HOME OF 2030 DESIGN MATTERS & ISSUES TO CONSIDER

HOME OF 2030

MOBIE
Ministry of Building Innovation and Education

HEALTHY AGEING

The Government's Ageing Society Grand Challenge mission is for people to enjoy five more years of healthy, independent living by 2035. Housing has a crucial role to play in achieving this goal.

The UK's housing stock is among the oldest in Europe and as a result it creates significant associated health and care costs. It is estimated that illness and injuries caused by poor housing cost the NHS £1.4 billion a year. Poor quality housing has particularly detrimental effects on the people who spend most time at home, such as the elderly, young children, and people who are ill or unemployed.

We can design new homes so that they meet the needs of as many potential occupants as possible, for the lifespan of the building and the lifetimes of the occupiers. Which means we need to start by understanding the wants and needs of all people, including older people, so that we can design housing that enables them to meet those needs while staying in their home longer.

Good quality housing can help people to stay warm, safe and healthy and it allows them to do the things that are important to them. There is significant potential to ensure, through design, that new housing is inclusive, accessible, adaptable and affordable:

Inclusive means designing for a range of potential needs and not creating unnecessary barriers to use now or in the future.

Accessible means designing to give easy access to as many people as possible, including those with physical impairment – such as reduced mobility and agility - or sensory impairment – such as reduced sight or hearing. Ensuring amongst other things ease of use of entries and exits, internal hallways and rooms, and household controls and appliances.

Adaptable means designing a building so that simple adjustments and changes can be made over its lifetime to enable occupants to use it easily, safely and independently for longer.

FIND OUT MORE:

MOBIE.ORG.UK
HOMEOF2030.COM

Affordable means that the design features required to achieve the first three elements do not add significantly to the cost of the home – good design considered early should not impose significant added initial cost and indeed should be cost saving over time, as they allow residents to live in their homes longer.

The government's national standard for accessible, adaptable dwellings covers elements like on-site parking, accessibility, entrances and doorways and the approaches to them, circulation, living, sleeping and bathroom spaces, and windows heights and openings. Good digital connectivity in homes can help avoid isolation and create a sense of connection.

What will you include in your home design and what features and technology will your home have to help ensure a good quality, safe, and adaptable home that enables its occupants to live in it longer and so help maintain their physical health and mental wellbeing?

Suggested further reading:

- Ageing Society Grand Challenge
- Industrial Strategy Challenge Fund Healthy Ageing Challenge Framework, Centre for Ageing Better (2019)
- Accessible Housing Standards Briefing, Habinteg Housing Association (2nd edition, June 2016)
- Putting Health into Place – Design, Deliver and Manage (TCPA, Kings Fund et al Sept 2019)
- Centre for Ageing Better The State of Ageing in 2019 **(Link)**
- The Housing and Ageing Alliance Time for Action (2019) **(Link)**

LIVING WITH CLIMATE CHANGE

Our homes use energy to build and run. There are 29 million existing homes in the UK and the Government is committed to building around 1.5 million new homes by 2022. The UK Construction Industry is the largest consumer of resources, consuming more than 400 million tonnes of material a year - this accounts for around 10% of UK carbon emissions.

Heating and hot water for UK homes make up 25% of total energy use and 15% of our greenhouse gas emissions. A further 4% of greenhouse gas emissions are the result of electricity used in the home for appliances and lighting. Housing can play a key role in protecting the health and wellbeing of occupants, in adapting to climate change. We need to plan for higher average temperatures, increased flooding and water scarcity – so our homes can keep us safe and comfortable in the future.

HOME OF 2030

MOBIE
Ministry of Building Innovation and Education

HOMES OF 2030 CHALLENGE BRIEF & DESIGN ISSUES TO BE CONSIDERED

FIND OUT MORE:

MOBIE.ORG.UK
HOMEOF2030.COM

Around 20% of homes (4.5 million) currently overheat, even in cool summers; 1.8 million people live in areas which are at significant risk from flooding; and the average daily water consumption per person across the UK is around 140 litres, above the sustainable level in a changing climate and higher than many other European countries.

What will you include in your home design and what features and technology will your home have to help adapt to the effects of and help mitigate the onset of climate change?

Suggested further reading:

- Committee on Climate Change UK Housing: fit for the future? (Feb 2019) **(Link)**
- BEAMA Net Zero by Design (Sept 2019) **(Link)**
- BEIS Clean Growth Strategy (Nov 2017) **(Link)**
- MHCLG National Design Guide, October 2019

MATERIALS & WASTE IN HOME CONSTRUCTION

We can significantly improve the way we make houses – in terms of their design, manufacture, construction and performance. We have hardly changed the way we build houses in 100 years. Whilst other sectors, such as cars and phones, are undergoing manufacturing revolutions, housebuilding remains rooted in tradition.

The Home of 2030 could and should be built differently from the past. We should learn from the best manufacturing industries and from abroad. With incredible developments in digital technology, the amazing research and development that goes into the performance of individual building products and higher standards of building practice, we have an opportunity to radically transform our product. We can transform house building into a clean, precision-engineered and efficient product and process.

Modern Methods of Construction provide an alternative to brick and stone-built traditional houses, which will remain part of our building approach. It uses materials such as timber, steel and concrete in different combinations and can be manufactured offsite and brought to site as components, panels, modules or even complete houses and then assembled on site, sometimes in a matter of hours.

Construction is responsible for significant volumes of waste. Construction, demolition and refurbishment accounts for around 100 million tonnes of waste in the UK each year, about half of which is recycled. Construction and demolition of buildings accounts for 32% of landfill waste. 13% of materials and products that are delivered onto construction sites are sent on to landfill without ever

HOME OF 2030

MOBIE
Ministry of Building Innovation and Education

HOMES OF 2030 CHALLENGE BRIEF & DESIGN ISSUES TO BE CONSIDERED

FIND OUT MORE:

MOBIE.ORG.UK
HOMEOF2030.COM

having been used! An average new semi-detached house generates 5 skips worth (9.6 tonnes) of construction waste. The Home of 2030 must be more efficient and reduce waste.

How will your home design use new materials, processes and ways of making to produce a modern, less wasteful product? Do you have any ideas for new products that could be included in the House of 2030 to make people's lives easier, more sustainable, or to help them live in their home longer?

Suggested further reading:

- Modern Methods of Construction – MMC Definitions Framework, MHCLG (March 2019)
- Developing a Strategic Approach to Construction Waste, Defra, BRE (2006)

HOME OF 2030

MOBIE
Ministry of Building Innovation and Education

HOMES OF 2030 CHALLENGE BRIEF & DESIGN ISSUES TO BE CONSIDERED

FIND OUT MORE:

MOBIE.ORG.UK
HOMEOF2030.COM