

NET ZERO NOW: WHY WAIT FOR THE FUTURE

How the timber industry can help the UK Government deliver on its economic, employment, housing, and climate targets now.



Timber is a £10bn supply chain in the UK. It provides economic prosperity in every region of the UK, green employment, thousands of healthy, safe, warm, and beautiful low-carbon homes, and is helping create a sustainable construction industry.

The timber industry is at the forefront of driving low-energy manufacturing, producing high-performance low-carbon goods, and helping achieve UK carbon reduction targets. Right now there is existing capacity to double timber frame manufacturing output to reach 100,000 per annum¹⁰, with timber providing a cost-free solution to carbon capture.¹¹

BACKGROUND

Reducing the carbon emissions from our built environment is essential, as nearly half of the UK's total carbon emissions within our borders can be attributed to the construction, operation and maintenance of our built environment (49%).¹²

The **UK Climate Change Committee (CCC)**, the independent advisor to Government on how to achieve net zero by 2050, has repeatedly advocated for **growing the use of wood in construction to reduce emissions** as a way to achieve this.^{13,14,15}

The CCC also recognises UK building stock as among the most energy inefficient in Europe.¹⁶ Even new builds are facing expensive retrofits, with efforts to make housing more efficient not set to be put in place until 2025 with the Future Homes Standard.¹⁷

KEY FACTS

- The UK timber industry is an existing supply chain which **employs more than 150,000 people**.¹
- **UK's housing stock** of around 28 million is amongst **the most inefficient in Europe**.²
- **Embodied carbon emissions** account for **up to 75% of a building's total emissions** over its lifespan.^{3,4}
- Timber products have **the lowest embodied carbon** of any mainstream building material.⁵
- Every **cubic metre of timber** used in construction has absorbed **0.9 tonnes of carbon dioxide** which will be stored for the lifetime of the product.⁶
- Timber is the **safest and cheapest form of carbon capture and storage** available.⁷
- As a result of **sustainable forest management**, forests across Europe, including the UK, **have grown by 5%** over the past 25 years.⁸
- The forestry and timber industry is **a key part of our environmental and industrial heritage** and a vital part of our low-carbon future.⁹

We say: why wait for the future? We can achieve net zero now!

Even the Future Homes Standard itself, while containing many good points, only seeks to address operational carbon; the emissions of a building in use. Embodied carbon, the emissions which result from the production of materials and construction are not addressed. Yet embodied carbon can contribute up to 75% of a buildings total carbon emissions over its lifetime.^{18,19}

Greater use of timber can help address operational and embodied carbon, as the UK timber industry has the capacity, technical knowledge, and track record to deliver more homes, quicker, and to a higher standard.²⁰

Timber in the UK is responsibly sourced to ensure that all wood products come from sustainably managed forests, with several trees being planted every time one is harvested.^{21,22}

UNLOCKING OUR LOW CARBON ECONOMY

With independent advice from the **UK Climate Change Committee (CCC)** calling for **growing the use of wood in construction**, and timber frame social housing winning the highest architectural prize in the UK, **RIBA's Stirling Prize in 2019**,²³ timber is now positioned as the future of low-carbon, safe, sustainable, healthy and affordable construction in the UK.

However, there are changes which need to happen to allow for the transformation of the UK construction industry into a world leading exemplar whose first choice is to build low-carbon, safe, and sustainable buildings, including by:

- Regulating embodied carbon; beginning with mandatory reporting.
- Developing a long term pipeline for retrofit by adopting the CLC National Retrofit Strategy.
- Accelerating the adoption of the Future Homes Standard to 2023.
- Ensuring building regulations and policies reflect scientific research as recommended by Hackitt.
- Promoting modern methods of construction (MMC) throughout government procurement.
- Working with the construction industry to recruit and train the next generation of workers.

While some of these changes are already underway, with an increasing push into MMC,²⁴ some areas are in danger, such as the national retrofit programme,²⁵ or are subject to an impending skills crisis.²⁶

THE OPPORTUNITY

By getting behind these policies and looking at buildings as a system, politicians and policy makers will be able to help transform UK construction. The CCC reports that by using timber frame to build the 270,000 homes per year required in England to overcome the housing crisis, 3 million metric tonnes of CO₂e could be absorbed and stored in our built environment per year.²⁷ This is the equivalent of taking 648,131 cars off the road.²⁸

There is room for timber construction to grow, as timber frame was used in just 30% of new homes in the UK in 2016, equating to 83% of new housing starts in Scotland, 30.7% in Wales, 22.8% in England and 17.4% in Northern Ireland.²⁹ This method provides 'cost effectiveness, speed and energy-efficiency advantages from inception to construction'.³⁰ The industry has existing capacity to double housing output to 100,000 homes per year within the right policy framework.³¹

BENEFITS

By embracing a policy framework towards long term, sustainable, low-carbon construction, UK policy makers would;

- Grow the economy, with the economic benefit of each home built in the UK estimated to be twice the cost of construction.³²
- Create thousands more green jobs in UK manufacturing and construction, both by stimulating demand for sustainable building products,³³ and in the retrofit market.³⁴
- Support the upcoming England Tree Strategy by boosting the UK's timber industries.³⁵
- Reduce the carbon footprint of the UK in construction.³⁶
- Promote the world's only proven viable form of carbon capture and storage and help grow sustainable forest management globally.
- Prevent more than 6,000 deaths per annum which result from poor housing, and save the NHS nearly £2bn per annum from related negative health impacts.³⁷
- Support greater innovation and productivity in the UK construction sector.
- Create higher performing, safer buildings, up to 30% quicker, with MMC and timber.³⁸
- Improve well-being, with timber buildings shown to boost creativity, productivity, mood immune systems, while reducing stress.³⁹

KEY POLICY RECOMMENDATIONS

- Embrace the advice of the CCC to increase the use of wood in construction.
- Adopt the CLC's National Retrofit Strategy to improve the UK's existing housing stock.
- Follow the advice of the Hackitt Review to create higher performing, safer buildings.
- Bring embodied carbon into UK building regulations as per the advice of ACAN.
- Provide tax incentives which will encourage both the retrofit of existing buildings and MMC.
- Create a preference for low-carbon sustainable construction in UK Government procurement.

Our perspective is informed by the following key documents;

Construction Leadership Council, *National Retrofit Strategy*
Architects Climate Action Network, *Regulating Embodied Carbon*
Climate Change Committee, *UK housing: Fit for the future*
APPG for the timber industries, *How the timber industries can help solve the housing crisis*
Dame Judith Hackitt, *Independent Review of Building Regulations and Fire Safety: Hackitt review*
Mark Farmer, *Farmer Review of the UK Construction Labour Model*

ABOUT THE CTI

The Confederation of Timber Industries (CTI) is an alliance of associations and stakeholders from across the UK timber supply chain.

We work collaboratively to promote and protect the markets for, and interests of, timber and timber products and systems.

We do this via political advocacy, market research, policy reports, conferences and other events. You can find out more information at www.cti-timber.org.

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