Fletcher, 2008; Swann, 2007). Co-production and co-design are highlighted in the literature as key to future-facing strategy and ownership of long term change (McCall et al. 2017). However, the review of current design guides highlighted co-production and service user engagement was limited in the creation of current design standards.

Fang et al., (2016) critically engage with the topic of representation of older people in the research process. They highlight that 'older peoples' voices are often excluded in planning, development, and initiatives but this can be counterbalanced by collaborative models of design. Including older peoples' voices in these process can challenge the sometimes negative experiences of 'ageing-in-place'. (Fang et al., 2016).



Inclusive design places an emphasis on the person, and co-production is an essential component to 'a good life' in later years (Greasley-Adams et al., 2017).

In a UK wide Housing and Ageing programme (McCall et al., 2018) explored the ability to improve wellbeing with an ageing population. It was found that real, long-lasting change must include communication and co-production with service users. This helps support long-term ownership of changes and decisions, promote partnership and collaboration with meaningful co-production and co-working with older people, work in an integrated way across sectors, ensure a rights-based approach to making decisions and planning for the future and representation of diverse groups (McCall et al., 2018).

Safety and wellbeing

The role of the built environment in public health has been examined in detail (Frumkin, 2003; Pilkington, Grant, & Orme, 2008; Srinivasan et al., 2003; Stewart, 2005). Ageing-in-place is a concept much debated has been adopted as a key strategy for coping with the challenges of ageing but with critical engagement and emphasis of ageing-well-in-place or ageing-in-the-right-place (Sixsmith and Sixsmith, 2008; Golant, 2015; Sixsmith et al., 2017; McCall et al., 2018). Burton et al., (2011) developed a tool to 'place-related' elements including functional, emotional and social wellbeing. All of these must be considered in relation to building a 'home' (Phillips, 2015).

Social behaviour, cultural assumptions and norms, attitudes and perceptions are also important. Smith et al (2004) found that life quality was linked to perceptions of health, or feeling lonely, and indeed poverty. Socio-demographic factors and objective life conditions are an importance measure of social inclusion and equality.

It is notable that this review has drawn very little research into the factors that affect safety (Berry et al., 2017). There seems to be a particular lack of research into ageing and perceptions of safety within the reviewed literature, but we do know from research in Scotland within the housing sector is that safety remains of the key housing issues from the perceptions of older people (McCall et al., 2017; Greasley-Adams et al., 2017). Secure by Design principles also include elements of confidentiality, integrity and availability which can overlap with considerations around technology, information and accessibility.



Key findings:

- Removing physical and social barriers to social inclusion by developing intergenerational communities which enable people to age-in-place
- Inclusive design places an emphasis on the end user, co-production and co-design



Physical Space and Design

A range of literature considers the relative importance of age-friendly design, focussing on physical disability, dementia and impaired reasoning and to a lesser extent hearing and/or sight loss (Atkin, 2010; Goodman, 2011; Keating, Eales, & Phillips, 2013), and more recently Autism spectrum challenges. Whilst accepting that there are many important components for age-friendly design and Inclusive Living, there is a general consensus that accessibility of housing and the external environment is a key factor (Biggs & Tinker, 2007; Malloy, 2009; Robbins, 2008).

It is notable that many of the terms used in the literature lack conceptual clarity. Accessible housing, age-friendly housing, adaptability are frequently used terms but they are often used without precise definitions and sometimes interchangeably.

Accessibility of internal space and wider environment

Capability Scotland and GCIL (2013: 5) note that:

'Housing is the cornerstone of independent living for every one of us. Without user-friendly, appropriate housing it is impossible to access employment, education, or leisure and recreational opportunities. Government policy clearly indicates the importance of building a more inclusive society and the central role that housing has to play in this process. Increasing the stock of accessible housing is a fundamental part of promoting independence, flexibility and social inclusion. This can only be achieved by building accessible dwellings or by adapting the existing housing stock to meet people's needs.'

There is a large range of different design guides providing technical specifications, design information and standards (Biggs & Tinker, 2007; CABE, 2010; Fletcher, 2008; Goodman, 2011; Greasley-Adams, Bowes, Dawson, & McCabe, 2014). These cover a range of design concepts such as: lifetime homes, inclusive design, and

housing for varying needs. These focus on physical design concepts around physical accessibility, wheelchair design and to a lesser extent design to support sight and/or hearing loss.

Dementia and age-friendly design can include very simple changes that can make a difference and impact on people's lives and wellbeing. Greasley-Adams et al. (2014) for example emphasise simple changes in colour and contrast that can help homes and living spaces be friendlier for those with dementia and sight loss but also can benefit most people. For example:

- Contrasting coloured doors.
- Contrasting key features such as light switches, sockets, and handrails.
- Having toilet seats in colour (not white on white) to make them more visible.
- Contrasting potential hazards (steps, sharp edges) (Greasley-Adams et al. 2014: 6-7).

There is a range of age-friendly and dementia-friendly design guidelines currently in use within the UK (Goodman, 2011; Greasley-Adams, Bowes, Dawson, & McCabe, 2014) and internationally (Government of South Australia, 2012; World Health Organisation, 2007). These design guides highlight the importance of housing design to enable people to remain independent within their communities, in particular the importance of internal space and transitions to outside space. Agile Ageing Alliance note that this can be linked to new jobs, economic growth and independent living. To take forward, the changing needs of older people needs to be explored and prioritised in product design (Agile Ageing Alliance, 2019).



Adapting existing housing stock and managing existing assets

Whilst the focus of this report is on the inclusive design of new build housing across tenure, it is acknowledged that the majority of the current population will continue to live in houses which have already been built. It is therefore vitally important that we continue to improve the delivery of effective and efficient adaptation services across tenure as an option for anyone facing challenges in their home environment. The responsibility for adaptation services now lies with the Integrated Joint Boards (Public Bodies (Working) (Scotland) Act 2014) and the legislation includes a wide definition of adaptations which should enable stakeholders to deliver more innovative and responsive solutions in addressing a wide range of needs.

Recent guidance from the Royal College of Occupational Therapists and the Housing LiN promotes an improved, resource-efficient approach to the provision of adaptations with good practice examples across tenures (Adaptations without Delay, RCOT, 2019). RCOT's (2019) guide to planning outlines the benefits of adapting homes to improve health and wellbeing, increase independence and reduce risk for individuals. Adaptations are one of most tangible ways to prevent a health crisis in housing. RCOT (2019: 36)

- There continue to be delays in the delivery of major adaptations across tenure.
- Some housing associations are not providing straightforward adaptations without an occupational therapy assessment.
- Across the four UK nations, adaptations are defined by type (straightforward/major) and cost rather than being defined by the complexity of the individual's circumstances (i.e. related to their needs and home environment).
- There continues to be a lack of information for individuals about adaptations

- It is also important that Landlords build in a range of inclusive design features and approaches to their Asset Management Strategies in order to maximise options for their existing and future tenants.

Technology

We are living longer, healthier lives that means that the population will live independently at home for longer. The Agile Ageing Alliance (2019), however, note that healthy life expectancy has not kept up with increases in inequality. Reduction of inequality needs much more focus on physical and sensory changes that support people day to day with more inclusive design in homes and the environment to support independent living. This will have to include 'digital technology to support existing carers and over time, provide care directly to people, provides an opportunity to help address these challenges. It is anticipated that the successful deployment of technology in the delivery of health and social care can deliver a range of benefits' (Just Economics, 2018).

Technology has potential to help, but there have been challenges with implementation and integration. Technology Enabled Care (TEC) as defined by the Scottish Government includes "where outcomes for individuals in home or community settings are improved through the application of technology as an integral part of quality cost-effective care and support" (Scottish Government, 2018). Tang & Venables (2000) also include newer ideas around telecare services and 'smart' homes, which often do not link up.

Design and technology can contribute to autonomous ageing and compensate for functional changes associated with ageing. Research considering the opportunities for technology to enable ageing in place highlight technology that can enhance social inclusion for older people, in particular for those living within rural communities (Biniok et al., 2016; Beimborn et al., 2016; Normie, 2011).



However, technology was generally considered in isolation or to compensate for poor design rather than as a tool to create inclusion and independence.

The Agile Ageing Alliance (2019) note that 'technology must respond sensitively to existing needs and must seamlessly support the human side of care and services. There is a need to embed care and an understanding of users into all digital innovation. Insensitive, incorrectly applied solutions without the right user interface risk undermining independence and increasing social isolation'. The systems in place should enhance face to face communication, rather than replace it (Agile Ageing Alliance, 2019).

The social housing sector in Scotland has recognised the important role of technology in the housing sector. The TEC in Housing Charter hosted by the SFHA outlines a series of pledges for housing organisations to engage with different elements of technology that supports health, social care and living independently at home for as long as possible. These pledges acknowledge the holistic nature of housing and focus on prevention, service design, connections and engagement:

PLEDGE 1: Opportunity and solution focused

PLEDGE 2: Engaging with customers

PLEDGE 3: Working in partnership

PLEDGE 4: Preventative analytics

PLEDGE 5: Service redesign

PLEDGE 6: Supporting the workforce

PLEDGE 7: Getting the infrastructure right

(SFHA 2019, <https://techhousing.co.uk/>)

Examples of the TEC in Housing programme in practice have include Belses Gardens Care Home in Cardonald, led by Blackwood Housing Association. The site provides an innovative care system, supported by 'CleverCogs' (see later case study).

Sustainability and quality

Trillo (2017) notes that the main elements of Sustainable Urban Development include a focus on the environment, the social and the economic together. This calls for a high level of integration in public policies, especially focusing on social exclusion. Much research was focused on the importance of well-designed spaces that are accessible and encourage a feeling of community (Arthurson, 2014; Scarfo, 2011; Trillo, 2017). There is a strong relationship in the literature between inclusive design and physical space, in particular street design. Designing Streets: A Policy Statement for Scotland (2010) focuses on street design towards place-making. Creating Places: A Policy Statement on architecture and place for Scotland then highlight the importance of good design and communities as being essential to health and wellbeing and identity.

Much of the literature highlights the importance of access to opportunities for meaningful work and activities and local facilities that promote healthy active lifestyle such as green spaces and outdoor amenities (Agile Ageing Alliance, 2019; CABE, 2008; CABE, 2010). Milner (2003) widens our consideration inclusive housing design to emphasises the importance of energy efficiency, thermal lighting controls, total floorspace and storage.

A key gap in the literature was the consideration of the impact of green spaces and the inter-relation of inequality, ethnicity, health and wellbeing. CABE (2010) for example have shown that green spaces are linked to equalities. The study found that:

- 1 per cent of people living in social housing reported using the green space on their estate
- Limited access to green space impacts on health and wellbeing
- The most acute affects are felt by black and minority ethnic groups



Access to community spaces, green space and amenities was also highlighted (Bookman, 2008; Centre for Excellence in Universal Design, <http://universaldesign.ie/>; Craig et al., 2015; Maisel, 2006). And the importance of good design for shared spaces and creating spaces that are easy to navigate, usable by all and encourage people to gather together (Department for Aging, 2016; Kennedy, 2010). Therefore, highlighting the importance of accessible design in creating a sense of community to bring people together to avoid isolation.

‘Everyone’- friendly (universal design)

Much of the literature considers the importance of accessible and flexible design that meets the widest range of people and promotes independence and equal access (Agile Ageing Alliance, 2019; Goodman, 2011). These are similar in that they consider a life course perspective and the role of housing to adapt to meet changing needs over time (life-long housing, life-time homes, inclusive by design, future proofing). However, progress has been slow regarding life-time homes that are ‘heavily biased towards the physical access needs of older, adult wheelchair users’ (Milner & Madigan, 2004).

Housing needs to be adaptable and support all generations, from growing families and older people. Research highlights that design solutions can be considered more easily if instigated early in the process, during the design phase is a key time for consideration of a building and avoids complexity and cost (van Hoof et al., 2013; Rooney et al., 2016). However, adaptability has focused on the needs of people with mobility impairments, rather than wheelchair users (Milner & Madigan, 2004).

A sub-section of research has sought to understand the housing preferences of specific groups, for example people with Parkinson’s disease or those with learning disabilities living in supported housing environments (Cumella & Lyons, 2018; Slaug, Iwarsson, Ayala, & Nilsson, 2017). This recognises that vulnerable populations have various housing

preferences and may have specific physical space and design needs that are not being met. Therefore, good design has to acknowledge diversity and difference and meet as many needs as possible by identifying barriers and providing solutions to overcome them (Fletcher, 2008).

Keating, Eales and Phillips (2013: 329) sum up this well in their investigation of the rural housing context and note that ‘policies aimed at age-friendly communities need to be much more attentive to the nuances of both community and individual needs. A range of interventions that can respond to the diversity and inequalities of place and people are required if age-friendly communities are to develop and be sustainable within a rural context. There is no one ideal model to suit all community contexts’.



Key findings:

- Accessible external environments (public space, green space) are important in creating a sense of community
- Design and technology that enables people to remain independent within their communities (ageing in place)
- Good design and communities essential to health, wellbeing and identity
- Importance of accessible and flexible design that meets the widest range of people (life-course perspective, future proofing)
- Flexibility in design is important in order for organisations to adapt to different contexts, situations and individual needs
- Adaptations are a key area to support independent living
- Good design has to acknowledge diversity and difference and meet as many needs as possible by identifying barriers and providing solutions to overcome them



Connections and Relationships

Although for the purposes of mapping the literature, research has been divided into different categories, it is important to note that much of the literature cuts across several distinct areas, drawing out the relative importance of a range of themes. A smaller proportion of studies have considered the role of connections and relationships, focussing on social connectedness, support services and transitions.

Social connectedness is about relationships, connections and a person's level and quality of contact with people. It is key to healthy ageing, quality of life and wellbeing.

Social connectedness at individual level, community and service-level

Scharlach and Lehning (2012) highlight and connect elements of social capital and social integration, participation and the importance of social activities and social networks for ageing and older people in America. Glass et al., (2006) has further noted the link between connections, relationships and reduced depression.

Menec (2017) conceptualizes social connectivity to include:

- 1 Creating social connections;**
- 2 Empowerment;**
- 3 Social influence**
- 4 Access to material resources and services.**

This extends the discourse on age-friendly communities beyond the local and highlights the importance of consideration of broader societal influences.

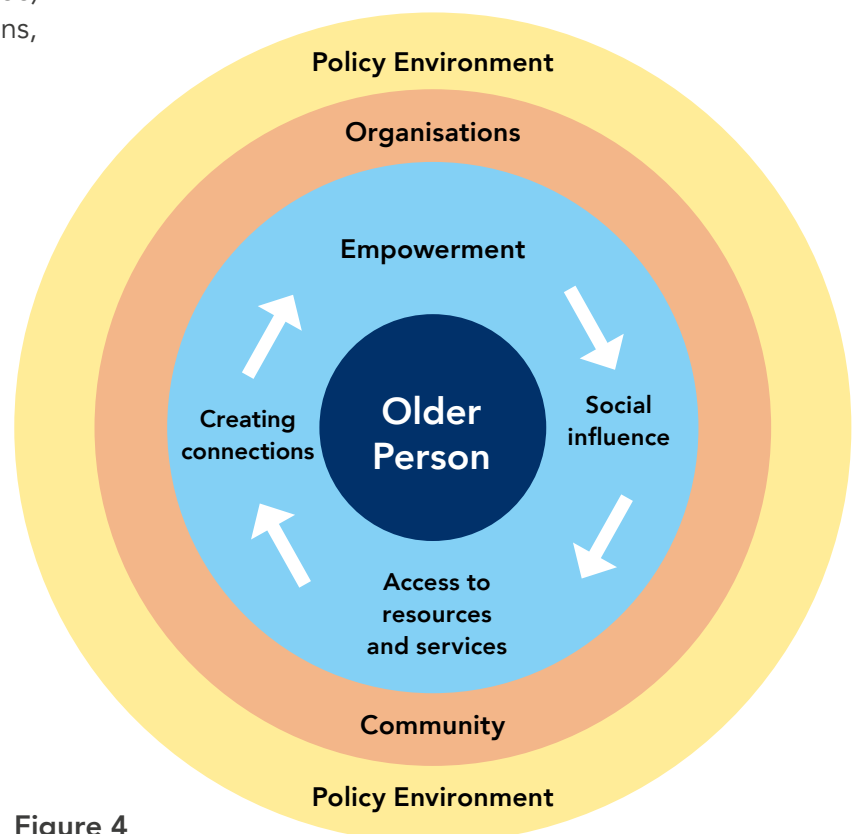


Figure 4
Source: (Menec, 2017)



Relationships, partnership, integration with individuals & support services

The literature suggests that ageing in place is important at community level, household level and individual level in regards to choice (Evans et al., 2017; Neville et al., 2016). This is why Keating et al., (2013: 329) call for 'a much more sustained and wider approach, strengthening the resources that communities have a social, cultural, economic, and environmental to meet the needs of diverse groups of older people'.

Sixsmith & Sixsmith (2008) outline a key focus on community spaces and note that the 'home' environment and experience may not always be positive. Sixsmith et al., (2017) expand this to consider the psychological, social and service landscape. Menec et al., (2011) in their conceptualisation of age friendly communities also note both informal and formal community supports as important. Transportation options are not often found in aging approaches and models, but remain an important element for connection and reducing isolation (e.g., Evans & Stoddart, 1990; WHO, 2002), and thinking in terms of inclusion supports the negotiate the environment for older people and wider groups (Menec et al., 2011).

However, relationships and connections are an often not a focus in guides targeted at physical space. One of the more holistic guides Inclusion by Design (CABE 2008) has been powerful as it centralises accessibility and connections between communities as key in urban design. This guide highlights that we should be moving 'from access to inclusion' where:

"The built environment can contribute to a more equal, inclusive and cohesive society if the places where we live, the facilities we use and our neighbourhoods and meeting places are designed to be accessible and inclusive". (CABE 2008: 4).

Although focused more on the outside environment, this guide makes it clear that good design is good for everyone in that it helps tackle structural barriers between rich and poor areas, as well as contribute to the improvement of people's mental health. Homes for our old Age report (CABE 2009) builds further on this theme specifically outlining case studies in the housing sector that support housing for older people. The theme of relationships and connections is once again a central element of that support:

"Older people want homes that give them independence, choice and the ability to maintain their friendships and family contacts" (CABE 2009: 3).

This is connected to key themes around age, poverty, dementia and isolation. The guide shows that housing solutions can – and must – tackle all of these elements.

HACT (2019) and McCall et al. (2019) also notes the importance of partnership working between housing and health. The HACT (2019) report has shown housing associations to be a key element to supporting social prescribing (i.e. helping people access non-clinical services). This can be about making connections around employment, financial inclusion, digital inclusion, physical environment and health and wellbeing. This is because:

"... wider supported housing, is a significant community resource with tailored support that links individuals into neighbourhood support and services. As such, they have access to a comprehensive picture of local provision" (HACT 2019: 11).

HACT (2019) conclude that investment in social prescribing would be attractive to housing associations, and support a connected agenda based on strong partnership.



Transitions through spaces

Many studies highlighted the importance of transitions and connectivity, in particular transport (Alley et al., 2007; Keating et al., 2013; Sixsmith & Sixsmith, 2008; van Hoof, Kazak, Perek-Białas, & Peek, 2018; World Health Organisation, 2007). Going back to Scharlach and Lehning's (2017: 123) concept of walkability, they note that 'improved access to other modes of transportation, including driving, public transportation and supplemental senior transportation, may also facilitate the social inclusion of older persons'. In the rural context, transport is even more important to support independence in regards to social, cultural, economic, and political participation (Keating et al., 2013). What is clear is that moving within and between spaces is a key part of retaining and keeping connections and relationships.



Key findings:

- Social connectedness is key to healthy ageing, both access to material resources and social networks
- Attention must be paid to community places as well as the home
- Informal and formal community support is key to ageing in place
- Transport and the ability to remain independent is key
- New areas such as social prescribing have been emerging as new pathways for partnership and connections.



Overcoming Barriers to Inclusive Living

This section summarises the feedback from consultation and outcomes with key stakeholders involved with the housing innovation factory. The initial findings from the mapping exercise were presented to the housing innovation factory on Friday 17 May 2019 for initial feedback, comments and discussion. We then explore some of the insights around cost implications for housing practitioners to begin thinking through areas, categories and considerations for starting the process of implementing an Inclusive Living approach.

Challenges and opportunities

Stakeholders highlighted that there may be physical barriers (retrofitting, accessing land) to Inclusive Living. For example, some regions have a difficult topography and flat sites with good access to amenities and transport links may not be prioritised for housing. This highlights the need for joined-up approach at a local level to ensure that development is not undertaken in silos (e.g. master-planning).

It is important that an inclusive approach is taken to consultation and engagement (co-production). However, it may be challenging to engage with all the different interest groups, in particular those who are hard to reach (e.g. young people, BAME). Also, the volume of different interest groups could be a key challenge, as it will not be possible to meet the needs of everyone. There may also be interest groups who are against any change as they have vested interests.

Stakeholders were keen to ensure that the language used around the concept was inclusive and did not stigmatise groups. Marketing the concept is important to create the right image and branding to bring the concept to a wide audience and to ensure that it is 'mainstreamed'. They highlighted that the majority of households did not consider their long-term housing needs when they purchased a home, but rather the size, location and cost.

Therefore, there is a need to educate the consumer and focus on concepts that are considered relevant to the mass market (e.g. space and adaptability).

There was agreement that there are a lot of terminology and design concepts that are used interchangeably (e.g. accessible shower, wet floor shower). These often have no clear definitions and can lead to misinterpretation or miscommunication of design needs. It is important to develop a common language that brings this together rather than creating new terminology and confusion.

Adaptability is important to ensure that every building can meet the changing needs of households as they grow and age (generation proof). Also, the role of technology to enhance design, in particular around adaptations to existing stock. Stakeholders highlighted the need to design as inclusive as possible but accept that we cannot meet all needs.

It is important that buildings, developments or communities can be evaluated against the concept. It was suggested that a framework could be developed to measure against, however this needs to be flexible as we need to accept that we cannot meet all needs. Stakeholders also suggested that wellbeing indicators are needed on policies.

Stakeholders raised the importance of accessibility and visitability, both within and outwith the home. The majority of literature only considers only one aspect, however access to public space/green space is as important as the home to ensure that people are not locked in their homes. It is important to recognise the social nature of people and ensure that there are opportunities and places for people to gather together and interact.

Stakeholders agreed that this was an opportunity for Scotland to be an international leader, therefore it was important that the findings of the research were fed into the housing for varying needs review.



Cost Implications

There were also concerns that there could be resistance to a new concept or design criteria could have financial implications which could be prohibitive to development. Stakeholders suggested developing industry standards, linking the concept to building standards or planning guidance to generate more 'buy-in' to the concept.

The literature was very limited in regards to outlining cost implications for accessibility. Dementia design guidance from DSDC does link in with practical elements and solutions. There was emphasis, however, on the items that can be done if considered early in the process of decision making around age and dementia friendly design.

There is emerging evidence on the cost savings linked with Technology Enabled Care. The Scottish Government (2018) report outlines key evaluation principles in this area including strategic evaluations 'measuring what matters: (a) measure outcomes; (b) measure things relevant to people; and (c) ensure that indirect effects/externalities are captured.

There are also small scale interventions around technology that have limited cost implications. An evaluation of the Wheatley Groups' 415 project, for example, placed emphasis and positive impact on interventions that were under £50. Small items such as 'Magi Plug's (a plug that prevents flooding and scalding) was shown to be a very cost effective and welcome measure by older people living in supported accommodation (McCall et al 2017). These small tech interventions were compared with the cost by the point of delivery with the health service for comparison (next page).



Key findings:

- Challenges of physical barriers (e.g. retrofitting, accessing land) are similar across tenure and need a partnership solution
- There are potential financial barriers but cost implications may be less than people perceive if decisions are integrated and made early in development processes.
- Co-production is key to long term ownership and change
- Adaptability is important
- Evaluation must be integrated into Inclusive Living developments
- Accessible internal and external environments (green space, public space) must both be considered and included.
- You do not have to be 100% inclusive but if you start to make decisions towards a more inclusive approach this contributes to the progress of the whole housing sector.



Overcoming Barriers to Inclusive Living

Tech	Cost	Potential prevention	Cost by point of delivery
Magiplug anti flood and scalding indicator	£9.99	Flood; Burn or scald	Average cost of water damage £7,547
			NHS – Day case £733
			NHS – Non-elective inpatient (excluding excess bed days) £1,609
			NHS – Elective inpatient (excluding excess bed days) £3,749
Kettle pourer (tipper)	£11.99	Burn or scald	NHS – Day case £733
			NHS – Non-elective inpatient (excluding excess bed days) £1,609
			NHS – Elective inpatient (excluding excess bed days) £3,749
Your Minder Talking Medication Alarm Clock	£42.94	Non-adherence to medication	NHS – Non-elective inpatient (excluding excess bed days) £1,609
			Ambulance services – Hear and treat or refer £34 per patient
			Ambulance services – See and treat or refer £181 per incident
			Ambulance services – See and treat and convey £236 per incident
Nitesafe Sensor	£16.19	Fall, slip or trip (contributing to 57% of accidents in Scotland)	NHS – A&E attendance £138
			Depending on severity of trauma, cost range between £6,672–£12,572 for a hip replacement
			Ambulance services – Hear and treat or refer £34 per patient
			Ambulance services – See and treat or refer £181 per incident
			Ambulance services – See and treat and convey £236 per incident

Source: Evaluation of Wheatley Group's 415 Project. McCall et al, 2017



Discussion

The maps and literature give a clear review of how diverse and fragmented the areas are under the banner of Inclusive Living. These concepts also are related to work within different disciplines and sectors (health, housing, social care). We see that the umbrella of Inclusive Living can be a thread that brings together these diverse concepts under the same vision.

The concept of Inclusive Living highlights the importance of removing physical and social barriers to inclusion by developing intergenerational communities which enable people to age-in-place. It also emphasises the importance on access to wider environments, communities and opportunities for social connections.

Through good design that considers structural barriers, inclusive design and connections between people and places we can create a housing sector that is inclusive for everyone. This breaks down silos and assumptions and opens up options and accessibility for all groups. Good housing and environmental design is good for everyone, as it takes into consideration optimal space standards, safety and the integration of our inside and outside spaces. For example, dementia design includes bringing plugs up to a higher level to increase visibility and accessibility. By designing homes that have this as standard, would have no cost implications (plugs go in anyway). But if available, this home would be safer for those who are growing older as well as safer family with small children.

Inclusive Living moves beyond the home and considers the importance of community places, as well as social and service landscapes. It highlights the importance of opportunities for social, cultural, economic and political participation (Keating et al., 2013). By working in partnership with key stakeholders we can provide the types of homes and communities that meet the physical and social needs of everyone.

This is not about one group, this is not about being young or being older, or living with a disability or dementia. We need to rethink those developments and decisions that 'add' on accessibility, and start to ask why we are not starting with making our homes and environment as accessible as possible as a long-term strategy. Inclusive Living is about putting equality, inclusive design and relationships as a starting point a more inclusive housing sector for everyone.



Case Study: Loreburn Housing Association



Building Inclusive Living into future homes

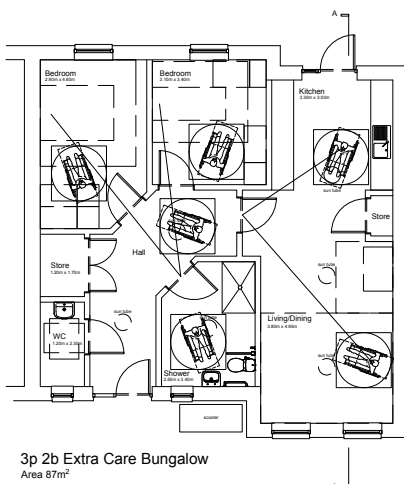
Loreburn Housing Association are building Inclusive Living into their future homes in three strategic ways: technology to enable inclusion, accessibility via age-friendly design and using the environment to encourage relationships and connections within communities.

Dumfries and Galloway's Health and Social Care Partnership is planning to develop new Extra care housing services in Moffat and Langholm with Loreburn Housing Association. This is a development that will include homes that are "not just for older people, but across the generations where the environment will be inclusive, bringing the wider local community to the development, thereby providing opportunities where relationships can be fostered to reduce social isolation" (Nina Brunton, Loreburn Housing Association).

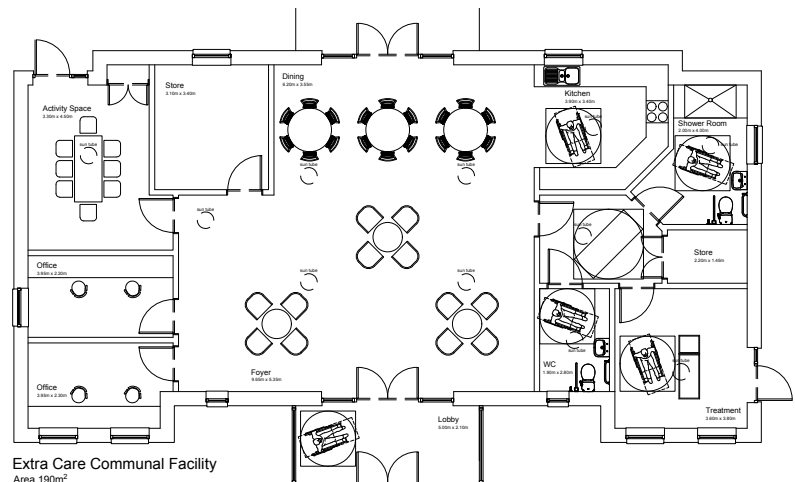
Loreburn HA is explicitly tackling health and income inequalities through making new developments meeting Passivhaus standards¹ to ensure excellent air quality and energy efficiency.

Links between health and housing are clearly being developed to enable the vision of Inclusive Living as in Dumfries and Galloway's Joint Strategic Plan for Older People there is a projection of a 56% rise in the number of older people by 2037. Gary Sheehan, Locality Manager for Health and Social Care said "The new Extra Care services are central to our plans to support older people to remain living in their homes as independently as possible with the appropriate level of support". Key Inclusive Living activities include:

- Enabling Wifi connectivity
- High accessibility standard to indoor and outdoor spaces
- Integrated shared spaces (e.g. recreational planting)
- Dementia friendly and visual impairment design principles
- Accessibility for circulation and easy navigation including by those who may have a cognitive or visual impairment or have reduced mobility
- Facilitation of Learning opportunities for people across all age spectrums



3p 2b Extra Care Bungalow
Area 87m²



Extra Care Communal Facility
Area 190m²

1 http://www.passivhaustrust.org.uk/what_is_passivhaus.php



Case Study: Blackwood Housing Association



Creating Connected Lives, Homes and Neighbourhoods

Blackwood's key purpose is to support and promote independent living. It does this through delivering its range of service and products across Scotland, and by investing in innovation in technology and design. The development of bespoke digital support system CleverCogs™ gives people more choice and control on how they live their life. The Blackwood House is revolutionising accessible housing and with the accompanying Design Guide, Blackwood has aimed to modernise the Scottish standard for accessibility with integrated technology.

"Blackwood is building a new standard of accessible, beautiful, connected homes integrated with CleverCogs™ as one solution for an aging demographic but we need more. Statistics show that 1 in 3 people born today will see their 100th birthday, so we wanted to create a suitable home that will see them through their lifetime. But it's about more than just the home, it's about living in a supportive community where people are included and valued." (Fanchea Kelly, CEO Blackwood)

Blackwood believes technology can help people stay independent for longer and can bring choice in how services are delivered. Its Innovation team is working with universities (University of Edinburgh and Heriot Watt), tech companies and customers to explore how AI, Big Data and Robotics can enhance independent living and bring a higher quality of life.

The CleverCogs™ evaluation by Carnegie UK Trust, sponsored by Scottish Government, demonstrated how the use of technology is tackling loneliness, improving confidence and wellbeing and offers a financial saving. The 'cogs' represent the menu of choices which people will make to live life to the full, from online shopping to video calling to managing care visits.



CleverCogs™ is now in everyday use in several Blackwood developments, with Glasgow care home, Belses Gardens, being one of the early adopters. Connecting with friends and family and community is at the core of CleverCogs™, but services can be joined in such as health, care and home automation. These connections are key to independence and healthy living.

In a visit to Belses Gardens, local MSP Humza Yousaf said: "It's really fascinating that such a great piece of technology is bringing so much comfort and security to residents and helps to tackle important issues like isolation among the residents here. What I'm really excited to see is the future developments of this technology as it helps people to live independently."

Blackwood provides digital coaching to its customers so that they are comfortable with using technology. However there is still work to do to build confidence in using technology positively to enhance homes and peoples' lives, and Blackwood is now working on the concept of an inclusive neighbourhood through its new branding of #ImIn.



Recommendations and Conclusions

This project developed by the Homes for the Future partnership shows clearly that we must realign the way that we approach inclusion, equality and connections in the housing sector. We can do this by resetting our approach, assumptions and perceptions around design within our homes and environment.

This review does not propose a new guide. We believe there is enough evidence to show what works, and does not work. What is needed is an approach that takes into consideration all 3 of our key strands: social inclusion and equality, physical space and design, connections and relationships. When one element of these are missed, a key area of support in living a long, healthy and independent life is left behind.

Therefore, the current standards that exist can be augmented and revitalised to take into consideration the integrated nature of housing design through the lens of Inclusive Living. We recommend:

1. A review of the Housing for Varying Needs standard in Scotland
2. The creation of an online cost/benefit indicator for the housing sector
3. Sharing the vision of Inclusive Living to break down silos and assumptions between groups of people and types of housing



A review of the current standards and regulation

Housing for Varying Needs guidance is one of the most used tools within the housing sector. However, what was clear through the review and consultation is that this must be reviewed and updated to include the wider elements and development. In particular, guidance on ageing and dementia (University of Stirling) and technological support (Blackwood) would help update the guidance to also support the wider elements outlined in this review around equality, relationships and connections.



The creation of an online cost/benefit indicator for the housing sector

The consultation has shown that the main barrier to the vision of an Inclusive Living approach is the perception of costs regarding accessible housing. We argue that there is a range of ways that you can integrate accessibility into both current housing and new builds. We would argue that small wins (focusing on good lighting, colour, etc) can be done quite quickly but acknowledge that fully integrated 100% accessibility would be difficult to achieve, especially in the short term. However, if someone makes the decision to do one thing that makes a home more accessible and inclusive this is still a step forward.

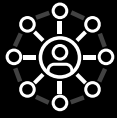
What would be useful to the housing sector is a more comprehensive tool (similar to perhaps the affordable rent setting tool from SFHA) that can assess the standard of a development or refurbishment programme on its level of inclusivity and relate that to indicative costs. As shown in the report, this information is simply not available in the current literature in a comprehensive way. We have had to rely on sector examples to highlight different cost implications on accessibility. This could be a key area of would be an area of future research and on that partners would fully support going forward.



Sharing the vision of Inclusive Living to break down silos between groups of people and types of housing

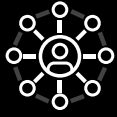
If the housing sector resets its stand point, the idea of Inclusive Living can break down silos and assumptions between groups of people and types of housing. Housing models that are simply focused on one group (e.g. dementia, older people) will become more integrated. We must not build remote islands of housing focused on one group in particular. The evidence shows clearly that all groups, all types of people benefit from connections and relationships with different people. In an era where social isolation is increasing, it is more important than ever to develop housing models focused on integration and inclusion.

The concept of Inclusive Living redefines the starting point in considering how to develop housing and the approach to adaptations, accessibility and independent living. The new framework that emphasises equality, connections and relationships as something that is considered alongside good design can be used to bring Inclusive Living to the forefront of the housing sector and improve homes and the wider environment for everyone.



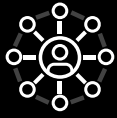
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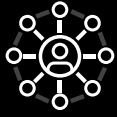
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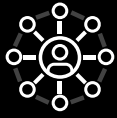
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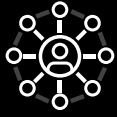
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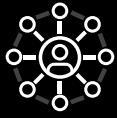
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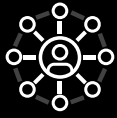
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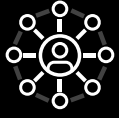
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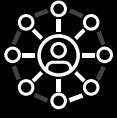
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Appendix I: Mapping search strategy

An initial set of sub-themes were developed. As abstract screening took place these were refined further, with some new themes added as a result of engagement with the research literature (such as labour market changes, force moves), and some themes being clustered together under more expansive sub-themes (such as socio-emotional factors).

In defining the scope of the mapping review, a number of exclusions were made. Only English-language literature, limited to Western Europe, North America, Australia and New Zealand context would be included. Literature from 2007 to 2017 was included in the search, limited to articles in peer-reviewed journals.

First stage search strategy

The first stage of the process was to review and map key 'age-friendly' design guidelines. Initial scoping was undertaken to outline currently used design guides including those developed by Government and housing associations in collaboration with key stakeholders.

In order to supplement this literature, a targeted Google Scholar search was undertaken. Google Scholar searches were undertaken limited to PDF file types. This restriction was included to remove some of the academic literature from the search return, since peer reviewed publications had already been systematically searched. It is expected that most grey literature are available as PDF publications. Because of the high volumes of returns for Google Scholar searches, screening was limited to the first 30 publications returned by relevance.

A total of 20 reports were included in the mapping review.

Second stage search strategy

A search protocol was developed using the SPIDER tool (Cooke et al, 2012). Although the tool was designed for search strategies in relation to qualitative evidence synthesis, the mapping review encompassed qualitative, mixed, quantitative, and theoretical approaches. In addition, outside the health sciences, for which this tool was originally developed, there is much less consistency in the structuring of abstracts. This means that the research design is often not specified in the title, abstract or keywords, meaning that this would likely limit the number of studies that could be found during the initial searches. The tool was therefore adapted for the purposes of the mapping review, as the mapping review was not focused on the selection of any specific research type or methodological approach, and it was clear from an initial review that many abstracts did not mention the research design. The table below highlights the way in which the key search areas were conceptualised.

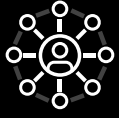
Searches were conducted in four bibliographic databases: SocIndex, Scopus, CINAHL Complete and JSTOR. In all databases searches were conducted for the dimensions specified in Table 1.

SocIndex returned 1,484 citations. Scopus returned 2,620 citations. CINAHL Complete returned 857 citations. JSTOR returned 3,936 citations. Following title screening to identify publications that met the thematic focus of the mapping review, 111 citations remained for abstract screening.

Following abstract screening, 65 thematically relevant references remained.

When added together, the multi-phase search strategy resulted in 85 references. When working through the database a number of additional exclusions were made, in line with the reasons specified in Table 2.

The final sample for coding and analysis in the mapping review was 77.



Appendix I: Mapping search strategy

Appendix 1 – Table 1: SPIDER search strategy

Sample	Young Old People Adults	Rent(ers) Homeowner(s) Individual(s)	Owner(s) Household(s) Population(s)	Public Women Men
Phenomenons of Interest	House(s) Home Housing	Inclusion Accessible Health inequality	Ageing Integration Inclusive design	Connectedness Participation Community
Design	All			
Evaluation	All			
Research type	All			

Appendix 1 – Table 2: Additional exclusions

Outside country scope	4
Report, not peer-reviewed publication	3
Outside date range	1
Total	8

SFHA Innovation and Future Thinking project

In April 2018, SFHA launched its Innovation and Future Thinking (IFT) programme to bring social housing providers together with other stakeholders to develop new ideas and solutions for the future.

The programme, in partnership with Wheatley Group, will develop practical approaches to current and future challenges and support a network of innovators. The new innovation community already includes over half of SFHA members, and other stakeholders who share a collective ambition to broaden and strengthen the sector's contribution to social justice and inclusive growth.

IFT aims to be:

- Inspirational – incorporating international and out of sector inputs to promote radical thinking and fresh approaches
- Customer focused – using design-led approaches which put people at the centre
- Evidence-led – building ideas and solutions based on robust research and insight
- Sustainable – developing capacity for the housing sector to continue to innovate on an on-going basis.

Innovation & Future Thinking



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