SITE SAFE

STRUCTURAL TIMBER ASSOCIATION

Building offsite solutions in timber

Insurance industry guide to mass timber in UK construction

Version 1.0
January 2021

Foreword

The purpose of this paper is to provide the reader with sufficient information to better understand the use of timber in construction from a risk management perspective.

There are two markets in the sector and it is important to appreciate that not one structural timber system is used in one type of application:

- Low and medium rise buildings
- High rise and complex buildings

There are also two distinct structural timber technologies, both of which have a significant contribution to carbon reduction and the drive to Net Zero 2050:

- Mass timber systems (the focus of this guidance)
- Lightweight timber systems

A detailed explanation can be found in **Appendix B**.

The issue of climate change cannot be underestimated and is covered in more detail in **Section 4**.

The risks brought about by the lack of clarity around combustible/durable materials (specifically structural timber) in construction is also addressed.

Included in **Appendix C** are some FAQs the insurance industry often ask of the structural timber industry.

For context, the report addresses timber used as structural load-bearing elements and not timber cladding or timber building appendages, such as balconies.

It is vital when considering the risk associated with all construction materials that the design and product type has been fully considered and is suitable for its intended use. STA provide numerous guidance documents for structural timber construction to help clients and constructors alike to make those right decisions.

Timber construction is the only material that takes carbon from the atmosphere during the growth period and locks that carbon in during the life of its use. It is fundamental in the fight against climate change and cannot be overlooked when requested by clients as a preferred method of build.

Furthermore, there are strong indications that being inside a timber building can improve concentration and have a calming effect. Philip Marsh, director of dRMM architects, cites research by the University of Salford showing that a focus on "naturalness" in the design of primary schools generated a 16% enhancement in attainment:

"Extending naturalness to include the use of exposed timber in learning spaces can only enhance these outcomes as it has been shown to improve concentration and has a calming effect on occupants."

In summary

- Net Zero 2050 is a core Government objective and the UK construction industry has a key role in achieving it
- 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 Hackitt Review will have a profound and positive impact on competency in the delivery of buildings
- The property investment market is starting to demand low to net zero carbon timber buildings
- Wellbeing is of increasing importance in a highly competitive and caring employment market
- Implementation of additional risk management, via quality programmes, assures stakeholders providing insurance cover for timber construction.

I very much hope the content of this report provides clarity as to why the insurance industry can rely on structural timber systems as a safe building method

ANDREW CARPENTER
CEO Structural Timber Association

Executive summary

To simplify the navigation, this document has been broken down into six main sections:

1. **Management of structural timber projects**
2. **Risk management**
3. **Compliance**
4. **Structural timber and the built environment**
5. **Building Safety Bill 2020**
6. **STA technical document library**

Reference links are included in **Section 6**.

What are mass timber systems?

In summary, they are solid timber panels or beams constructed in multiple layers of smaller timber sections bonded together. This build-up of timber lamellas gives exceptional strength and load-bearing capabilities.

Additional information can be found in **Appendix B** of this report.

The market is served by three key suppliers of mass timber systems:

Stora Enso
HQ in Finland
Euro 10 billion overall turnover
26,000 employees
www.storaenso.com

Binderholtz
HQ in Austria
Euro 1 billion overall turnover
2,500 employees
www.binderholz.com/en-us/

KLH
HQ in Austria
Euro 80 million mass timber turnover
218 employees
www.klhuk.com

The Structural Timber Association

Representing over 800 members across the structural timber industry and associated supply chain, the Structural Timber Association (STA) has the objective to enhance quality and drive product innovation through technical guidance and research, together with growing the market for structural engineered timber systems.

The STA is the trade association representing the mass timber supply chain in the UK.

How does the supply chain work?

STA mass timber members are fully committed to driving change in the construction industry through market-leading quality assurance initiatives such as STA Assure and the fire safety Site Safe programme.

As with any construction system or technology, the building, regardless of size, needs to be designed correctly and then built by competent people to the approved designs.

By focussing on the three pillars of People, Process and Product, stakeholders can be assured that by using STA members in the delivery of structural timber buildings, quality will be best-in-class.

This commitment to quality and safety has been brought about as a result of concerns from stakeholders as to the durability and fire resilience of timber systems.

Buildings must be designed for maximum fire resilience in accordance with the UK regulatory requirements. The STA has invested heavily in extensive independent fire testing of structural timber systems (including mass timber) to European and British Standards. As a result, timber is easy to specify and backed by empirical data on performance. The testing programme results are available for interrogation by specialist fire engineers and can be employed to assess the performance of complex buildings.

Why structural timber?

The UK market has seen an extraordinary uptake of mass timber systems in recent years. As an organic, natural material wood can breathe and maintain a comfortable and healthy indoor climate.

Timber is the only construction material that sequestrates carbon from the atmosphere, resulting in true zero embodied carbon emissions.

Carbon reduction is a key aspect of the Government agenda in the road to Net Zero 2050, see **Section 4** for more detail on this complex issue.

Mass timber is supplied in large format components and sub-assemblies, the benefits of which include:

- Reduced disruption during construction through less vehicle movement
- Creates a cleaner environment during the build process
- An established supply of skilled designers, engineers and installers
- Offsite fabrication improves speed and quality of build.

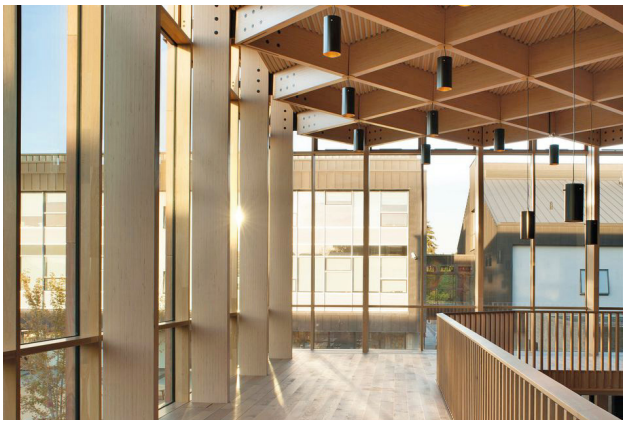
Section 1 of this report includes the RIBA Plan of Work, which sets out the build process from concept to completion.

Structural timber systems have been following the plan for many years and its use fits well with timber construction's usual practices.

With complex buildings, there is a well-established need for performance-based design, which is provided by specialist consultants, fire engineers and suppliers.

To ensure fire resilience and durability, it is important that the right building system, design and engineering are selected for the intent of the building. Mass timber is no different to concrete, steel and glass in this regard.

The eminent introduction of the Building Safety Bill is about to overhaul the construction process in terms of competency and compliance. Details of likely the impact are included in **Section 5**. The 2020 bill has served as a roadmap for the mass timber industry in developing its quality processes.



Sky head office London

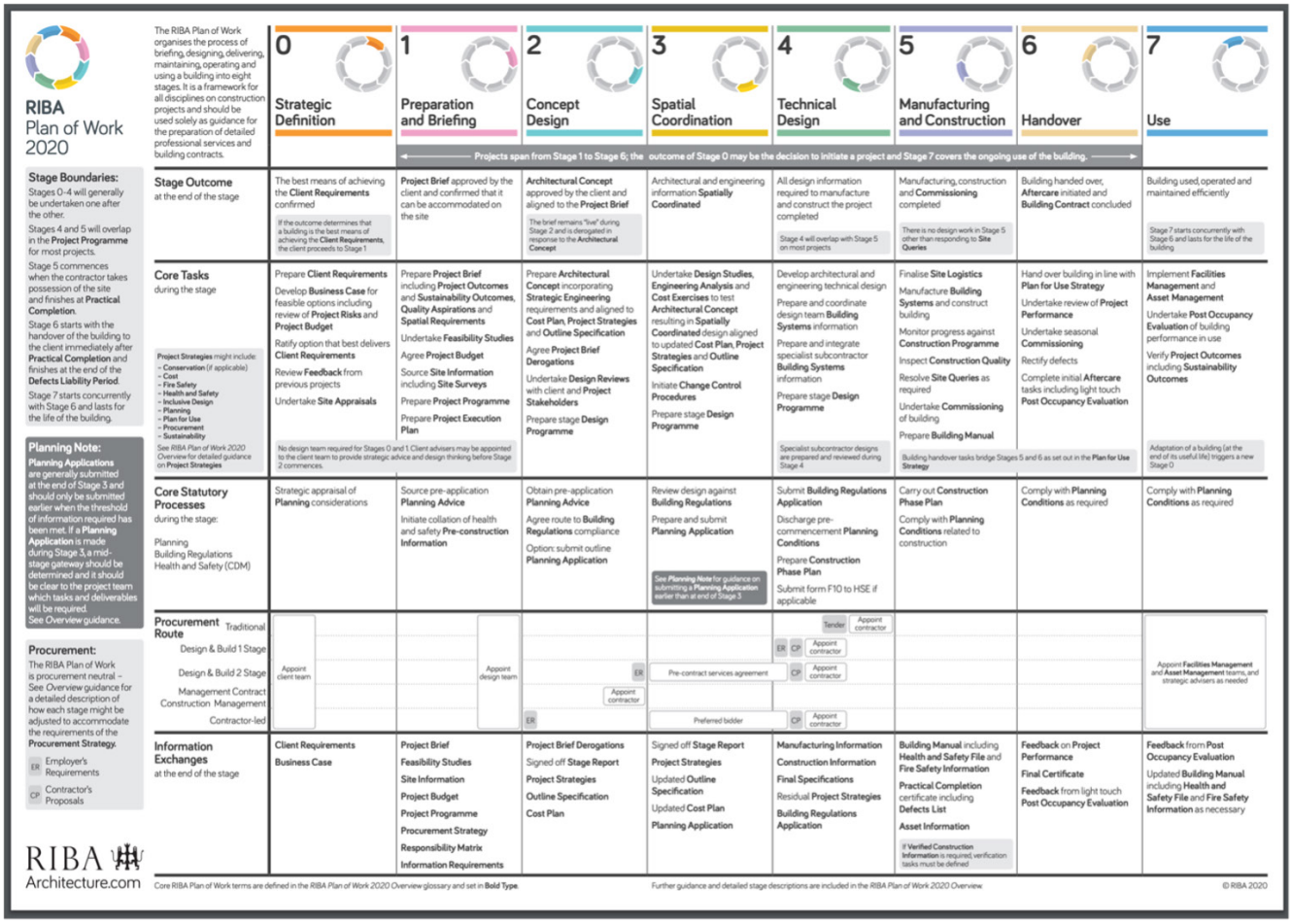
1) Management of structural timber projects

Much the same as procuring a building using any technology, a structural timber building will follow the RIBA Plan of Work. [R1]

To achieve the best and most desirable build programme, early engagement is essential. This will ensure that the design and engineering will accommodate (for example) repair to localised damage in the event of fire or water ingress.

Designed with care, most buildings will allow for the removal of damaged sections of structural timber if needed, allowing replacement and reinstatement with no detrimental impact.

Early collaboration with the insurance industry has repeatedly given much better outcomes for all parties involved.



A high-resolution PDF of the RIBA 2020 Plan of Work can be downloaded **HERE**

2) Risk management

The STA has long recognised the increased risks associated with the use of engineered timber solutions. Focus is predominantly around fire resilience and water ingress, both during construction and in use. The Association has committed its members to a quality, compliance and competency programme for many years to mitigate those risks and to engender a best practice culture.

The STA Assure programme pre-dates the Dame Judith Hackitt review undertaken by the Government following the Grenfell Tower tragedy of June 2017. It responds well to the concerns expressed at the time in relation to the construction industry's ability to confirm competency and compliance.

There are three key pillars of activity driving quality assurance within the membership of STA, which broadly align with the new Building a Safer Future, initiated by Dame Judith Hackitt and crafted by the Competence Steering Group 2020 of the Construction Industry Council (CIC): [R2].

- Competency
- Training
- Site Safe policy

The Hackitt Review highlighted the need for the construction industry to rely on actual tested data in establishing the suitability of building products in use and not the use of extrapolated data often referred to as desktop studies. Responding to this, STA commissioned extensive product testing described in the compliance section of this paper.

Competency

STA Assure is the Association's membership and quality standards scheme. [R3] Designed to benefit both clients and members, it offers reassurances by promoting the differing accreditations and quality standards held by individual STA member companies.

STA ASSURE
Defining the standard for structural timber

The scheme has received formal recognition from many of the industry's leading structural warranty and building control bodies: LABC Warranty, Premier Guarantee, Protek Warranty, Build-Zone Warranty, Self-Build Zone Warranty and ABC+ Warranty - as well as the Health and Safety Executive, the National Fire Chief Council (NFCC) and CIREG.

STA Assure mandates members to follow the quality standards put in place by the scheme and offers technical support to enable them to do so:

- Adhere to the Site Safe scheme, ensuring timber construction is both safe and sustainable
- Undergo an independent audit of their quality standards
- Receive regular updates on the latest building regulations and legislation
- Gain access to dedicated technical support service, advice notes and technical documents
- Fully support sustainable construction, quality standards and adhere to our Code of Conduct
- Ensure all installers have met the requirements of STA Timber Frame Competency Award Scheme.

Training

The STA now manages the Timber Frame Competency Award Scheme requirements alongside CITB. The training scheme improves timber frame erectors' skill levels and acknowledges the competencies of existing timber frame erectors. It supports the achievement of gaining an SVQ or NVQ in Timber Frame Erection, allowing erector/installer companies to access sites that require CSCS cards.

The scheme sets industry-wide standards for erectors and installers of structural timber frames. As part of the STA Assure quality initiative, members are required to complete three workbooks and an online test to examine practical and theory-based knowledge, which takes up to one year to complete.

2) Risk management cont.../

Site Safe policy

The award-winning Site Safe policy applies to all structural timber building system members, including manufacturers, fabricators, contractors and installers who work with principal contractors. Members are audited to ensure they are achieving the functional requirements of the Site Safe policy for sites under construction. Both the policy and the audit process have been developed over many years to support members; by following the policy they can engage with customers and assure the best project outcomes.

Included within members' Site Safe obligations is a commitment to follow STA 16 Steps. Designed to mitigate the risk of fires during construction, it includes the registration of every STA member on-site construction project with the National Fire Chief Council (NFCC).

The programme is fully endorsed by the Health and Safety Executive and CIREG.

PHASE	RESPONSIBILITY AND ACTION	EXAMPLE
Design	Principal Designer and Design team **Action** Consider the fire risk in the choice of building location, materials and process of build. ***STA 16 Steps numbers 1,2,3***	Adjust location of the building; adopt fire robust timber solutions on sensitive sites. Undertake / commission a concept or full off the site fire risk assessment.
Tender	Principal Designer and Design team **Action** Include the risk mitigation concepts for the constructor to fulfill. ***STA 16 Steps numbers 1,2,3***	Provide a concept or full off the site risk mitigation risk assessment report. STA site safe policy actions. STA 16 Steps compliance for the construction phase.
Construction: pre-site start	Principal Contractors and subcontractors **Action** Check that Steps 1 to 3 have been completed and follow or commission additional detailed fire risk assessment ***PLUS STA 16 Steps numbers 4-7***	Appoint fire safety coordinator and create fire safety plan. Appoint STA site safe companies.
Construction: during construction	Principal Contractors and subcontractors **Action** Review Steps 4 to 7 for compliance ***PLUS STA 16 Steps numbers 8-16***	Fire hazard and warning procedures implemented. STA site safe checks.
Practical completion	End of construction fire prevention	

Fig 1: STA Site Safe risk assessment

3) Compliance

Product testing for fire resilience is a key activity of the STA and its timber system manufacturing members. As an Association, the STA has taken the unprecedented step of completing a significant number of fire resilience tests on timber frame systems to EN 13165. Carried out by UKAS accredited laboratories, the tests provide the market with empirical data on the performance of systems, relating to buildings in use, and confirms they are all a safe building method.

The decision to test to European EN standards and not British Standards is consistent with the STA strategy to 'raise the bar' in terms of exceeding the regulatory requirements for performance and to build-in additional fire resilience.

The output from this programme is a series of STA Pattern Books and guidance notes to provide designers and engineers with hard data on performance-tested structural timber systems, which has been peer-reviewed by subject matter experts from the Building Research Establishment at Watford.[R4]

In addition to the STA's fire resilience tests, a significant amount of data was gained from member's own test programmes; the results of which will be collated in additional volumes of research data to be released early 2021.

Ongoing fire testing is still a key feature of STA activity, including comprehensive research into mass timber systems.

It is important to recognise that the structural timber market is separated into two distinct risk profiles:

- Low and medium rise buildings
- High rise and complex buildings

In both cases, the principal risks are broadly the same, but the mitigation strategies will differ. Typical examples of this relate to regulatory requirement on the preservation of life as determined by Building Regulations. Single occupancy buildings are expected to be clear of occupants within 30 minutes, whereas for multiple occupancy is 60 minutes.

In most cases, structural timber relies on non-combustible protection for fire resilience, utilising products such as plasterboard, which has been common practice for many years. More complex buildings designed to feature timber as the internal finish will require different mitigation strategies, which will be defined by specialist fire engineers.

STA members are fully conversant with the regulatory requirement for differing styles of buildings and are committed to regulatory compliance and the provision of empirical proof; including the installation of fire stopping products designed to limit the spread of fire within the building structure.[R3]

Resilience to moisture ingress and fire compartmentalisation centres around good design. In both cases and regardless of construction type, designers are specifically aware of the need to ensure buildings are designed to minimise the risk of fire spread and water damage. Building Regulation by means of Approved Documents addresses many of the issues in a generic form, with members relying on guidance notes from STA to provide specific details for structural timber. These issues are addressed within the STA competency programme to ensure that designers and engineers are aware of their responsibility to prevent fire spread and moisture ingress.

Equally, a feature of good design is to allow remediation of a building that has suffered damage from either fire or water. Depending on the extent of the damage, sections of a well-designed building can be replaced avoiding a total loss scenario.

4) Structural timber and the built environment

Timber, as part of the circular economy, is the safest and most effective carbon store.

Currently, the construction industry represents around 10% of total UK carbon emissions and directly contributes to a further 47%. 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.

Engineered timber solutions act as an effective carbon store when used as part of a building. When the building has reached the end of its use, this stored carbon can either be re-used as fuel or will naturally filter 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) shows that cement is the source of 4-8% of total global carbon dioxide emissions. Whereas more carbon dioxide is absorbed and stored within timber products than is emitted during its harvesting process, manufacturing and transportation combined.

When used instead of other building materials, a single cubic metre of timber will save around 0.8 tonnes of carbon dioxide emissions. With such strong green credentials, it's clear to see why so many organisations are embracing timber. Not only does the material provide strength and aesthetic beauty, it also offers an effective solution in battling climate change.

More information can be found at **www.timefortimber.org**

Timber is an organic, natural material; wood can breathe and maintain a comfortable and healthy indoor climate. Recognising this, the French government recently announced new sustainability legislation to help make the country carbon-neutral by 2050. The new law, enforceable in 2022, states all new public buildings in France are built from at least 50% timber, or other natural materials.

Health and wellbeing is front and centre for many large corporations, such as Google, in trying to attract and keep the best staff in the industry.

The use of timber in construction is known to have numerous positive effects on 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 sense of wellbeing. In creating such environments, which employees clearly favour - and an increasing number of studies point to those workplaces being more productive, with lower rates of absenteeism and sickness.

Google headquarters Kings Cross

5) Building Safety Bill 2020

The Building Safety Bill is a new piece of UK Government legislation aimed at reforming the regulations surrounding the safety of high-rise buildings in the UK. A major part of the UK Government's response to the Grenfell Tower tragedy, it is currently being scrutinised in draft form, but is expected to be brought to Parliament and be passed into legislation early 2021.

Extracted from the Building Safety Bill, the following statement makes clear the need for the construction supply chain to be able to demonstrate competency. STA Assure is at the heart of the delivery of quality structural timber systems.

Clause 6: Facilitating improvement in competence of industry and building inspectors

EFFECT

160 Clause 6 states that the Building Safety Regulator must provide assistance and encouragement to persons in the built environment industry and to registered building inspectors to facilitate improvement of competence of organisations and individuals in the industry, or members of the profession.

BACKGROUND

161 This is a new provision. The independent review recognised competence as an area where improvement was needed across the built environment sector.

A working example of this clause is provided in the Bill's accompanying explanatory notes:

Example: Functions in relation to industry competence

Under this duty the Building Safety Regulator may undertake activities such as setting the strategic direction of the competence committee (see Clause 10) to increase competence within the built environment industry, carrying out research and analysis, convening working groups, developing a communications strategy and other activities which support this duty.

For example, the Building Safety Regulator may use the insights it gains into the competence levels within the built environment industry to focus the Committee's activities on areas where additional work is most needed and can have the most impact.

The Building Safety Regulator can also develop and implement a communications plan with the industry competence committee to encourage industry's use of the competence frameworks and to highlight the legal requirements regarding competence.

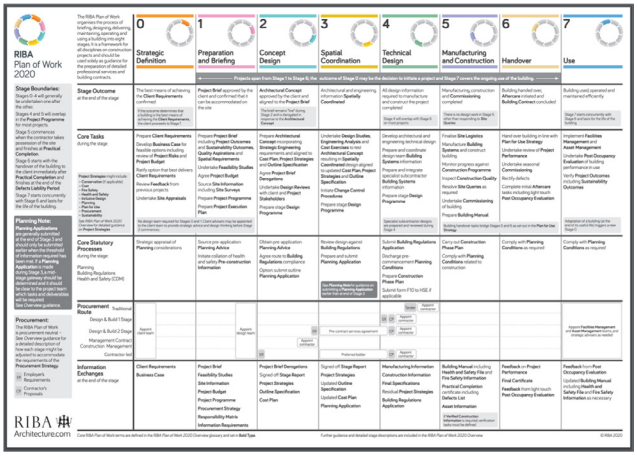
The Building Safety Regulator may work with the competence committee to share its insights from reviewing Gateway two applications containing evidence of the competence of the Principal Contractor and Principal Designer, to improve the guidance to industry.

6) STA technical document library

The STA strive to provide the most up-to-date information and technical guidance and our online library contains over 140 documents including product papers, advice notes and technical bulletins.

This library contains a wealth of information on Building Regulations and best practice principles. It is a valuable resource which can assist architects, engineers and clients who are considering specifying structural timber for projects or provide technical support during installation on site.

(R1) RIBA PLAN OF WORK



Published by the Royal Institute of British Architects (RIBA), the Plan of Work is split into several key project stages, which provides a shared framework for design and construction that offers both a process map and a management tool. Download the full plan **HERE**

(R2) SETTING THE BAR

A blueprint to improve competence for those working on higher-risk buildings, the work was initiated by the recommendations in Dame Judith Hackitt's review Building a Safer Future. Download full document **HERE**

(R3) STA INSURER RESOURCES

A section of the STA website created to service the specific needs of the insurance industry, concerning structural timber systems. Insurers can download guidance and technical document **HERE**

(R4) STA FIRE SAFETY RESEARCH DOCUMENTS

Access to the STA's fire test research and cavity barrier/fire stopping best-practice documentation **HERE**

Appendix A - Structural Timber Association (STA)

About the STA

Representing over 800 members across the structural timber industry and associated supply chain, the Structural Timber Association (STA) has an objective to enhance quality, drive product innovation through technical guidance and research together with growing the market for structural engineered timber systems.

The membership consists of members manufacturing timber frame, structural insulated panels and cross-laminated timber technologies, designers, installer/erectors, supply chain (suppliers into the structural timber industry) and associate members such as academics and governing bodies.

Structural Timber can be categorised into four principal technologies explained in **Appendix B**.

The market for structural timber is defined into two distinct risk profiles:

- Low and medium rise buildings
- High rise and complex buildings

In both cases it is the purpose of STA to provide guidance and on risk and risk mitigation.

Appendix B - structural timber systems

The principal technologies that make up the structural timber market are mass timber and lightweight timber systems.

Mass timber systems

Glued laminated timber

Glued laminated timber or glulam as it is more commonly known, is an engineered wood product, manufactured from layers of parallel timber laminations, normally Spruce or Pine. Individual laminates can be finger-jointed to produce long lengths in accordance with the requirements of BS EN 385:20013. One of the greatest advantages of glulam is that it can be manufactured in a wide variety of shapes, sizes and configurations, including beams wider than normally available.

In addition to straight prismatic sections, beams can also be single tapered, double tapered and bevelled. Curved profiles range from a simple curved beam to a complex arch configuration. Curved glulam is manufactured by bending laminates on formers before being bonded together with adhesive, clamping and curing.

Cross-laminated timber

Cross-laminated timber (CLT) is a structural two-way spanning solid wood panel product that can be used to form walls, roof and floor panels. It is produced by stacking several layers of timber, known as lamellas, at 90º to the layer below and subsequently glued to create panels of up to 24 metres in length and 2,950mm in width, which can encompass between three and seven layers.

Cross-laminated timber is now extensively used across the commercial, leisure and education construction sectors. The benefits have been widely acknowledged, but the technology has not been prolifically used in residential developments in the UK, until now. It is in medium rise developments where the advantages of CLT make it a suitable structural solution.

Appendix B - structural timber systems cont.../

Lightweight systems

Structural timber frame

Modern timber frame structures are precision-engineered, strong and durable. The build method relies on a factory manufactured timber frame as a means of structural support - carrying the loads imposed by the floors and roofs, before transmitting them to the foundations.

Timber frame currently accounts for around a quarter of all new homes being built in the UK. This build method is utilised by every sector of the construction industry including social housing providers, due to timber frame's superb environmental credentials, as well as being quick and easy to construct.

- Open panel systems are structurally engineered panels that form the inside load-bearing leaf of the external wall, comprising studs, rails, sheathing on one face and a breather membrane. Panels are made from treated soft wood timber framing, over which a structural sheet material of either ply or OSB board is fixed.
- Closed panels are made from studs, rails and insulation, with sheathings and/or linings on the faces of the panel. A vapour barrier is also provided on the warm side of the insulation and a breather membrane on the outer face. Closed panels may also include fitted windows and internal service zone battens for ease of construction.

Structural insulated panels (SIP)

Structural insulated panels are an advanced method of construction, exploiting composite panel techniques, delivering excellent structural and thermal characteristics in one system. SIPS have two parallel faces, usually oriented strand board (OSB), sandwiching a rigid core of expanded polystyrene or polyurethane (PUR) foam.

The result is a lightweight system which is quick to erect and free from the complications of thermal bridging often associated with other forms of construction.

There are two fundamental applications for SIPs: a full structural wrap or infill walling. In all cases the product will be engineered for load-bearing capability, racking resistance and wind-loading requirements.

- Infill walling SIPS are often specified as infill to steel, concrete or engineered timber structural frames and can sit inside or outside the frame itself. Infill walling is incredibly quick to install, making it an innovative solution for high-rise residential applications to deliver a rapid dry building envelope.
- Full structural insulated panels systems can be designed and engineered to form a loadbearing full structural.

Appendix C - insurance underwriter FAQs

Q	A
In the event of partial damage caused by fire, at what point is the building likely to have to be demolished or significantly deconstructed to replace damaged structural elements?	This will depend on the compartmentalisation of the building and the extent of the damage occurred. Early involvement with the project would provide an opportunity to establish the criteria during design.
What are the 'repairability' factors?	Mass timber buildings can be designed to 'notch and replace' sections of the structure if damage occurs.
To what extent does a hybrid construction alter these dynamics?	A hybrid building would be unaffected as both timber and steel working structurally together will be designed and engineered accordingly. In both cases, the material may be adversely affected by fire damage and will need to be replaced. How this is carried out will be subject to the extent of damage and design of the building.
To what extent does the design take into account being able to repair, noting that it has to consider the mitigation design for the structure not to collapse in the event of a fire?	As with all buildings, it is typical that mass timber buildings are designed to accommodate disproportional collapse as defined by BS EN-1991-1-7:2006.
Are timber elements routinely treated with fire retardant sprays? Please explain.	No. Timber is mostly encapsulated by non-combustible material such as plasterboard. Where the timber is left exposed the resistance to fire will be assessed by a competent fire engineer and designed in accordance with UK regulatory requirements.
What are the typical lead times to replace long span structural timber elements?	This will vary between supplies but typically the supply chain is very focused on getting the building operational as quickly as possible. Lead time is expressed in weeks following confirmation of the design and engineering.
How are timber materials stored on and offsite site in with consideration to: • Exposure to weather (precipitation/frost/sunlight etc)? • Potential fire that can spread to the materials already constructed?	Panels are protected using appropriate fire-retardant sheeting materials with emphasis on those areas more susceptible to moisture. Brush applied temporary end-grain sealers are also used for the underside of walls/half laps on floors and roofs and around window openings. See STA 16 Steps, as referenced in **Section 2** of this report.
In the event of internal water leakage, or inundation of water, how does structural timber perform?	The key is early interaction. It is important to design in early warning/tell tales. Assuming it's not left too long undetected it can be dried/ventilated and tested regularly to monitor drying and a return to an acceptable moisture content (below 18%).
Are there any special/additional considerations regarding internal partitioning within mass timber structures? If so, does this alter with hybrid buildings or with structures over a certain number of stories?	Many internal walls can be used for load-bearing and stability. These need to be designed to perform in a fire situation. Non-load bearing walls must have deflection heads to avoid the load being transferred to these elements. Some clients elect to have stud and plasterboard for internal partitions for cost and future flexibility reasons.
Using the Nottingham University fire in 2014; what lessons have been learned and addressed? The fire is believed to have been caused by an electrical fault in the temporary power supply but accelerated by the additional ventilation due to the lack of fire doors and windows being fitted.	Risks are now mitigated by following the separation distance guidelines. Introducing compartments early in the build process is key. Temporary fire doors/fire stopping etc. and following STA 16 Steps. For example, contractors not charging battery-operated mobile platforms overnight to reduce the risk.
Are all mass timber projects required to be fully sprinklered? If so, at what point does this change when constructing a hybrid?	Not all mass timber projects require sprinklers. Each complex building is assessed by a qualified fire engineer as to the need for such requirements.

Appendix D - STA activity

The following matrix is a summary of the activity carried out by STA in the pursuit of 'Raising the Bar', aligned with the Dame Judith Hackitt review.

STA ACTIVITY	WHY WE DO IT	IMPACT
STA Assure	Evidence that STA members are competent and capable	People
Timber Frame Competency Awards scheme	Ensures members are trained to use best practice guidance	People
Design and Engineering workbooks	Ensures members are trained to use best practice guidance	People
NVQ/SVQ	Ensures members are trained to use best practice guidance	People
CLT fire testing	Structural timber is easy to specify, backed by empirical data on performance	Product
Timber frame fire testing	Structural timber is easy to specify, backed by empirical data on performance	Product
SIPs fire testing	Structural timber is easy to specify, backed by empirical data on performance	Product
Guidance and technical notes	Aligns standards and guidelines to ensure consistent and usable best practice guidance	Process
Site Safe registration process	Ensures all structural timber projects are registered, prior to commencement, with the local fire officer	Process
STA 16 Steps	Ensures all structural timber projects under construction are protected against the spread of fire	Process
Time for timber campaign	Provides context to the role timber has in construction and climate change	Promotion

Fig 2: Association activity

STA are fully committed to driving change in the construction industry through market-leading initiatives such as STA Assure and Site Safe Programmes. By focussing on the four pillars below stakeholders can be assured that by using STA members in the delivery of SIPs buildings, the quality will be best in class.

People = training Product

Product = best practice

Process = audit check

Promotion = wider education

It is vital when considering risk associated with all/any construction material that the design and product type has been fully considered as suitable for the purpose in which its use is intended. STA provide numerous guidance documents.

Head office

Structural Timber Association
The e-Centre
Cooperage Way
Alloa
FK10 3LP

t: 01259 272140
f: 01259 272141
e: office@structuraltimber.co.uk
w: www.structuraltimber.co.uk