

Health and wellbeing and the positive impact of energy efficient design

Whilst the sustainable benefits of energy efficient design are well-documented, the human and social benefits are often overlooked. Good health clearly begins at home but as we continue on our journey towards net zero, the positive impact that energy efficient measures, such as insulation, can have on human health, wellbeing and safety should not be overlooked. The **Insulation Manufacturers Association (IMA)** explains more.

The specification of insulation materials can have substantial impacts on the lives of building users and occupants. For example, thermal comfort provides pleasant internal conditions during the winter and summer months and is seen to influence performance and productivity, as well as the physical and mental health of building users.

With ever increasing fuel costs, a social benefit associated with enhanced levels of insulation is the ability to reduce the number of people living in fuel poverty and prevent an increase in the numbers falling into this category.

The provision of an enhanced building envelope results in a reduced overall energy demand to heat or cool a building. Modern lifestyles have come to expect high levels of thermal comfort and 'affordable warmth' is defined by the World Health Organization (WHO) as having a sustained temperature of at least 21°C in the living space and at least 18°C throughout the rest of the home when occupied.

A new lifestyle

The demand and schedule for space heating is considered to be in a transitional state. Traditional heating of residential spaces, generally observed in the morning and evening, is changing as many employees are switching to hybrid working, spending time both working

from home as well as in the workplace.

In addition, with average life expectancy increasing, an ageing population will likely result in the need for an overall increase in the space heating demand associated with the built environment as a whole.

The 2020 COVID pandemic tested en masse the suitability for these changes in lifestyle of the domestic housing stock across the majority of the developed world. Considering the increased incidence of mental health challenges associated with isolating, there is now, more than ever, a much greater focus on providing homes which prioritise the wellbeing and health of occupants – this stems from ensuring homes are constructed to provide comfortable and enjoyable places to reside and work for prolonged periods.

Societal health

The WHO states that climatic conditions directly affect the spread of epidemic diseases and risk to human health. The threats of such outbreaks have also been linked to the wider factors of a developed modern society fuelled by fossil fuels.

As a result, these two features of society – energy consumption and social health – are inextricably linked. Therefore, it is argued that, by reducing energy consumption (through implementing energy efficiency measures such as enhanced insulation)

and in turn mitigating climate change has the capacity to influence societal health on a global scale.

Mental health concerns are also a growing public health issue, with approximately one-in-four adults in England being diagnosed with a mental illness at some stage during their lifetime¹.

Understanding how the built environment can influence, improve and support people's overall sense of wellbeing is critical and must be considered as such. Good quality housing, with comfortable indoor conditions facilitated by the correct specification of insulation as well as access to green spaces and recreational facilities, has a direct and positive impact on occupants and building users. This, in-turn, has the ability to combat mental health disorders more widely and alleviate some of the pressure on the NHS.

Improving health and wellbeing

A publication *Insulation for Sustainability*, produced by specialist low-carbon consultancy XCO2 for IMA, highlights the issues associated with energy demand and the benefits of a fabric first approach. It demonstrates the way enhanced insulation strategies play a crucial role in the built environment to help the UK meet its net-zero targets, and how this simple element of construction can bring associated benefits including sustainability, durability, as well as bringing comfort and wellbeing to building occupants.

Our health and wellbeing has never been more important, and what better place to start than in the home where most people spend most of their life. If we are going to futureproof our housing stock then we must achieve more thermally-efficient building envelopes, which in turn will result in more comfortable buildings. **rci**

¹ McManus, S., Meltzer, H., Brugha, T.S., Bebbington, P.E., and Jenkins, R. (2009). Adult psychiatric morbidity in England, 2007: results of a household survey.

www.insulationmanufacturers.org.uk

