building for 2050

**A project for**

Department for Business, Energy & Industrial Strategy

**Delivered by**

AECOM

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# Building for 2050 is the UK Government's evidenced-based report on the drivers and barriers involved in the large-scale construction and take-up of low cost, low carbon housing

Business and Energy Minister Lord Callanan said: **"Making the UK's homes more energy efficient is the best way to cut household energy use and reduce energy bills.**

**That's why we're boosting investment in energy efficiency with an extra £6 billion, on top of the £6.6 billion we are already spending this Parliament which will help us on our journey to cutting emissions from UK buildings by 15% by 2030.**

**This research is important to building our understanding on the best way to deliver low-carbon strategies for new homes as we continue reducing the country's contribution to climate change by 2050."**

*Building for 2050* provides a snapshot of the UK's construction industry and its ability to deliver low carbon homes now. This ground-breaking report identifies how to minimise cost, improve energy efficiency, reduce carbon emissions, increase consumer demand, drive growth, and accelerate industry delivery of low carbon housing. While the focus is newbuild housing in England and Wales, the key findings broadly apply to all newbuild housing throughout the UK.

From exploring pros and cons of living in low carbon homes to underlining the importance of local planning policy to catalysing the development of lower carbon homes, the in-depth report benchmarks the British construction industry's ability to mitigate the impact of climate change.

Crucially, *Building for 2050* makes clear that if all homes constructed in future are built to a low carbon standard, there should be no need to retrofit these homes before the UK Government's net zero 2050 deadline. Yet the report also identifies significant skills gaps across the construction industry and makes clear that performance gaps – the difference between a building's predicted and actual energy use – are still commonplace in newbuild developments.

*Building for 2050* was commissioned by BEIS in 2017 and completed in 2022. In a detailed analysis of case study projects – small-scale housing developments in Cambridge, Neath, Corby, and London's Waltham Forest, it identifies the barriers and opportunities to their delivery at scale and examines the impact this could have on energy demand and carbon emissions. It provides rounded analyses of the whole process from inception to occupancy - developing, designing, constructing, and living in low cost, low carbon homes.

This holistic evaluation incorporates the views of multiple stakeholders and draws upon case study homes, the wider construction industry, and the energy services sector. A wide-ranging consumer survey and a general industry survey further contributed to the findings.

The project was led by infrastructure consultancy AECOM and supported by Pollard Thomas Edwards (PTE), Fourwalls, and LCP Delta (incorporating Delta-EE).

AECOM Director and Report Technical Lead Alison Crompton said: **"By unpicking the barriers and challenges to at-scale low carbon housing delivery, we can support industry in making informed decisions, based on evidence and insight."**

**Ends**

**For further information, please contact:**
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**Notes to editor:**

Read the full report https://www.gov.uk/government/publications/building-for-2050

**Building for 2050**
Building for 2050 was a 5-year research project to help housebuilders meet the challenge of delivering low cost, low carbon housing. The project, funded by the Department for Business, Energy and Industrial Strategy (BEIS), examined the drivers, attitudes, barriers and challenges relating to low cost, low carbon housing and will help shape UK policy on delivering low carbon homes. Building for 2050 was managed by an AECOM-led research team, including architects Pollard Thomas Edwards; Building Performance Experts, Fourwalls and low carbon technology specialist, LCP Delta (incorporating Delta-EE). Using pioneering case studies to capture the experiences of those directly involved with low carbon development, the research findings pave the way for new homes in England and Wales to be low carbon and energy efficient.

For further information please visit www.buildingfor2050.co.uk

**The Research Team:**

**AECOM** acted as the Research Team's project manager. They brought expertise in the design and construction of housing, modern methods of construction, delivering research for Government, low carbon housing, and innovation. The social and market research team led the qualitative and quantitative social research, framing the stakeholder engagement, carried out interviews and arranged focus groups. https://aecom.com

**Pollard Thomas Edwards** (PTE) brought expertise in the design of housing including low carbon housing, modern methods of construction, research and guidance to the industry on low carbon homes, undertook on-site audits, assessed the performance gap, and conducted interviews with building professionals. The in-house communications team led the traditional and innovative dissemination of the project results. https://pollardthomasedwards.co.uk/

**Four Walls** are experts in building performance evaluation, including monitoring equipment specification, and advised on and testing of building fabric, undertook monitoring, and analysis of dwellings with respect to energy and comfort performance. They led this aspect of the project. http://www.fourwalls-uk.com/

**LCP Delta (incorporating Delta-EE)** is a subscription research and consultancy specialising in "new energy" providing detailed insight into the energy sector, distributed energy markets,

consumer viewpoints and electricity markets. They work closely with Government and Industry analysing the impact of innovative energy solutions for housing on the energy supply chain. They led on these aspects. https://www.lcpdelta.com