The Timber Industry

Growing our Low-Carbon Economy

THE TIMBER ACCORD

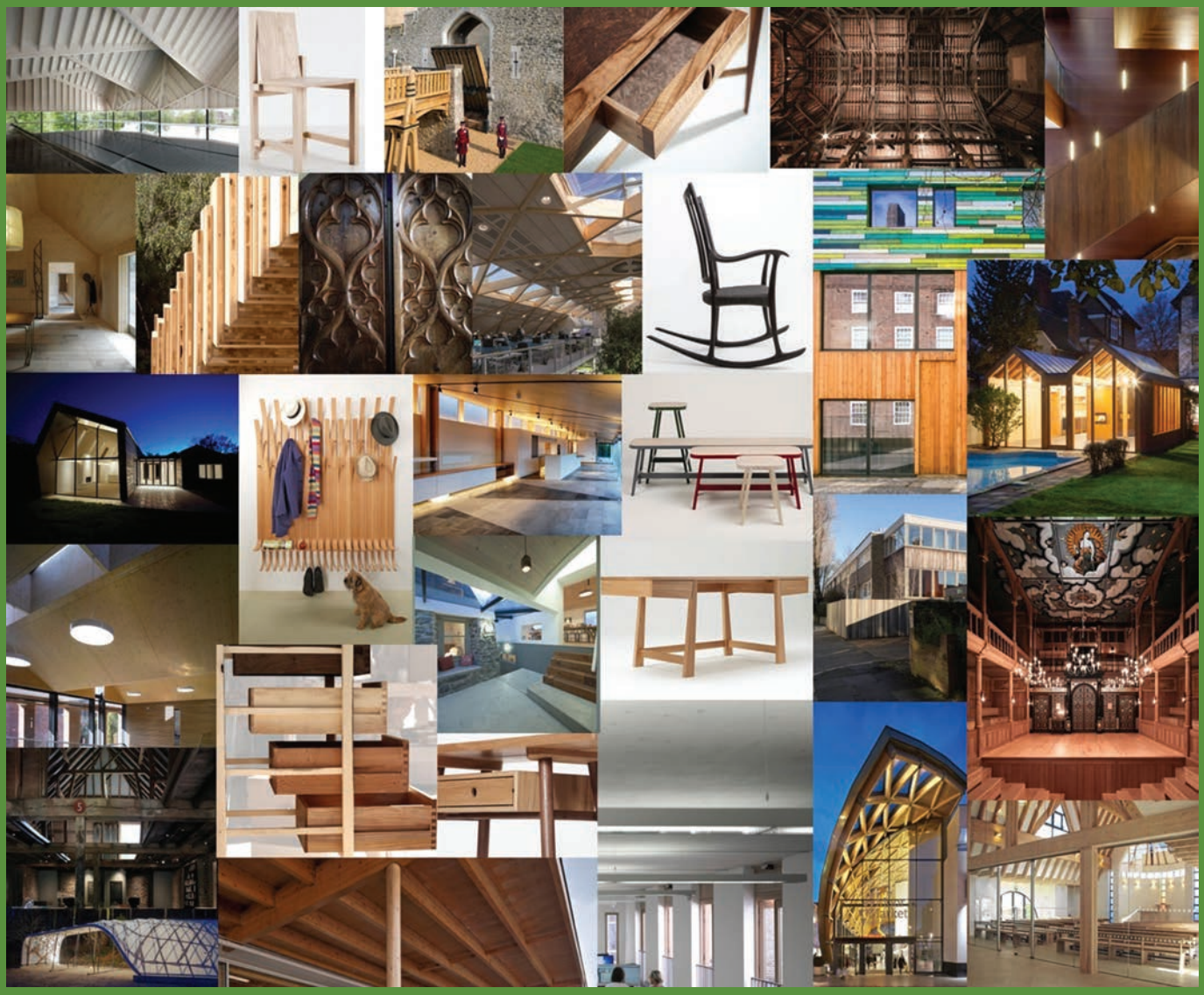


Image © Wood Awards

What can Government do?

12 Policy Asks

to expand the use of wood-based products, boost the forestry and timber sectors and grow the UK's low-carbon economy

Growing our low-carbon economy

- Protect the status of vocational training
- Recognition and reward for low-energy manufacturing
- Help keep costs competitive

A source of sustainable jobs and growth

- Build more Homes for Britain
- Emphasise quality through clearer regulation and enforcement
- Ensure all building projects consider full carbon impact

A vital role in building homes - zero carbon solutions

- Encourage more planting
- Ensure uniform enforcement of the EUTR across Europe
- Set and enforce strong carbon reduction targets
- Promote local wood energy

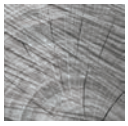
The natural choice for health and well-being

- Reward management, expansion and access to woodlands
- Ensure National Curriculum drives understanding of the intrinsic role forests play in society

The Timber Accord has a long term aim to improve the competitiveness and performance of the UK timber industry by working together to promote timber and wood products to the Government, other commercial organisations and everyday customers, by putting wood at the heart of the UK's environmental policy and popular thinking.

Introduction

The forestry and timber industry is a key part of our environmental and industrial heritage and a vital part of our low-carbon future.



"Wood is the most technologically advanced material that we can build with. The Earth grows our food. The earth can grow our homes. It's an ethical change we have to go through."

Michael Green, Architect

Valued by the Office of National Statistics (ONS) at over £8.5 billion, the forestry and timber products sector is in the top 20 major industries in the UK.

The industry provides significant employment opportunity across all regions and for all levels of skill and qualification – from forestry, land and habitat management to joinery and manufacturing, engineering and architectural design. In the construction sector alone wood related trades account for around 10% of all jobs.

Timber has an established supply chain with huge potential for rapid growth, helping the UK meet employment, economic and housing targets, whilst also delivering against low-carbon and climate change objectives.

- Timber is one of the **safest and cheapest** forms of carbon capture and storage available
- **The UK timber industry** directly employs 150,000 people and approximately 10% of all UK construction jobs are in wood related trades
- Timber products have the **lowest embodied carbon** of any mainstream building material.

Over the next few pages we have outlined some of the key ways that the forestry and timber sectors are contributing to rising levels of sustainable thinking and business growth across the UK. It also maps out ways in how the Government can do more to help stimulate this growth even further.

Growing our low-carbon economy

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.

Renewable

Roughly 90% of timber used in the UK comes from certified sustainable sources such as **FSC** and **PEFC** as outlined by the Government's own world leading **Central Point of Expertise on Timber (CPET).** Most of the rest comes from well managed sources in countries which do not practice certification. This minimises the risk of illegal material entering the supply chain and ensures 'no net losses' of forest cover.

The **EU Timber Regulation (EUTR)** was enacted in 2013 and with the support of the **National Measurement Office (NMO)** and the industry, the UK leads the world when it comes to responsible sourcing and trading in timber.

Carbon Capture & Storage

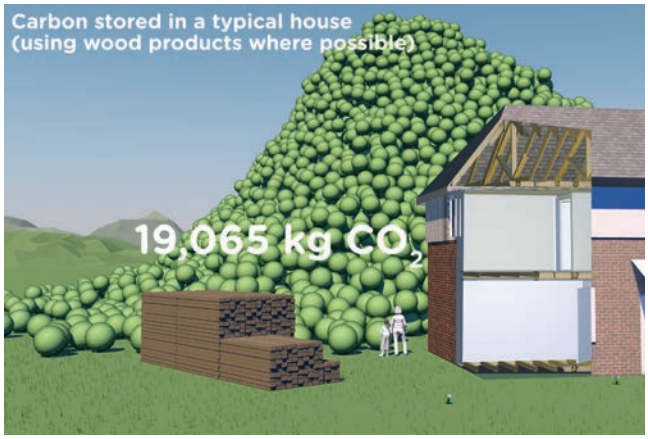
Trees absorb carbon dioxide as they grow. When the tree is harvested the carbon remains stored in the timber until the end of its physical life – **roughly one tonne per metre cubed.** While this carbon is safely locked up in timber products – such as walls, windows, doors or floors – more trees are planted, absorbing and storing carbon as they grow. In fact, our LCA studies show that more emissions are absorbed and stored in timber products than are emitted during harvesting, processing, manufacturing and transportation combined. This provides a net emissions reduction process.

In managed European forests

there are five trees planted for each one harvested, making timber the only truly renewable mainstream building material.

Roughly one tonne of carbon

is stored for every metre cubed of timber used – this makes our building stock one of the safest and most effective carbon stores available.

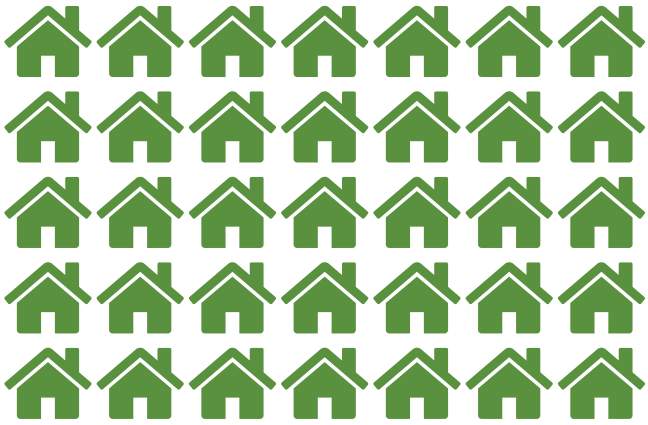


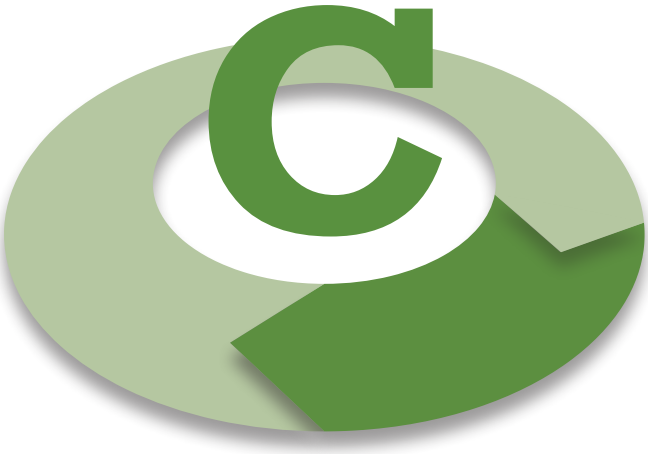
Low Embodied Carbon

Manufactured timber products require **far lower energy inputs** to produce than competing materials. This reduces pressure on the UK electricity grid while producing high-performance, low-carbon goods which can substitute or outperform their high-carbon counterparts. It also gives timber a very low embodied carbon content.

A Truly Green Deal

Timber also has some of the best insulating properties of any material helping keep us naturally warm and achieve energy efficiency targets. Timber products can be readily **reused and recycled** and, increasingly, used as a low-carbon fuel. Timber products provide low-carbon benefits throughout their life-cycle with none of the subsidies or incentives associated with other low-carbon sectors.





If we built 200,000 new houses

in timber it would store around 4 million tonnes of carbon dioxide every year.

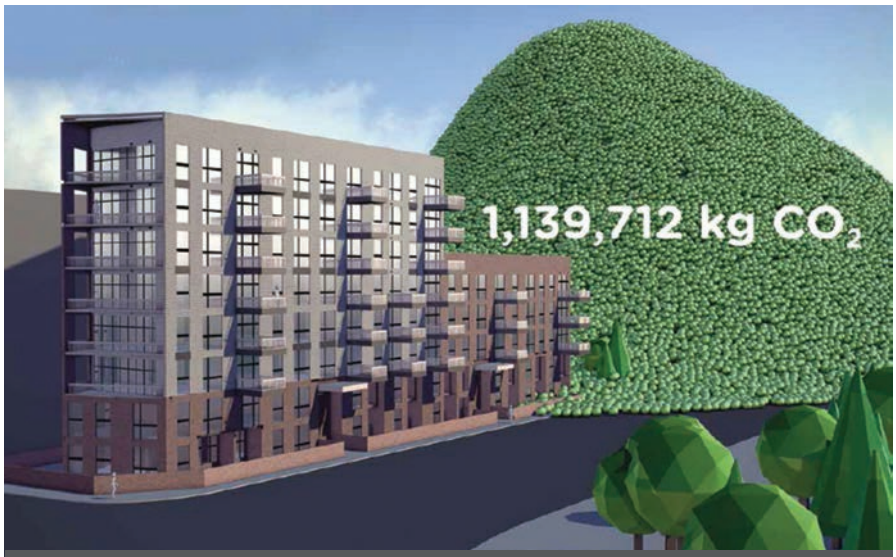
Embodied carbon now makes

up between 30 to 50% of the carbon emissions of a new building through its lifetime. This figure can be slashed by using more sustainable and renewable materials such as timber.

What can Government do?

Encourage more planting

According to the **Confederation of Forest Industries (Confor),** wood supplies are set to peak around 2025, a challenge to future supply and the potential loss of a vital and valuable carbon bank. In 2012, the UK consumed £1.09 billion of homegrown timber (approximately 41% of softwood timber used) – this is increasing rapidly. By increasing the UK's forest cover from 13 to 16% we could reduce around 10% of our national CO_2 emissions by 2050 and provide the feedstock for a vibrant manufacturing industry.



Stored Carbon in new housing development Bridport House

Grown in Britain is a new initiative that aims to create a sustainable wood culture across the country. It shows that only a working woodland can produce the fantastic array of wood products that we use every day. With the passionate backing of government, industry and many others, Grown in Britain brings together a broad diversity of forest, woodland, societal, manufacturing and end-user interests to create a sustainable future for our woods and forests.

Ensure uniform enforcement of the EUTR across Europe

Through procurement channels such as **CPET,** industry regulation through the **Timber Trade Federation** and effective enforcement of the EUTR through the **National Measurement Office,** the UK Government has ensured that the UK is a world leader in the development of legal and sustainable timber. We now need the Government to use its resources and influence in Europe to ensure there is uniform regulation and enforcement throughout all European partners.

Set and enforce strong carbon reduction targets

We recognise the recent call from 340 financial institutions including **BlackRock, AXA Group** and **Legal & General Investment Management** for strong policies to drive action on climate change. This means putting a "stable, reliable and economically meaningful" price that polluters have to pay for their carbon emissions. Governments must phase out subsidies for fossil fuels – (an estimated £370bn worldwide a year) – and for high energy users, as this is not sustainable from an environmental or long-term economic perspective. Policy should favour the viable low-carbon alternatives.

Promote local wood energy

Large-scale use of virgin timber for biomass electricity, subsidised by Government, distorts the price of timber and is a threat to jobs. It can also reduce the availability of wood to deliver carbon reductions. However, **local use of wood for heat and good quality CHP is far more carbon efficient** and can stimulate the responsible management of woodland and the sustainable production of more wood.

A source of sustainable jobs and growth

The timber sector provides excellent employment opportunities to 150,000 direct employees as well as numerous more indirectly, including approximately 10% of UK construction jobs are in wood-related trades.

From forest management and the harvesting of trees, through a series of processing and manufacturing stages, to joinery and furniture production, the sector provides **employment and career development** in a wide range of disciplines. Jobs are being created across the skills spectrum and in a variety of business types and sizes – predominantly the SME sector. Importantly, a lot of investment and job creation takes place in rural areas increasing the strength and fabric of communities that are increasingly isolated from cities and larger urban areas.

The EU's European Environment Agency is driving a more integrated approach to employment strategies that support the development of skills, jobs and training related to the needs of the green technology industry including timber – the UK could be leading this.

To encourage increased investment **we need to focus on continuing to make the UK an attractive place to do business.** This requires a long term vision for a stable regulatory environment and practical tax framework for productive enterprise, along with workable policies to fully develop vocational skills in the workforce. Without high functioning personnel, no business can survive. In addition, our economy needs serious investment in infrastructure – from energy to transport – to demonstrate we are thinking long-term about our future prosperity.

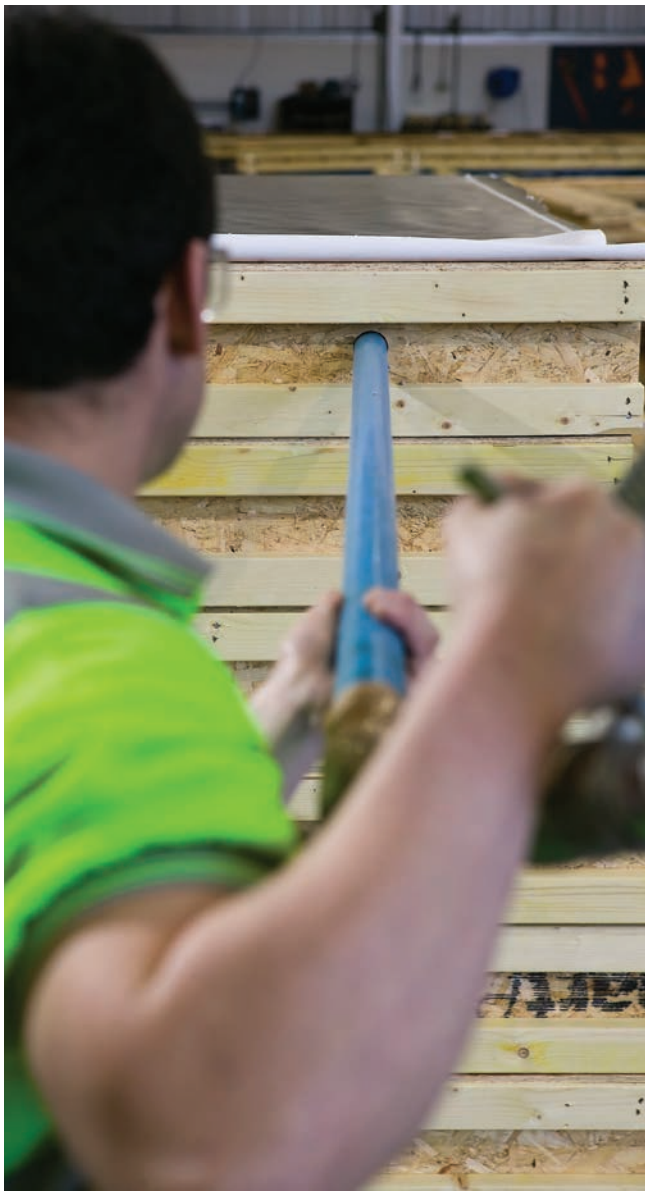
The timber industry is seeing great investment across the supply chain - over £100 million of investment is anticipated in the UK saw milling sector alone over the next 5 years.

What can Government do?

Protect the status of vocational training

It is vital in a modern economy that trade skills have parity of esteem with academic education. Schools should be compelled to give balanced and comprehensive advice on vocational options for pupils reaching 16 and above. Working through organisations such as **CITB, ProSkills** and the **Agricultural, Horticultural and Forestry Industry Training Board** is essential at the pivotal point when those turning 16 are forced to remain in education until 18. Funding to help build links between schools and employers will show young people where the opportunities are and help them to understand the scope of career options available. To support career shifting, we would also urge the **Government to widen the eligibility** of fully funded apprenticeships to all age groups, as well as maintain it for 16-18 year olds.

Government efforts continue to be undermined by inappropriate bonuses in the banking sector – to provide context, the £576 million bonus pot recently announced by RBS could fund the wages of around 80,000 first year construction apprentices.



Recognition and reward for low-energy manufacturing

Investment in people, design and equipment is vital to support growth and this should continue to be recognised through extended **R&D Tax Credits,** particularly for green investments. There is an urgent need to reduce primary energy demand across our manufacturing and industrial base. This means supporting and nurturing low-energy manufacturing sectors. The Government-owned **Green Investment Bank** should support investment in the development of products manufactured from renewable sources.

Help keep costs competitive

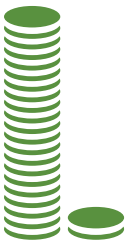
Turnover growth does not always equate to profit, particularly for construction products where global demand is driving up material prices. Overheads (business rates, rent, haulage, gas and electricity) remain high in the UK. Business Rates have been rising and can act as a disincentive to investment. Although the retail sector dominates the headlines, there has been little emphasis on SME manufacturing premises. **A wholesale review of Business Rates involving all sectors needs to be a priority for the next Government.**

A vital role in building homes – zero-carbon solutions

The availability of new housing stock for the private and affordable sectors in the UK is fundamental. The Government committed in 2006 to ensuring all new homes would be 'zero carbon' from 2016 onwards.

The homes in which we live and the buildings in which we work contribute significantly towards our overall carbon footprint – around 47 per cent of the UK's total carbon emissions.

According to latest research from the **Zero Carbon Hub,** this ambition is under threat. Timber systems provide ideal solutions to all housing issues from urban brownfield sites to new garden cities and from social housing to 'Grand Designs' private developments. Timber systems offer high quality offsite solutions through build systems that can cut months off traditional build times, saving money in onsite costs. It is the perfect material for periods of high demand.



In the UK for every £100 we spend on housing just £5 is invested in building works and £95 on housing benefit. This is a complete reversal from 30 years ago when £80 of every £100 was invested in housing assets.

The potential for timber-based building products to create a new generation of low-carbon energy efficient homes is huge. The industry is involved at every stage of building design and delivery and is

creating some of the best quality and progressive solutions from the structural elements to refurbished interiors to furniture, floors, walls, staircases, roofs, doors and windows.

The UK is a world leader in advanced engineered timber construction. The world's tallest multi-storey residential timber building, Murray Grove in Hackney, London, designed by Waugh-Thistleton Architects, shaved nearly five months off projected build time of traditional build methods.

Society as a whole, as well as local authorities, housing providers and builders want to see high quality housing delivered quickly – **'offsite manufacture'** is a key part of this. Timber technology embraces all the successful principles of offsite manufacture with quality, speed of production and consistency of design and delivery.

The timber industry has recently published the largest inventory of lifecycle data of any material sector in the UK construction industry. The industry stands ready to support the BIM environment of the future and the Industrial Strategy 'Construction 2025' Smart objectives.

Research by Heriot Watt University for the Wood Window Alliance in 2013 quantified the significant carbon savings from the use of a timber frame instead of PVC-U (roughly 1.5 tonnes CO_2 per home) – the equivalent of driving over 5,000 miles in a small family car.

The quality-controlled factory environment means less product faults and onsite complications. It provides a number of project efficiencies and environmental benefits such as savings in preliminary site preparation, onsite labour (including wet trades and teams of sub-contractors), construction timescales, health and safety risk and less material-intensive activity. The reduction in onsite work alone often saves weeks on project completion times.

RIBA has suggested tax and other incentives for developments using factory made construction components and offsite construction methods. This would increase speed, quality and efficiency of finished units.

Timber systems are ideal for tight **urban spaces and brownfield developments.** Due to the lightweight nature of structural timber the amount of groundwork required compared to concrete or steel is minimal. This means far less disruption for building site neighbours.

North West Bicester – the UK's first zero carbon Eco-town

Stewart Milne Timber Systems (SMTS) is working with lead developer **A2Dominion** and contractor **Willmott Dixon,** to provide highly-sustainable timber frame houses as part of the UK's only eco town still to adhere to the Government's original **Eco Town Policy Planning Statement** designed to achieve high standards of environmental sustainability. The homes at NW Bicester are designed to be 'future proofed' against climate change and rising temperatures. Each home will have a true zero carbon rating, with heat and hot water being generated onsite by a highly efficient, gas-fired combined heat and power plant.

What can Government do?

Build more Homes for Britain

We need to build more homes quickly and efficiently. The recent in-depth review by the **European Commission** highlighted major risk from the "continuing structural undersupply of housing; intrinsic supply constraints, particularly in London and the relatively slow response of supply to increases in demand."

Help-to-Buy has been effective in getting housebuilding moving, but a targeted long-term plan is needed to satisfy demand for new homes. This must address public sector investment via Housing Bonds and facilitating Local Authority investment by removing borrowing caps. Land supply and tangible incentives for the self and custom-build markets need to be addressed – the UK still has one of the lowest proportions of self-built homes in Europe.

The Construction Products Regulation should be supporting Building Control. Trading Standards have been tasked, but not resourced, to police a situation which enables manufacturers of non-compliant products to undercut their competitors. This must be addressed.

Emphasise quality through clearer regulation and enforcement

Poor quality products, site practice and inappropriate substitutions continue to reduce efficiency in the building works and lead to inadequate, unsustainable and occasionally, dangerous buildings.

Guidance in the Building Regulations related to products such as Fire Doors leaves too much subjectivity. The provisions of **Approved Document B fall short of requiring third party certification** and allow products to be installed without adequate proof of performance. It is crucial to limit the opportunity for substitution through tighter regulation, better guidance and effective control of regulation.

Ensure all building projects consider full carbon impact

We are deeply concerned that the demise of the **Code for Sustainable Homes** signals Government overlooking the benefits of renewable building materials and materials with low embodied carbon (like timber). This change may drive developers and architects to make less sustainable, more expensive choices due to a regulatory bias towards 'bolt-on' renewable energy technologies, rather than considering a **Fabric First approach.** We support RICS in calling for a taskforce to be set up to look at **Embodied Carbon within the Allowable Solutions framework.** This principle should extend to all commercial buildings, with Government taking a lead by setting minimum performance standards for public projects.

The natural choice for health and well-being

The quality of our living and working environments are directly connected to our physical and mental health, energy levels and overall fitness. Forests and woodlands in general provide a setting for leisure activities with thousands of walks, hiking trails, cycle and bridle paths and opportunities for camping and horse riding across the UK.

The expansion of forested land and the planting of more trees in the UK is a long term solution to i**ncreasing biodiversity, lowering carbon dioxide levels** and providing a wide variety of **social benefits and community engagement.**

Woodland generation is playing a major role in regenerating brownfield areas and old industrial sites to bring fresh forest closer to urban areas. However forestry takes time to develop – 40 to 60 years depending on species – so mitigation of climate change needs to be addressed now.

It has been estimated that doubling the tree cover in the West Midlands alone would reduce mortality as a result of poor air quality by 140 people per year.

Source: Centre for Ecology and Hydrology, Lancaster University • www.nhsforest.org

Woodlands and trees also improve air quality by absorbing pollutants, reduce noise pollution through sound deflection and reduce the impact of the urban heat island – the warming of the urban environment through lighting, building performance, roads, reflective surfaces and many other factors. Simply put – the more wood is used, the more trees are planted. This encourages the expansion of the UK's forests and creates more natural, healthy surroundings for communities to enjoy.

Timber is increasingly seen as an aesthetic and healthy option for interior design in the education and healthcare sectors. Here timber is used both as a structural element and as a way to provide a warm, clean, calming space for students, patients and staff. Plenty of natural light and the organic feel of wood helps to improve behaviour and lower stress levels. The thermal properties of timber can also provide a warm, energy efficient and long lasting finish.

The 2008 study, 'Health and Place' found that 'natural settings such as parks, beaches and forests' constituted the largest category amongst 'favourite places'. Increasing the number of publicly accessible forests by growing the sustainable forestry industry in the UK will be good for all sectors of society.

What can Government do?

Reward management, expansion and access to woodlands

Ensure National Curriculum drives understanding of the intrinsic role forests play in society

We echo the Government's own **Independent Panel on Forestry Report,** in calling for a new approach to valuing and rewarding the management, improvement and expansion of the woodland eco-systems for all the benefits they provide, to people, nature and the green economy. This means the opening up of existing woodlands and creating new ones accessible to the public. Investment will be required to make this attractive to woodland owners – for example to support open access or pathways. The public forest estate, with its many and varied recreation and leisure opportunities, is an exemplar of woodland access in England and should be sustained into the future. We call on Government to give as many people as possible ready access to trees and woodlands for health and well-being benefits – this means planting more trees and woodlands closer to people, incentivising more access to existing woodlands and ensuring that our children in schools are encouraged through the National Curriculum to understand the intrinsic role that our forests play in society.

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"There is a huge opportunity for England's woodlands to drive a sustainable economic revival, to improve the health and well-being of the nation, and to provide better and more connected places for nature. We need a new culture of thinking and action around wood and woodlands, and a new way of valuing and managing the natural and social capital of our woodland resource, alongside the timber they contain."

The former Right Reverend Bishop James Jones, the Bishop of Liverpool, Chairman of the Independent Panel on Forestry established by the Department for Environment, Food & Rural Affairs.

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Build with Carbon

The Accord partners are:

British Woodworking Federation (BWF)
Confederation of Forest Industries (Confor)
Structural Timber Association (STA)
Timber Decking and Cladding Association (TDCA)
Timber Packaging and Pallet Confederation (TIMCON)
Timber Research and Development Association (TRADA)
Timber Trade Federation (TTF)
Trussed Rafter Association (TRA)
UK Forest Products Association (UKFPA)
Wood for Good
Wood Panel Industries Federation (WPIF)
Wood Protection Association (WPA)