

TIMBER INDUSTRY FESTO



Wood for Good
Challenge your perceptions.

**The Timber Industry Manifesto:
Developed by Wood for Good**

Sustainability, a phrase barely in the public consciousness thirty years ago, has rapidly become a concept that permeates policy discussions in all spheres of public life. It is no longer adequate to centre our thinking on what will work in the short term; our eyes must instead become trained to see what impact the choices we make now will have in the future.

Wood for Good is an organisation that works on behalf of the timber industry in order to generate demand for sustainable timber products. A key element of this is guiding Government on how increased timber use can benefit the UK.

We are confident that increasing demand for wood as a construction material is key to meeting the challenges of our age, enhancing environmental sustainability, economic sustainability and sustainability for our communities.

With the emphasis so often on innovation, it will probably surprise many that the most sustainable building material is completely natural, and has been around for thousands of years.

Like so many age-old, ubiquitous things, wood has become, quite literally, part of the furniture, and the positive contribution it can make to issues such as climate change is in danger of being overlooked.

Yet the benefits of increasing the use of sustainable wood in the UK – and the arguments for how it can help Government meet its aims – are too compelling to be ignored. Wood is carbon-positive in its growth phase, generating jobs as it is harvested, reducing labour-time as it is used, and has some of the most effective insulation properties of any material. Timber isn't just good for the environment, it is good for people and it is good for the economy. Wood is good for the UK.

Yet the UK currently lags behind comparable countries with regards wood consumption. While the construction industry does use wood in many projects, it has never achieved the same levels of wood consumption as areas like Scandinavia.

In addition, the availability of a multitude of alternative building materials, coupled with misperceptions about wood's cost, ability to meet the demands of modern design and misconceptions about its flammability have presented new challenges to wood's position.

We want to challenge these myths and put sustainable wood at the heart of UK Government policy, and help increase demand for sustainable timber products in the construction industry.

The sector already recognises the importance of wood; for example the use of timber frame in new-build housing has grown from around 2 per cent in the 1980s to roughly 27 per cent now. These are good signs of progress, but we're not there yet. We must benchmark ourselves against Nordic countries, and particularly Finland where per capita consumption has reached 1m³, through targeted policies in favour of timber usage in construction. In the UK, the figure is nearer 0.16m³ per person – something we want to increase.

We aim to put sustainable wood at the heart of UK Government policy.

To achieve this target of increased use, we need a regulatory environment that helps to support and create demand for wood in both the new build and repair and maintenance sectors. The Timber Industry Manifesto sets out the benefits this will bring to the UK, and what Government can do to ensure this happens.



John Kissock
Chairman, Wood for Good

As trees need little more than sunlight and rainfall to grow, wood from sustainably managed forests is not just carbon neutral, it's carbon positive.

It's not surprising, therefore, that producing sustainable timber requires significantly less energy than other mainstream building materials such as steel and concrete.

And using wood as an alternative to other materials has ongoing environmental benefits too, saving on average 0.9 tonnes of CO₂ per cubic metre and providing the best thermal insulation properties of any mainstream construction material.

It's no wonder that the UK Government has signalled its intention to include sustainable forestry as part of its larger strategy to address climate change.

THE CASE FOR TIMBER: WOOD IS GOOD FOR THE ENVIRONMENT



Trees are sustainably harvested at the peak of their cycle, and replaced with younger, more efficient trees, before their ability to absorb and emit declines.

The Copenhagen Accord and the Kyoto Agreement mean that the UK has already agreed to ambitious and binding targets in order to reduce greenhouse gas emissions. Driving demand for sustainable wood and increasing forest cover is a key mechanism at Government's disposal and will help to meet this challenge.

Indeed, by agreeing to the importance of the REDD agenda (Reducing Emissions from Deforestation and Degradation) at Copenhagen, the UK has already made a statement of intent that best practice forest management will form part of its armory in the battle against climate change.

This is not surprising. The environmental imperatives for sustainable forestry have consistently been proven in independent studies and trials, and myriad reports have placed it at the heart of suggested strategies to reduce the impact of climate change. In 2006, the Stern Review 'The Economics of Climate Change' asserted that "the loss of natural forests around the world contributes more to global emissions each year than the transport sector", and that "curbing deforestation is a highly cost-effective way to reduce emissions."

Similarly, the Read Report of 2009, 'Combating Climate Change: A Role for UK Forests' states that analysis of the relationship between forestry and climate change in the UK reveals there is an "urgent need to increase the extent of forest cover in the UK so that we can make an appropriate contribution to the global requirement for mitigation of greenhouse emissions."

And it is not difficult to see why so many studies list sustainable forestry as one of the key elements in strategies to fight global warming. Long before it reaches the construction site, timber is tackling climate change. Trees absorb CO₂ as they grow, meaning that wood is carbon neutral. Indeed, because of the carbon sink effect, wood from sustainably managed forests is carbon positive. Europe's forests provide a carbon sink for 150 Gtonnes of carbon dioxide. Simply by increasing the UK's forest cover from 12 to 16 per cent we could, by 2050, abate up to 10 per cent of our national CO₂ emissions at the same time.

Sustainably grown wood is an endlessly renewable and natural resource. Needing little more than sunlight and rainfall to grow, producing timber requires significantly less energy than any other mainstream building material. For example, producing steel requires 24 times the energy needed to produce wood; while concrete can give off 140kg CO₂ per cubic metre produced. Moreover, as they grow, trees are producing the oxygen we breathe – almost three quarters of a tonne of oxygen for every cubic metre's growth.

Sustainable forestry ensures that this process of CO₂ absorption and oxygen emission is maximised. Trees are sustainably harvested at the peak of their cycle, and replaced with younger, more carbon efficient trees, before their ability to absorb and emit declines. This is nature's original carbon capture and storage system which needs no research and carries no major capital investment or risk compared with the alternatives.

Even when the energy expended during the harvesting and transport process is factored in, wood still maintains its low carbon credentials. An independent study commissioned by the American Hardwood

A greater use of wood is the easiest way for the UK Government to achieve its greenhouse gas emission targets.

Wood is an endlessly renewable resource; it can be recycled into new timber products and at the end of its life burnt to produce renewable energy.



Export Council (AHEC) found that the carbon sequestration during each tree's growth more than offsets the total combined emissions from harvesting, processing and transporting timber to the EU from the US.

Once in place within a building, wood continues to outperform other materials, and modern wood protection technology means it can keep on doing this for even longer.

Using wood as an alternative to other materials saves on average 0.9 tonnes of CO₂ per cubic metre. Wood also has the best thermal insulation properties of any mainstream construction material; five times better than concrete, 10 times better than brick and 350 times better than steel. This is because wood's low thermal mass means that it has very limited ability to conduct either heat or cold, meaning that using timber in buildings makes them more easily able to retain heat.

Simply growing trees is good for the environment, but in the UK the environmental benefits are greatly enhanced, because, according to a recent Timber Trade Federation (TTF) Report, 83 per cent of the timber used in the UK is from certified sustainable sources. Much of the remaining 17 per cent is sourced from countries such as the US where legal and sustainable forestry is practised but certification schemes are not yet widely used.

Destructive?

Using wood as an alternative to other materials saves an average of 0.9 tonnes of CO₂ per cubic metre.



So, increasing timber use in the UK will mean that it is sustainable forests that benefit, and will also help protect biodiversity and important habitats for endangered species, as well as the attendant environmental benefits already discussed. The UK lags far behind Europe with regards to forest cover, and driving the demand for sustainable timber from UK forests is one way of addressing this issue and enhancing biodiversity in the UK.

Of course, illegal deforestation still exists, largely in developing countries, but a concerted effort has been made to tackle this issue in recent years. And it is working. A Chatham House report of July 2010, 'Illegal Logging and Related Trade: Indicators of the Global Response' identified significant reductions in illegal logging in countries such as Cameroon, Brazil and Indonesia. Regulation and pressure from trade organisations has been key in achieving this reduction. The growth in certification schemes, such as FSC and PEFC, the introduction of Timber Regulation in the EU and the Lacey Act in the US have been significant steps towards preventing illegal wood entering the supply chain.

In many instances, the UK has helped lead the way in this sphere. Government initiatives such as the establishment of the DEFRA-led Central Point of Expertise on Timber in 2004, who are responsible for assessing legality and sustainability and advising Government procurement officers, have had a major effect on the UK timber trade and its supply chains. Moreover, the UK timber industry, with the backing of organisations such as the TTF and Wood for Good, is vigorously supportive of stamping out illegal timber sourcing. For example, the TTF's Responsible Purchasing Policy (RPP) demands businesses 'risk rate' their supply chain for potential contamination with illegal wood. In 2010, the companies audited demonstrated that 86 per cent of wood was certified as sustainable.

The importance of sustainable forestry is already inculcated in the UK timber industry and the majority of its supply chain, and the environmental benefits that sustainable forestry practices bring are clear.

Yet business is not governed by altruism. There is no imperative to grow a sustainable forest industry if there is no market for its products. Put simply, when we can ensure that a forest will pay, we can be confident that a forest will stay. Stimulating and increasing demand for certified timber, wherever it comes from, will mean that sustainable forestry continues to be a viable long-term economic proposition. By increasing timber output and stimulating the market for wood, we are ensuring the conservation and effective management of sustainable forests. Buying sustainable wood will not only ensure that forests are preserved for future generations, but also that the UK meets its binding obligations to tackle climate change.

CASE STUDY: OLYMPIC VELODROME



© Hopkins Architects

Case study: Olympic Velodrome

The iconic Olympic Velodrome uses sustainably sourced western red cedar for the outer cladding, and Siberian pine for the track.

The efficient design of the building has delivered both cost savings and energy savings, with significant cost and embodied carbon savings. This resulted in the Velodrome achieving 31 per cent efficiency above 2006 building regulations.

In total, there were 85,000kg of carbon saved through the efficient building design throughout the Olympic Park site.

Location London, UK	Size 21,700m ²	Site carbon saving 85,000kg
Architects Hopkins Architects	Timber Cladding Western Red Cedar	
Client Olympic Delivery Authority	Cycling track Siberian Pine	

Data source: Olympic Delivery Authority

In an industry where time is money, easy to use wood can help reduce the time between a building being designed and being built. This is because modern methods of construction mean that many components can be pre-engineered under strict quality controls off site and then assembled quickly and efficiently once on site.

Wood's excellent thermal insulation properties also mean that heating costs are reduced for the occupants of the building once it is completed.

And with stricter regulations on the horizon driving change towards more sustainable construction, most significantly within the public sector, wood's environmental credentials mean it is a core construction product that will be expensive to ignore.

**Modern methods
of construction**

mean wood can be pre-engineered off site and delivered ready to erect into a form or structure.

THE CASE FOR TIMBER: WOOD IS GOOD FOR THE ECONOMY



Using wood can help reduce costs both during the build process and over the life cycle of a property. Modern methods of construction mean that it can be pre-engineered off site and delivered ready to erect into a form or structure. This ensures high levels of quality control are practised in the factory and that accurately manufactured components are assembled quickly and efficiently on site. Moreover, wood is very much a durable building material. Modern treatments mean that wood can resist biological degradation even longer, as well as locking in carbon.

Because of the ease of use, wood products can help reduce the time frame between a building being designed, and the completed structure being up and running and serving the purpose for which it is built. The excellent thermal insulation properties of wood can also reduce the heating costs for occupants of a building.

One example is the Stadthaus building in Hackney, London – the world's tallest residential timber structure. Apart from its concrete foundations, the nine-story residential tower is built entirely of cross laminated timber. Using timber in this form of construction meant that the project was completed in just 49 weeks compared to 72 weeks using the more traditional concrete and steel alternatives. On this occasion, timber's thermal properties also meant that there was no need to install additional insulation.

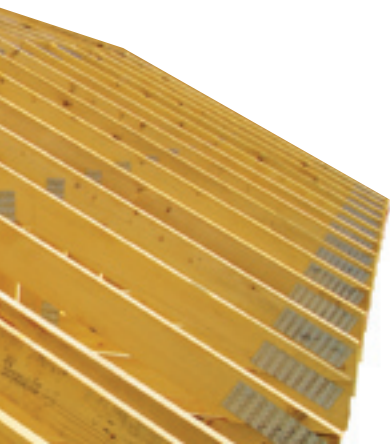
The Government's policy of reducing greenhouse gas emissions means that the negative impact that buildings can have on the environment can no longer be ignored, and Government has been working with the construction industry to drive and encourage change through guidance and regulation. For example, the Building Research Establishment's (BRE) Green Guide assesses the relative environmental impacts of the most commonly used construction materials. This enables low carbon building materials to be specified at the start of the building process. Similarly, the development of The Code for Sustainable Homes is helping to drive change towards sustainable building practices by giving a star rating to reflect the sustainability of a specification. All projects must meet the minimum sustainability rating of one star, with exemplar projects being granted six stars.

Expensive?

Using pre-engineered timber can make significant savings in build times and costs.



The Low Carbon Construction report of autumn 2010 challenged the construction industry to take seriously the issue of climate change, and was a significant reminder that over the next 40 years, use of low-carbon methods will become a necessity when competing for public sector contracts. Stimulating appetite for timber in the construction industry will help UK construction firms meet the demands of the low-carbon economy, which will in turn help the UK Government meet its own low-carbon targets.



Like many materials, wood is only a fire hazard when left exposed to arson or poor site practices. This risk can be eliminated with proper management systems and site security, which would not only protect wood, but also protect the other construction products that are also at risk from foul practice.

But isn't wood a fire hazard?

The risk is not as high as some sensationalist news stories suggest. Figures issued last year as part of the annual Fire Statistics Monitor (Department for Communities and Local Government) showed that just one in eight fires on a part-completed building was in a building constructed from a timber frame system. And in finished timber buildings the incidences of fire in timber frame structures are no greater than other materials. The same figures showed that there is one fire in a timber framed building for every 59 fires in non-timber frame buildings. In completed buildings there were 802 fires in timber frame buildings compared with 47,600 fires in those with non-timber frames.

Modern timber treatments greatly reduce the risk of fire, and these treatments will last for many years. The timber industry is already taking positive steps to reduce the risk of fire. The UK Timber Frame Association's mandatory 'Site Safe' process, which was introduced in 2010, requires timber frame manufacturers to get clear agreement up front from the main contractor/developer that they will take appropriate action to mitigate fire hazards on site. This is then followed up with an on site assessment to check that measures to reduce the risk of fire have been implemented.

A FOCUS ON: WOOD WINDOW ALLIANCE



A focus on: Wood Window Alliance

The Wood Window Alliance (WWA) is a membership organisation for those who make wood frame windows. It requires its members to meet specific standards to demonstrate the quality of their products, prove their environmental claims and reassure the customer that they can specify wood with confidence.

Recent research by construction consultants Davis Langdon has shown that frames made to WWA standards are carbon negative across the overall life cycle, and save around three quarters of a tonne CO₂ per average house.

The low thermal conductivity of wood helps to reduce heating costs in buildings and the cost of frequent replacement. Typically WWA windows have an expected service life of at least 60 years.



There is something so innate in man's relationship with the forest, that it is rarely articulated:
trees are good for our wellbeing.

The UK timber industry has a positive social impact, not only through providing nearly 150,000 people with employment, but also by improving our general well-being. It's an anecdotally accepted fact that trees improve the quality of people's lives and now there is scientific research to back this up.

By supporting the UK timber industry, we are stimulating the expansion of sustainable forests, and that is good for everyone.

THE CASE FOR
TIMBER: WOOD IS
GOOD FOR THE
COMMUNITIES

Wood is natural and infinitely renewable, but looking after a forest, harvesting and replanting trees requires labour, as does its manufacture into wood products, and thus sustainable employment is created.

Almost 150,000 people in the UK currently work in the timber industry, which is worth £18 billion every year. It accounts for over three per cent of all construction and manufacturing output and contributes around 0.4 per cent to the UK's total GVA, or around £5.6 billion to the economy. As demand for wood grows, so will the industry, increasing the strength of the rural economy in the UK.

And employment is not the only benefit that timber brings to communities. There is something so innate in man's relationship with the forest, that it is rarely articulated: trees are good for our wellbeing.

This is something that is largely accepted on an anecdotal level, but there is also a raft of research to back this up. The Forestry Commission's report 'Place-making and Communities' cites the benefits of forestry as "community benefits such as empowerment and inclusion" and the ability to "enhance people's quality of life."

The 2010 report, 'Benefits of Green Infrastructure' discusses the biophilia hypothesis, the idea that "as a consequence of evolution, humans have an innate tendency to focus on life and lifelike processes" and are instinctively calmed by the presence of trees, perhaps because of the subliminal association with resources and shelter. The 2008 study, 'Health and Place' found that 'natural settings such as parks, beaches and forests' constituted the largest category amongst 'favourite places.' Figures from 2009 show that public access to forests has remained around the 50 per cent mark for several years. Increasing the number of publicly accessible forests by growing the sustainable forestry industry in the UK will be good for all of us, because put in its simplest terms, people like trees. And trees, through their positive impact on things such as air quality and an ability to reduce noise pollution, are good for people. By encouraging the demand for sustainable wood, we are stimulating the expansion of forests, with all the social and psychological benefits this will bring.

Data source: ONS 2010

A yellow logging truck is shown from a low angle, carrying a large stack of logs on its bed. The truck is yellow with black tires and a black grille. The logs are stacked high and are light brown in color. The background is white.

Almost **150,000 people** in the UK currently work in the timber industry, which is worth **£18 billion** every year.

A FOCUS ON: JAMES JONES & SONS



A focus on: James Jones & Sons and investment in the rural economy

James Jones & Sons Ltd is Scotland's largest independent sawmiller and one of the leading suppliers of British timber in the UK. With a group turnover of £188 million, it operates from nine different sites across the country, all of which are located strategically either close to the principal sources of raw materials or close to the end user markets.

The company employs more than 550 people in the UK, the majority of whom are in rural economies, and supports considerable indirect employment. The company has recently invested £25 million in a new state of the art sawmill at Lockerbie, creating one of the most technologically advanced sawlines in Europe. The Lockerbie site has benefitted from more than £40 million investment over the past decade.

In the long term the aim of Wood for Good is to secure a change in government thinking that puts wood, the most naturally environmentally friendly building material, at the heart of the UK's environmental policy. This is why we have laid out seven policy points that we want to see addressed.

John Kissock
Chairman, Wood for Good

THE CASE FOR
TIMBER: SEVEN POLICY
POINTS FOR A MORE
SUSTAINABLE UK

In order to support sustainable timber in the UK we want Government to:

01

Reduce VAT on sustainable timber and timber products to 10 per cent

This will act as an incentive to help drive demand for wood within the built environment.

02

A public endorsement of timber as an eco-material from the UK Government

Government endorsement will raise awareness of wood as one of the most sustainable building materials available.

03

A 'Wood First' rule that requires wood to be considered, where feasible, as the primary building material in all publicly funded projects

The Government has a responsibility to show leadership on sustainability and to reduce its expenditure. The green and life-cycle cost benefits of wood will help it to achieve this.

04

A consistent methodology for the assessment of embodied carbon and life-cycle assessment

This will allow timber to compete on a level playing field with other building materials and fully exploit its undoubted environmental credentials.

05

Provide additional aid to further support developing countries in creating a sustainable forest product supply chain

This will help to eradicate illegal logging once and for all while targeting development aid at projects which deliver clear economic benefits to communities.

06

Support the expansion of productive woodlands by providing a planning and support system which will promote commercial forestry

Sustainable management of forests helps to both grow and preserve tree cover in the UK, with the attendant economic, social, and environmental benefits that forests bring.

07

Support the UK Timber Industry in developing capacity to recycle post-consumer waste

We want Government to support industry in developing supply chains so that timber that becomes available at the end of its initial intended use is recycled either into new timber products or used in a way that harnesses the latent energy stored in all wood products in an efficient and environmentally compliant way.

A public endorsement

Government endorsement will raise awareness of wood as one of the most sustainable building materials available.

The Timber Industry manifesto is supported by:

British Woodworking Federation (BWF)
Confederation of Forest Industries (Confor)
Swedish Forest Industries Federation (SFIF)
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 Timber Frame Association (UKTFA)
United Kingdom Forest Products Association (UKFPA)
Wood Panel Industries Federation (WPIF)
Wood Protection Association (WPA)
Wood Window Alliance (WWA)

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