



NOW IS THE

**#TIME  
FOR  
TIMBER**

[timefortimber.org](https://timefortimber.org)

**“Increased use of Wood in Construction will be required to permanently remove carbon from the atmosphere, in order to offset remaining residual emissions in the UK and achieve Net Zero by 2050.”**

Climate Change Committee,  
6th Carbon Budget,  
December 2020.

## **TIME FOR TIMBER: THE FACTS**

- It is now clear that achieving Net Zero by 2050 is a core objective for the Government
- As a major contributor to carbon emissions, the UK Construction industry has a key role in achieving Net Zero 2050
- The use of correctly designed and engineered timber solutions are a key driver in the delivery of Net Zero 2050
- A design led approach is crucial to successful risk management where timber solutions are used
- The property investment market is starting to demand low to net zero carbon timber buildings
- The Hackett Review will have a profound and positive impact on the competency of the delivery of buildings in the near future
- Implementation of additional risk management via quality programmes provides assurance to stakeholders involved in providing insurance cover for timber construction

**Now is the Time for Timber**



# ACHIEVING NET ZERO

**In June 2019, the UK became the first major economy in the world to pass laws to end its contribution to global warming by 2050.**

The target requires the UK to bring all greenhouse gas emissions to net zero by 2050, compared with its previous target of an 80% reduction from 1990 levels. The UK has already reduced its emissions by 42%, whilst growing the economy by 72% and putting clean growth at the heart of its modern Industrial Strategy.

As well as appreciating the financial benefits involved in supporting sustainable projects, banks and insurers must begin to assess the future costs they'll be liable to, should extreme weather and rising oceans become more common. Ultimately, these companies hold their own destiny, as well as their future profitability in their own hands. Therefore, as the UK and the rest of the world begins to recover from the shock of COVID-19, it's possible that the next global shock could have much more serious and irreversible implications.

Although the UK Government announced that it has a target to achieve Carbon Net Zero by 2050, at present, there is no road map to how this will be achieved.

Consequently, there is a real risk that we will not meet these targets and the opportunity to address the global climate change issue will be lost. Will future generations look back at 2021 and see this was the year the construction industry failed them?

We are at a crossroads in the UK and on a global basis: the world has woken up to the detrimental impact that we are having on the planet and recognises that it is time to act. As individuals we can make a difference in how we behave, in the choices that we make and with our actions; however, this is not enough. It is at the centre of government that the most decisive action is needed to arrest the march of climate change.

Crucially, with the global population increasing and steadily becoming more urbanised, there is an urgent need to

change how we build high density and single-family housing. There is an obvious answer: to use renewable, sustainable and environmentally positive materials produced in such a way that there is a lighter impact on the planet.

One such material is timber, however there is a misconception by certain parties that have a clear agenda as to timber's suitability as a major construction material; consequently, timber is considered a risk for some insurers and finance houses to support or to invest in timber construction projects. A basic lack of understanding of the facts put us in danger of creating problems for the future of the economy and the environment.

The construction industry has a tremendous opportunity to make a significant and meaningful contribution to the delivery of the whole climate change agenda. That is why we - the construction industry - owe it to future generations to challenge these misconceptions and demonstrate to the financial and insurance

industries that timber is a viable and sustainable long-term solution to the country's environmental and housing crises.

With ambitious targets set for the UK to reach carbon net zero by 2050, timber is the primary building material that will help the country reach its targets: it is sustainable, replenishable, and can be positively recycled at the end of use. Opponents may point to the risk of fire; however, self-interest has caused some to ignore the body of evidence that exists regarding the very predictable nature of timber and how it performs. Furthermore, the impact of good design, engineering, detailing and construction has been willfully overlooked.

Whilst timber is the chosen building material for many of the country's leading housebuilders, there is a whole world of construction that could benefit from the learnings this progressive sector has made by adopting offsite and MMC techniques. These insights could have a profound

effect if they are extended to the wider construction market, where the full impact of timber on the carbon footprint of a project will have a demonstrable benefit.

This is in harmony with the Government's agenda of Building Back Better – with its emphasis on green initiatives – which clearly recognises that there is a need to create jobs to avoid a financial downturn. But we should be creating those jobs to ensure the green transition happens as quickly as possible, which in turn propels us towards net zero carbon. Sustainable projects are a critical way that the Government can create jobs and replenish local economies to protect communities from future environmental and health hazards.

In the current economic climate, it is noted that investors – both corporate and individual – are demanding better standards from the companies and funds they hold. Positive financial returns are naturally expected, but there is a growing interest in seeing environmental, sustainable and governance (ESG) principles being applied. This may be commercial pragmatism in response to public and government sentiment, but it cannot be ignored; viable, reliable and robust solutions are available today and for a renewable future.

Indeed, according to an article in the Financial Times (13th April 2020), the majority of ESG funds outperform the

wider market over 10 years. This study of sustainable funds counters claims that ESG investment comes at the expense of performance. What's more, with a growing focus on the effects of modern ways of life to health and mental well-being that the recent pandemic has only served to amplify; it has been proven that timber structures provide for a better living, working and learning environment.

There is a huge focus on the climate crisis and the financial services sector holds the key. The Time for Timber campaign has been founded to directly target the financial and insurance industries, to counter the misconceptions around timber and deliver a compelling narrative about its place in the sustainable buildings of our future. //

**For years, the climate change movement was led by the so-called 'eco-warriors', a myriad of non-profit organisations and dedicated small investors who shared a collective desire to drive change within big companies. They protested outside business headquarters, filed shareholder resolutions and spoke out at annual meetings in order to make their points.**

Large investors, in contrast, largely remained silent – at least in public. However, in the wake of the Paris agreement, a rising number of large investors now seem highly alert to the



investment risks of global warming. As of 2020, this group seems to recognise that drastically cutting greenhouse gas emissions represents good business sense. Delaying action on emissions, will only mean more radical intervention is needed in the future at greater financial cost, and with larger impacts on society. Plus, by taking action now, companies can plan to achieve long-term, sustainable economic growth from a low-carbon economy.

There is little debate that climate change will dominate our lives and economies in years to come. Recent announcements from the likes of the World Economic Forum, the Bank of England and leading blue chips like Microsoft, which demonstrate that climate risk has moved centre stage into the world's most influential boardrooms only furthers the point.

To this end, the world's largest companies now forecast nearly \$1 trillion at risk from climate impacts. Conversely, the same companies have identified \$2 trillion in opportunities from investments into sustainable business areas, such as low carbon technologies. Therefore, for the business community, climate change has

become a thing of now and not a thing of the future. Across modern boardrooms, daily discussions focus on how companies can meet climate challenges, as well as making the best use of any potential opportunities.

However, making the most of these opportunities requires foresight and investment. To this end, financial institutions, banks, investors and insurers must understand the risks they face in order to move to the next stage and build for the future. //



# TIMBER CONSTRUCTION AND THE INSURANCE INDUSTRY

**The technical advancement of structural timber has given designers and engineers the ability to consider the use of timber as an alternative to concrete and steel. If managed in the right way, timber can be considered no more of a risk than any other building material. If the construction industry has recognised its part in achieving net zero, then what of insurers and investors?**

Unfortunately there will always be a balance of commerciality versus morals and ethics and insurers and brokers are entities who need to make a living to survive. We believe the debate at the moment is how they balance the two off against one another. How can insurers make money whilst advancing environmental agenda and, at the same time, making sure that we hit our carbon neutral targets? Is timber currently a commercially viable option in the sense of finding a price point that is acceptable to all parties and that makes this work for everyone? We believe that this is one of the key challenges at the moment.

The experience for brokers is in finding the middle ground, where, at present, insurance for timber projects is expensive; yet developers are saying, to a level that they have never said before, that they want to build in timber, unless there really is a reason why they can't. We believe that insurers understand that the need to build in timber is greatly increased compared to what it was two years ago, therefore a solution needs to be found that works for both parties. This will require that the right measures and the right protections are put in place to make timber developments as safe as possible, so that insurers can deliver a price and that it can be built into a model that can be commercially viable for everyone.

Looking at the global approach to the use of engineered wood systems, outside of the UK, there is a robust industry in other countries from North America, to Scandinavia, through central Europe to Australia. As insurance is a global industry, there is certainly something to be learned from other countries insurers' experience

and the performance of buildings they cover. With the focus now on rebuilding the economy and to mitigate the future risk of climate change, the **Time for Timber** campaign is central to starting the dialogue between the construction industry and those that insure buildings, from site to completion, and beyond.

## **Insurance & timber construction projects**

It's clear that the insurance sector is feeling rather risk averse at present. Having come through some tough years, the future threat that the pandemic causes in terms of claims are unknown and with this uncertainty, coming fast on the heels of the issues raised by Grenfell, it is no wonder that the building industry causes a bit of a headache for brokers and underwriters.

From the conversations that have arisen since the start of the Time For Timber campaign, when it comes to insuring projects that involve timber, there is a real reluctance to take on what is perceived as additional exposure now, whether that's from understanding the design of the building, or from the potential of fire, or even from water damage. It is these misgivings and uncertainties that have highlighted the need for this campaign, to educate and reassure the construction insurance sector as to the benefits of timber.

The positive benefits that the increased use of timber brings to the economy, climate change and achieving net zero are clear; albeit clear to those in construction. It is evident that facing a climate crisis, there needs to be a consolidated approach to how we, as a joined-up economy can move forwards. This follows on from many insurers recognising the perils that climate change can bring, from increased risks from flooding, or from the forest fires

that have dominated the news agenda in California and Australia in the space of just one year. Environmentalists and economists welcomed the news that the number of insurers withdrawing cover for coal projects more than doubled this year and for the first time US companies have taken action, leaving only a very few insurers as the "last resort" for fossil fuels. In fact, last year saw the 35 biggest insurers on their actions on fossil fuels, declared that coal - the biggest single contributor to climate change - "is on the way to becoming uninsurable" as most coal projects cannot be financed, built or operated without insurance. This added to the news that pension providers are focussing on net zero, with Aviva recently setting a 2050 net-zero target for its own auto-enrolment (AE) default pension funds. It also called on the government to make all AE default funds set the same goal. With the rise in returns in ESG funds, then the momentum created by insurers backing out of coal should hasten now that ethical investment is squarely part of the news cycle.

Are we therefore on the cusp of change, as the economy recovers from the pandemic and looks to mitigate further risk from the much larger threats caused by climate change? Are we at the point where those in the construction industry work closer with their partners in construction insurance to improve the risk dynamics to educate any stakeholders whether they be builders or owners?

These are early days, but it is hoped that this campaign will highlight the topics that insurers want to talk about and want to understand in order to bring constructors and insurers closer together to allow the increased use of engineered wood systems to meet the UK Government's commitment to net zero by 2050. //



# REBUILDING THE ECONOMY

**In his speech on the 30th June 2020, Prime Minister, Boris Johnson underlined his commitment to “build, build, build” as part of efforts to upgrade Britain’s infrastructure network. Furthermore, Mr Johnson identified the nation’s existing skills gap and the need to close it in order to better fuel a full economic recovery across the country. As such, the Prime Minister’s ‘New Deal’ announcement has clearly put jobs and infrastructure at the centre of the government’s economic growth strategy.**

This impactful speech reaffirmed the government’s election commitment to build more homes. Additionally, with

his closing statement, Mr Johnson recommitted the government to its Net Zero targets and placed construction at the heart of this effort, commenting:

*“To that end we will build build build. Build back better, build back greener, build back faster and to do that at the pace that this moment requires”.*

Timber is an enduring and renewable building material, with up to 90% of the timber used in the UK coming from certified sustainable sources such as the FSC and the PEFC. Across the forests of Europe, five trees are planted for every one harvested, with much of the remaining imported timber coming from well

managed forest providers from across the globe. As a net carbon contributor, roughly one tonne of carbon is stored for every cubic metre of timber used, its credentials to be at the heart of net zero by 2050 are unquestionable.

With a need to rebuild after the crisis, as well an opportunity to tackle unemployment and grow the economy, it will be critical for private capital to fund infrastructure investment across the nation and to be able to offer adequate insurance cover for the build process and beyond. Although climate change is recognised at boardroom level, the path to net zero has not yet been set, especially by the insurance and financial sectors that will

provide the vital stimulus to rebuilding the economy. //

**The CCC Chairman, Lord Deben, said:**

*“The Covid-19 crisis has shown the importance of planning well for the risks the country faces.*

*“Recovery means investing in new jobs, cleaner air and improved health. The actions needed to tackle climate change are central to rebuilding our economy.*

*“The government must prioritise actions that reduce climate risks and avoid measures that lock-in higher emissions.”*

*BBC - 6th May 2020*



# BUILDING WITH TIMBER

**Across the world, designers and engineers are increasingly using the strength, stability and design flexibility of timber products to create high-quality buildings.**

Particularly popular in Scandinavia, Australia and the United States, structural timber buildings are pushing boundaries in design, attaining heights and spans that would have previously required concrete, steel, or masonry to achieve. Whether it's the world's largest load-bearing timber structure, a 121 residential unit in East London, made entirely of cross-laminated timber (CLT), from the external, party and core walls, through to the floors and stairs. Or the world's tallest timber building, the Mjøstårnet, which stands 280ft in Brumunddal Norway constructed from glued-laminated timber (GLULAM), CLT and laminated veneer lumber (LVL), timber continues to demonstrate its credentials as a modern, reliable structural building material. As well as the use of CLT there is a diversity to how highly engineered structural timber is used in construction, from glulam, a high-performance product

for structural engineering manufactured from layers of parallel timber laminations; to laminated veneer lumber (LVL) that uses multiple layers of thin wood assembled with adhesives, right through to the more familiar softwoods used as panels, beams and joists in the construction of houses.

Looking into the details, benefits and applications, structural timber offers the following:

## **Timber frame, for housing, housing/low rise, hotels/care homes**

Timber frame construction is being used increasingly for dwellings and medium rise buildings in the UK. Timber frame homes are usually manufactured in a factory and then assembled on site. This has the advantage of speed, strict quality control methods, ensuring the correct specification of materials are used and a high degree of dimensional accuracy. Many of the UK's leading housebuilders build using timber frame, with some, such as Barratt and Persimmon purchasing timber frame manufacturers, such is their confidence in the future of this methodology.

## **SIPs - Schools, energy efficient housing**

Structural insulated panels, or SIPs are increasing in popularity in the UK, as they provide a solid framework for low-energy homes. SIPs, are pieces of insulation bonded on each side to (typically) two skins of oriented strand board (OSB). The panels are then cut to size, with timber edge pieces added and any openings for windows and doorways cut by computer-controlled machines. The same panel is used for the external wall, any internal loadbearing walls and the roof panels. These panels share many of the advantages of traditional timber frame constructions, in that they are produced in factory conditions, with all the associated quality controls and can be rapidly erected on site.

## **CLT - Commercial building - Offices**

Cross-laminated timber (CLT) is a form of structural timber made from gluing together layers of solid-sawn timber, cut from a single log. In gluing the layers at right angles, the panel is able to achieve better structural rigidity in both directions.

This gives the finished CLT added structural integrity, which we see now being used in tall buildings in the UK and across the world. As a factory produced building material CLT is fully manufactured offsite. The nature of construction using CLT, consistent with all timber systems, means that buildings can be structurally sound whilst being relatively light, negating the need for deep foundations and reducing the need for heavy machinery to lift the materials on site. Increasingly popular as part of hybrid builds and multi-storey timber structures, CLT is often used in areas that require less building loads, or enables the infilling of projects where construction is especially tight, or difficult to access due to pre-existing buildings around the site. //



# CARBON EMISSIONS AND CARBON CAPTURE

## Timber as part of the circular economy; the safest and most effective carbon store.

Currently, the construction industry represents around 10% of total UK carbon emissions. As a result, the industry finds itself in a position of great responsibility and influence with regards to the nation's climate change efforts.

As trees grow, they naturally absorb carbon, which continues to be stored when the material is transformed into structural timber products. Timber absorbs and stores more carbon than it emits during processing and installation. These engineered solutions act as an effective carbon store when used as part of a building. When the building has reached the end of its use and the timbers are demounted from the structure, it can be used as a bio-fuel, or can be disposed of where it will decompose and return its

constituent elements back into the soil. By comparison, the use of concrete and steel within construction leads to considerably more energy and carbon usage. To this end, a report published by Chatham House (Making Concrete Change: June 2018) show that cement is the source of 4-8% of total global carbon dioxide emissions. Conversely, more carbon dioxide is absorbed and stored within timber products than is emitted during its harvesting process, manufacturing and transportation combined.

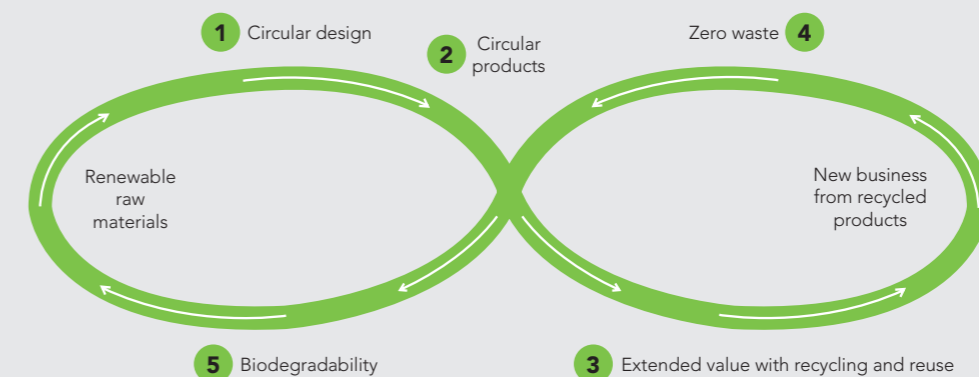
In fact, when used instead of other building materials, roughly one tonne of carbon is stored for every cubic metre of timber used. With such strong green and carbon storage credentials, it's clear to see why so many organisations are embracing timber. Not only does the material provide strength and aesthetic beauty but offers an effective solution in battling climate change. In fact, boroughs

like Hackney in East London, as far back as 2012, promoted a 'timber first' policy when it comes to building specifications. Similarly, the French government recently announced new sustainability legislation to help make the country carbon-neutral

by 2050. The new law, which becomes enforceable in 2022, will mandate that all new public buildings in France are built from at least 50% timber, or other natural materials. //

### A circular view for a brighter and better world

Timber is carbon negative from the cradle to the grave. It also stores more carbon than it emits during processing and installation. Timber as the only truly renewable building material needs to become the new standard.





# WHY BACK STRUCTURAL TIMBER FOR THE UK?

# LESS ENERGY TO MANUFACTURE

# FASTER CONSTRUCTION

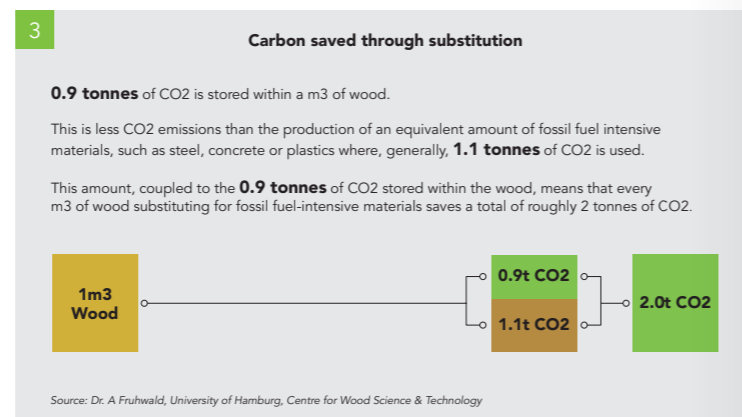
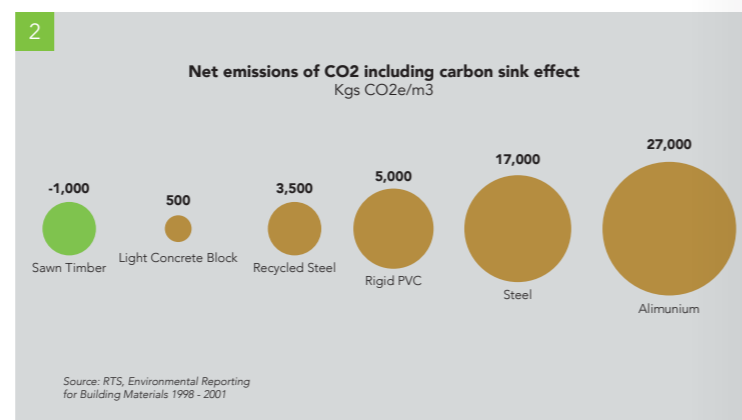
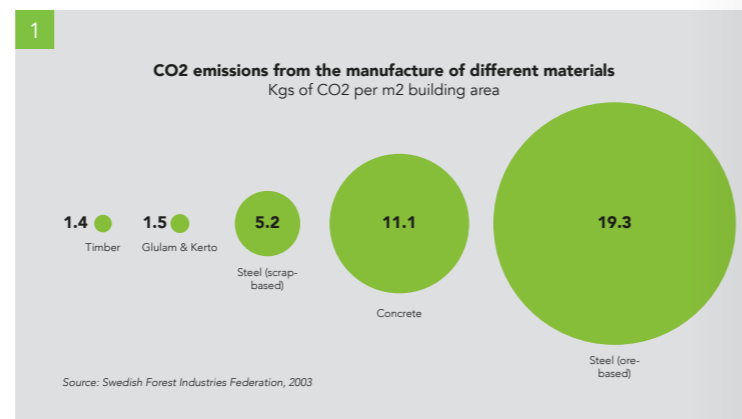
**Wood isn't manufactured, it grows and is the only truly sustainable construction material available.**

The construction industry is currently responsible for 35% of total global greenhouse gas emissions\* produced by global economic activities. Wood, engineered for use in building as timber, has a much lower carbon footprint than other building materials such as concrete and steel. (1 & 2)

Timber is carbon negative from the cradle to the grave. It also stores more carbon than it emits during processing and installation. (3)

**Timber as the only truly renewable building material needs to become the new standard. Now is the Time for Timber.**

\* Hurmekoski, E. 2017. How can wood construction reduce environmental degradation? European Forest Institute



**Recently, the UK government reaffirmed its commitment to building more homes, as well as working to reshape the nation's economy. Whilst advancing this agenda, those involved must also respect an existing commitment to achieving Net Zero emissions by 2050. Fortunately, recent publications, such as the 'Government response to the Housing, Communities and Local Government' from September 2019, identify how both goals can be more easily achieved through a greater commitment to modern methods of construction (MMC).**

Such solutions are helping to speed up the rate of housebuilding and therefore, in looking to increase the pace of change of building within the UK and achieve the targets identified within its manifesto, the government must increase the range of producers entering the market, as well as changing the types of homes that are being delivered. MMC facilitates this requirement as they allow housebuilders to build at quicker rates, reducing costs as well as alleviating some of the stresses brought about by the on-going skills shortage, close the skills gap and help to alleviate the rising unemployment rates created by the COVID-19 pandemic. According to Oliver Novakovic, technical and innovation director at Barratt Developments, one of the UK's largest

housebuilders, "The reports I read are saying, we can't make enough homes to sell. With timber frame, we know we can deliver homes quicker than other approaches, therefore in the short term it is a good opportunity for the timber frame institutions to show the true benefit they have; an opportunity to say this is the technology we can use and we can deliver timber frame houses on our site".

Of course, as demonstrated through the use of structural timber, MMC solutions aren't only allowing to make the build process more efficient, but greener too. Thankfully, structural timber frames are already used, according to research by the STA in 2017, in more than 28% of new build homes in the UK, with a steadily increasing annual market share. As a result, it's little surprise to see so many major companies making the shift towards MMC solutions. Legal & General has committed at least £100 million pounds of investment into a number of offsite construction facilities. Investment in the future is important to Oliver Novakovic of Barratt Developments, "we have purchased a timber frame company, Oregon and now we're looking at how we deliver more timber frame. Our use of MMC is growing and, of all those MMC's, timber frame is the dominant one, so our strategy is to keep using more of it, in the correct robust way. The reality of it is that we need a number of options and we

need more homes, therefore we will rely on all the technologies. But there's no doubt, that under MMC, timber frame has got a long history in this industry, which gives people confidence and it's the system that we are using most of."

Additionally, structural timber is increasingly used as part of a trend for panellised building systems. Within this market, timber systems such as structural

insulated panels (SIPS), alongside the use of the more familiar timber frame systems, are increasingly specified and have quickly becoming a recognised solution to meet the challenges of factory controlled, speedy modern methods of construction. //

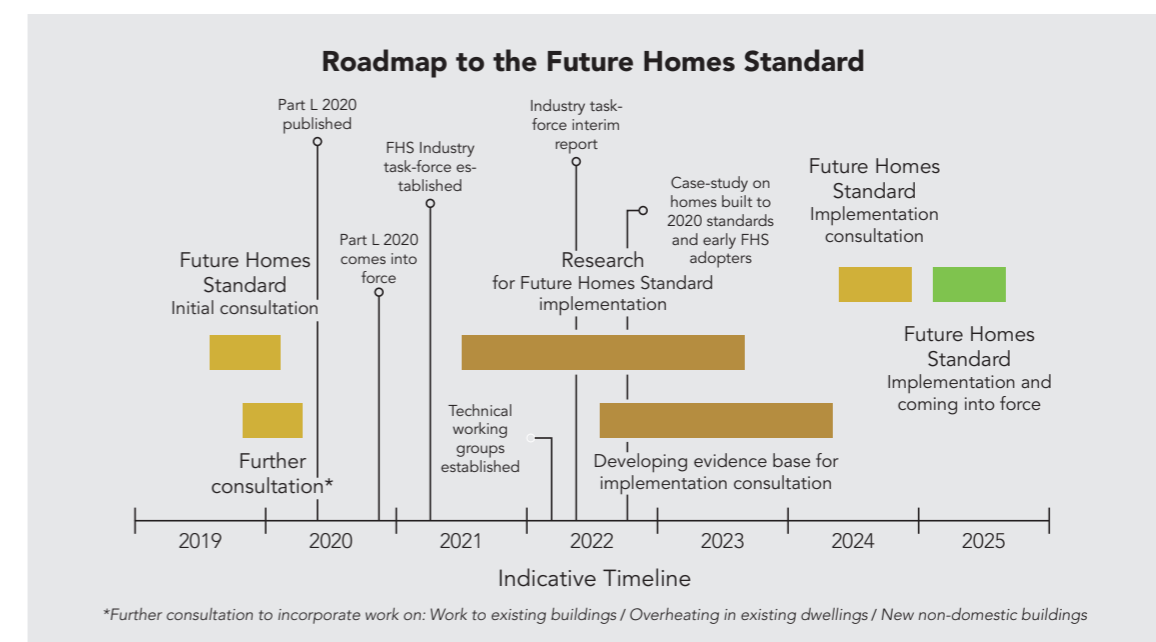


**The increased use of timber can only be a positive in that it provides a better built environment for generations to come by pushing towards a net zero economy and supports energy efficient buildings throughout their life cycle reducing carbon emissions in use.**

Structural Timber can have a significant role to play in creating a circular economy, contributing over £8.5 billion to the financial system and subsequent employment opportunities. In addition it can provide a carbon sink, enhanced health and wellbeing benefits and beyond

As such timber needs to be at the heart of construction. The increased regulatory requirements to improve energy efficiency of buildings can be met with ease when using structural timber.

A timber construction's total lifespan can be extended, to suit the flexible way we will be living in the future. In fact, many of the schemes that have been shortlisted in the Home of 2030 Government initiative, are centred around the use of timber, as a sustainable, scalable, carbon neutral material.



The Government has committed to introduce a Future Homes Standard in 2025, as part of its journey towards meeting the legal target of all the UK's greenhouse gas emissions to be net zero by 2050. It is estimated that currently new & existing homes account for ~20% of the emissions.

They expect a home built to the new standard will have 75-80% less carbon emissions than one built under the current Approved Document Part L 2013 of the Building standards. The new Approved Document Part L of the Building Regulations for England and Wales and Section 6 of the Scottish Building Standards will have a meaningful uplift towards the Future Homes Standard. The intent is to make new homes more energy efficient and to future proof those in readiness for low carbon heating systems, most notably the declining acceptability of using fossil fuel, most notably gas.

With this increasing focus on efficiency of the fabric of the building as non-fossil fuel heating systems are proposed by 2025, the use of timber frame and structural insulated panel construction can offer a good deal of external wall flexibility when the demands for high thermal insulation are required. In simple terms it is easier to fill the building envelope with insulation than filling a cavity between two traditional masonry wall skins.

As the Government, via the Ministry for Housing, Communities and Local Government (MHCLG), drive the regulatory requirement for buildings to use less and less energy to heat and cool as part of the carbon reduction of buildings in use, it can be expected that structural timber systems will be identified as a very efficient solution. Furthermore the 'fit and forget' nature of improved building fabric is already seen as a far more reliable

solution than the use of technology that requires replacement and maintenance over time to properly realise the carbon reduction benefits. Well-insulated, airtight structural timber buildings work well all year round. During the summer months daytime heat is kept out of the building through high levels of insulation within the structure - an important consideration in a country that is experiencing year-on-year temperature increases. It is often argued that traditional masonry buildings have a higher thermal mass which sees them absorb heat through the daytime, however this is built up only then to be released overnight. This means that timber buildings don't contribute to the build-up of heat to the excessive and uncomfortable night-time temperatures many people experienced in 2020 (during this year Britain experienced 16 evenings above 20 degrees).

In the winter months, structural timber buildings are quick to respond to heat as the insulation is close to the inside of the building. The high thermal mass properties of materials like concrete and bricks means that more energy is required in the initial heating process as there is loss to the heating of the structure. Without this heavy energy absorbing internal structure to heat up first, occupants in timber frame buildings benefit from a fast heating response, which results in low heating bills.

Using a truly sustainable material, offering high insulation values, quality construction and good air tightness, new structural timber buildings are well placed to meet the evolving needs of planet earth and its occupants.

Low embodied carbon and low carbon emissions from structural timber buildings in use it is clear, now is the time for timber. //



# HEALTH AND WELLBEING

**Choosing the right materials when designing a building can help the welfare of its occupants. As an organic, natural material, wood can breathe and help maintain a comfortable and healthy indoor climate.**

The use of timber in construction is known to have numerous positive effects on human health, proven in various studies. People working in environments with more wood are observed to show lowered heartbeat rates, a decreased perception of stress, decreased blood pressure and increased interaction. A closer connection to such a natural material can only help to promote a feeling of warmth, security and home and an overall sense of wellbeing. In creating safe environments, employees and an increasing number of studies point to workplaces that are more productive and have lower rates of absenteeism and sickness. With an increased awareness in the concept of biophilic design within the building industry to increase occupant connectivity to the natural environment through the use of direct nature, indirect nature, and space and place conditions, then timber is the best placed natural material to fulfil these requirements.

One environment where timber is the material of choice is in many hospitals and care facilities, where it is seen to promote mental and physical wellbeing. A high-profile example of this is Maggie's

Charity, which provides those diagnosed with cancer and their families with free practical, emotional and social support. The charity aims to promote wellbeing and bring joy to patients and the design of their clinics is a vital part of this. Picking two of the centres, Maggie's Oxford, is built entirely from engineered timber which creates a light, modern and enjoyable environment that blends with its surroundings. Maggie's Manchester, is laid out over a single storey with a natural timber structure. The use of glazing and exposed timber allows the centre to be illuminated with natural light.

In the commercial office space, the return on investment of a building can now be considered to include the occupants and calculating their reductions in sick leave and attrition. The use of timber is seen to improve the office environment, as many organisations have determined using the WELL measure from The International WELL Building Institute™ a leading the global movement to transform our buildings and communities in ways that help people thrive.

With the focus on health and wellbeing of a building's occupants, then timbers strong biophilia credentials, the affinity that we have towards the natural world, are best placed to advance the health and well-being in buildings globally. //

# THE STRUCTURAL TIMBER ASSOCIATION

**The Structural Timber Association (STA) supports and backs the Time For Timber campaign. The STA is a trade body which is heavily focussed on the provision of technical support for its 872 members. The association is committed to providing the most up to date guidance to members and clients in the use of structural timber systems. In respect of this there are over 140 documents in the STA library ranging from safe handling, sustainability, and performance, through to risk mitigation strategies.**

With an increased need focus on fire safety in construction, some key research has recently been commissioned by the STA into fire research in timber frame systems. This resulted in the publication of the first timber frame pattern book which demonstrates the fire resilience of different timber frame panel systems for

when a building is in use. This research complements the acknowledged fire mitigation process for structural timber buildings during construction, the site safe programme

In addition to this, the STA is currently undertaking the most comprehensive fire research programme on structural timber systems ever proposed. It is likely that the results will be published, as they become available, through 2020 and 2021, responding to concerns from the market on fire resistance. This investment by the industry of £750,000 is the largest undertaking ever recorded.



# FIRE RISK AND MITIGATION

**There is no denying that in using timber as the structural element to a building, there is a risk when it comes to fire, with the assumption from insurers that once the material is compromised, a lot of the building will be damaged and potentially require significant repairs.**

The Structural Timber Association has embarked for many years on a continuous improvement programme addressing concerns on the fire resistance capability of timber in construction.

These programmes address risks of timber both during construction and in use.

The STA Site safe programme recognises un-protected timber can be vulnerable to arson attacks or accidents during hot works on site. Site Safe is a process to ensure the building is constructed in accordance with 16 safety steps to mitigate risks of fire spread.

In response to concerns about structural timber buildings in use the STA has overseen, in recent years, investments close to £750k in fire research confirming timber is a safe building system when built correctly. Furthermore, in responding to

the latter, the STA introduced STA Assure, a quality and competency programme to address any risks of compartment fire failure associated with bad workmanship. Working to increase the quality in the sector, the purpose of STA Assure is to inspire confidence for all stakeholders in structural timber through an independent quality audit programme. In support of this approach, the STA has formal recognition that STA Assure accredited members (Silver or Gold) meet the warranty requirements of:

- LABC Warranty
- Premier Guarantee
- Protek Warranty
- Build-Zone Warranty
- Self-Build Zone Warranty

To further strengthen the recognition of the scheme across the housebuilding sector, the STA reached a formal agreement with the NHBC in 2019, who recognise the benefits of STA Assure. The NHBC now recognise STA Assure Silver/Gold members as compliant with the NHBC's Certification process for timber structures. //

# TIMBER FRAME COMPETENCY AWARD SCHEME

**The Timber Frame Competency Award Scheme was established as a mechanism to set an industry-wide standard for erectors and installers of structural timber frame. These training programmes are designed to promote best practice and provide tangible evidence of quality standards throughout every stage of the design and construction journey.**

The STA has turned the insurance markets opinion of the timber sector from a misconceived misunderstanding to a positive outlook, because of the innovation and best practice that STA Members operate to.

With STA Assure and the STA Erectors Structural Timber Frame Competency Award Scheme, many underwriters and insurers are advising that they are prepared

to recognise companies compliant with the scheme, as it shows good corporate governance, risk management and potential policyholders trying to mitigate their losses.

These schemes are recognition of the STA working more closely with the insurance sector, with the encouragement that there is an increasing appearance on Construction Proposal Forms from insurers actually asking for membership of the STA, and whether they are practicing within the membership guidelines. //

# CONCLUSIONS

## WHAT DO INSURERS NEED TO KNOW?

**As the use of engineered timber products increases, there is an ongoing debate from across many sectors, from the designers, contractors, building owners and users, right through to the insurance sector. As insurers are being asked more often to look at timber-based schemes, there is a requirement to evaluate the insurance premium requirements against the differing risks to those of concrete and steel frame structures.**

There are many risk factors that insurers have to consider when underwriting a structural timber construction both at the build stage, through completion and into occupancy.

Many of these risks may be common to all types of construction, while others

may stem from a lack of experience, or through understanding of the technical details as this as seen as a relatively new method of building in the UK. This new approach to building, using materials such as Cross Laminated Timber (CLT), also doesn't fit into the long-established construction classes and therefore there is a comparative lack of data to help insurers when underwriting these types of buildings.

One of the most significant concerns insurers have is around the increased risk of fire. Whilst legitimate, insurers are lagging behind in their understanding of how the latest materials and fire engineering methods are reducing this risk.

To evidence, the Structural Timber Association undertook research into this

issue. It ran multiple full-scale fire tests to EN1365 on different timber frame systems; comprising walls with insulation and plasterboard variability and even penetrations in the walls for sockets. The European standard was chosen as it is seen within the industry as the 'gold standard' of fire testing. The outcome has resulted in a robust comprehensive suite of evidence-based solutions for timber frame systems that will deliver high levels of resilience and quality of fire safety, all comfortably complying with EN Standards.

This research (along with ongoing further research) provides convincing evidence that the timber industry is leading the way when it comes to fire protection, regulatory compliance and all round best practice risk management on a construction site.

If there is a desire to support timber construction, to meet the challenges

and to help the government achieve its net zero target by 2050, then there are some elements that need to be taken into consideration to lower the premiums of a structural timber building, these may include:

- Ensuring early contractual involvement
- Bringing in insurance brokers on board as early as possible
- Selecting contractors with experience of working with structural timber
- Creating a fully formed fire/water damage plan for insurers before going on site
- Making sure that FM contractors adhere to all rules and regulations, ensuring that any 'penetrations' are re-fire stopped to maintain protections

**NOW IS THE TIME TO INVEST IN BUILDING IN TIMBER FOR THE PROSPERITY OF THE COUNTRY AND ITS RESIDENTS, FOR EMPLOYMENT, FOR THE ECONOMY AND ULTIMATELY FOR SAFEGUARDING THE ENVIRONMENT, TODAY AND TOMORROW.**



**NOW IS THE**

**#TIME FOR TIMBER**

[timefortimber.org](http://timefortimber.org)



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