LOWFIELD
TIMBER FRAMES

House of Commons Environmental Audit Committee Inquiry

-Sustainable Timber and Deforestation

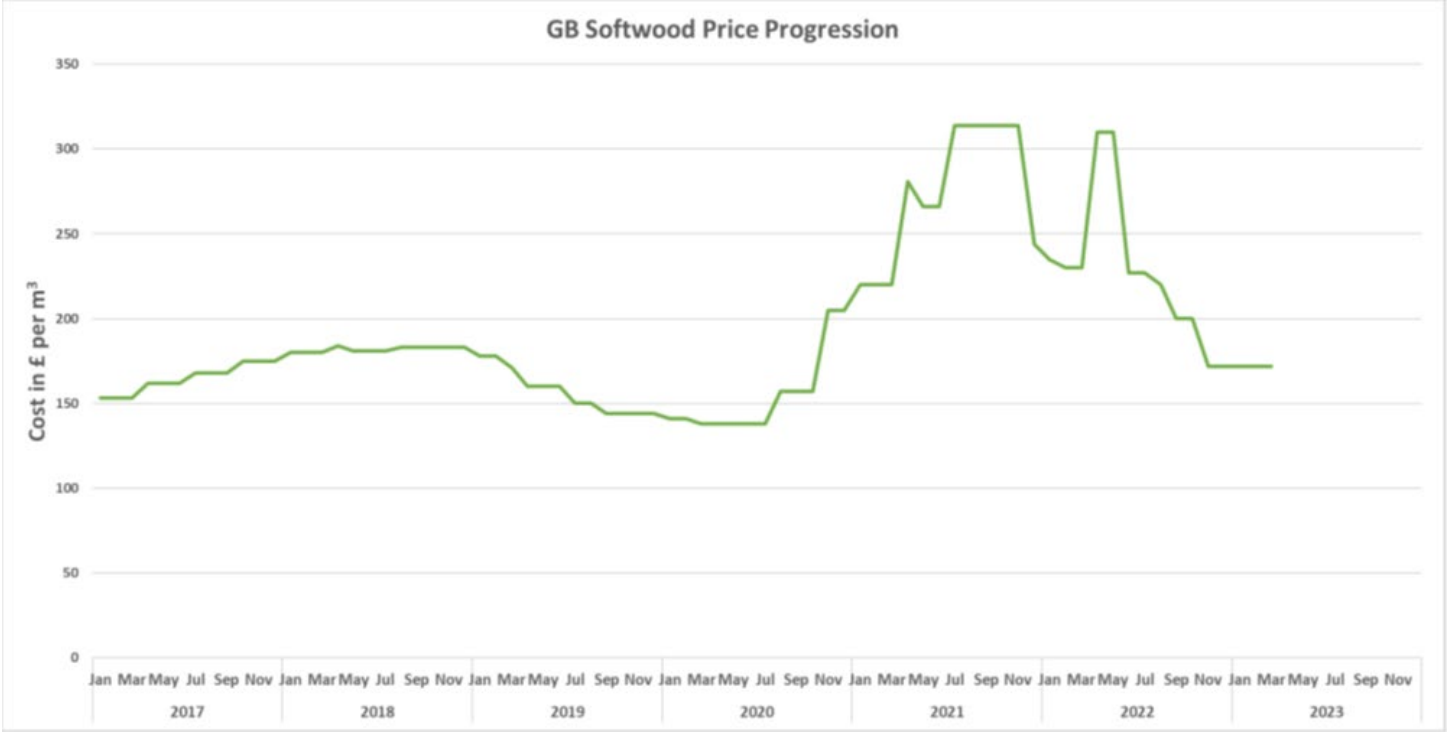
Price and availability of timber supply

- Most structural grade timber in the UK construction industry (CLS/C16/C24) is imported from Scandinavian countries.
- Raw material and production costs will be calculated by the producing sawmills and sold to the Country prepared to pay the highest price.
- Other considerations that determine the destination of timber include historical and reliable trading partnerships, shipping logistics and exchange rate.

The Covid pandemic had a huge influence on timber price and availability.

- Timber mills initially shut down due to Covid, but many sites in the UK stayed open, depleting the timber on the ground.
- The construction industry returned much quicker than expected, which also coincided with the annual shutdown of the mills.
- A warm summer led to an increased demand as DIY'ers creating outdoor spaces during lockdown.
- The global market was affected as the US started purchasing European timber. This was at a significantly higher rate than importers could get in the UK, so shipments were sent across the Atlantic.

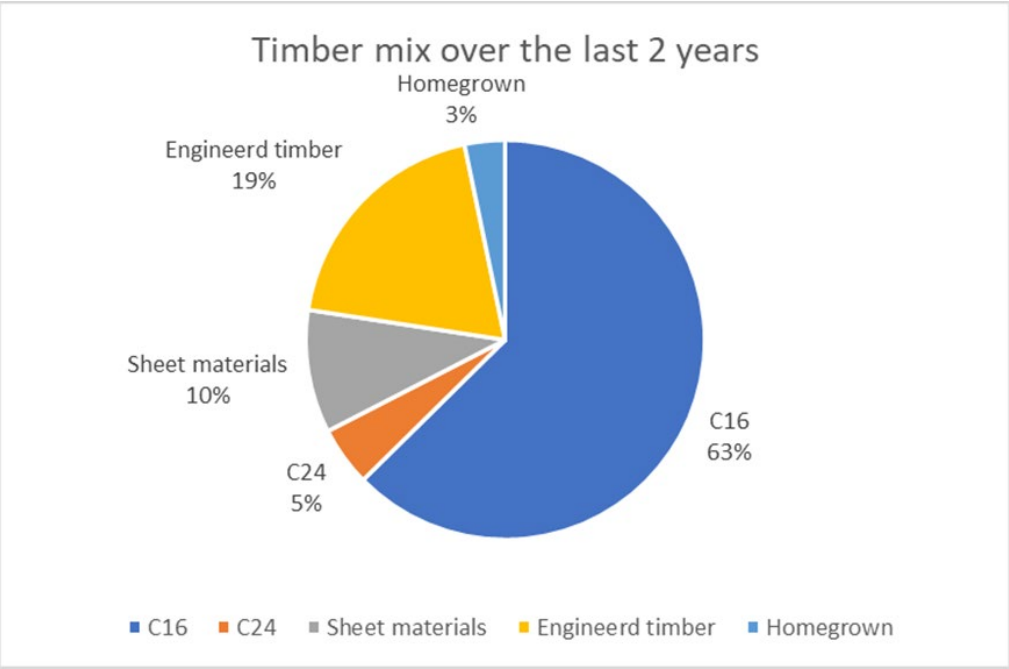
- Ideally cheaper to balance additional time and waste, home-grown timber must at least follow the trend of imported timber, unless incentives are put in place.
- It’s extremely difficult for smaller sawmills with an inferior raw material to achieve the economy of scale of some of the larger Scandinavian/European producers.
- Availability of Imported timber should remain high, but at times a higher price may need to be paid to secure the supply.
- Global demand is set to rise, and the UK market will need to be prepared to pay the going rate.
- Without incentives, native producers will not increase their production, especially for construction grad timber. The highest value / yield will be in fencing etc.
- Incentives are needed to ensure this additional volume is directed towards the construction industry, where the carbon capture will assist the Net-Zero agenda.



Source of raw material between: England/Wales/Imports

- Over 90% of the C16 used in the construction industry is currently imported.
- This is something which could be produced in the UK if the correct incentives and policies are put in place.
- Lowfield Timber Frames are certified under PEFC (The Programme for the Endorsement of Forest Certification).
- This ensures the timber we buy doesn't have a negative effect on global deforestation but is managed for future generations.

PEFC 16-37-820



❑ 39,000 m3 of C16	**610 loads**
❑ 3,000 m3 of C24	**47 loads**
❑ 6,200 m3 of Sheet Materials	**97 loads**
❑ (OSB, Plywood, Decking)	
❑ 12,000 m3 of Engineered timber	**188 loads**
❑ (I-Joists, Glulam, LVL)	
❑ 2,000 m3 of Home-grown timber	**32 loads**
❑ (C16, Battens)	

Loads = Artic Lorry Loads

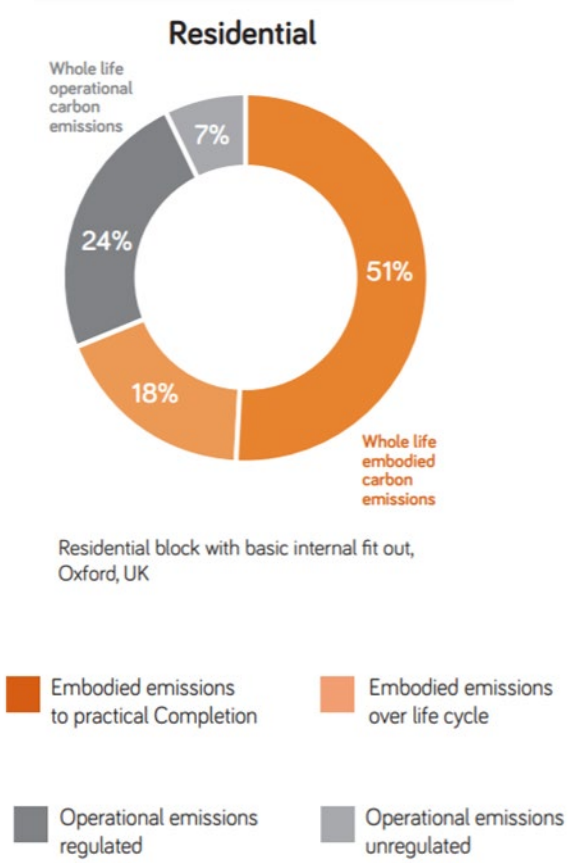
- EPDs highlight processing and transportation as having the main impact on carbon footprint.
- Scandinavian mills have invested heavily in the use of renewable energy, reducing their CO2 emissions.
- Currently less embodied carbon when buying from Scandinavia. Plenty of room for improvements with Native processing.

Shape of U.K. market

- NHBC suggest that the timber frame market share has developed from 19% in 2015 to 22% in 2021 and that market conditions present the opportunity for this to develop to circa 27% by the end of the 2025.
- The STA suggest that it has the potential to more than double in size over the next 25 years.
- More blue-chip organisations' are investing in their own timber frame factories, or purchasing existing manufacturers.
- Countryside Properties, Vistry, Persimmon, Taylor Wimpy, Barratt, Miller Homes and Crest Nicholson all have their own factories.
- Without truly understanding the incentives available, smaller manufacturers find it difficult to innovate.
- With more national housebuilders and Registered Social Landlords (RSLs) having their own timber frames facilities, a clearer pathway may evolve.
- Many sectors such as care homes, hotels and student accommodation have move away due to fire regulations in high-rise.
- Education is a big part of our portfolio. Government's 10-year school rebuilding programme, promoting greener projects to help meet the net zero targets.
- In the past 3 years, we have successfully delivered 6 new schools, 4 achieving Passivhaus certification. Clients are valuing net-zero aspirations first and foremost.

How you see the changes in regulations impacting on the products you supply

- Focus seems to be on operational carbon over embodied carbon. Businesses promoting net-zero homes, but merely in terms of operational energy.
- Almost 50% of the carbon footprint of a building goes into the construction phase.
- Regulation targeting operational carbon via SAP and an EPC A rating.
- We need to adopt a Fabric First approach, promoting materials with low embodied carbon to meet net-zero aspirations.
- Sustainable and renewable materials and can achieve low-embodied carbon targets advocated by RIBA.
- This approach goes against Dame Judith Hackitt's 'Building a Safer Future' report published in 2018.
- Following Grenfell, the 'Building Safety Bill' intendeds 'to create lasting generational change' to the way high risk and residential buildings are constructed. This steering people away from timber frame and combustible materials.
- Fire regulations will limit the use of timber in certain areas and Insulation products need a full review.
- Natural insulations with low embodied carbon generally have a poor fire classification.
- As in Education buildings, incentives for true, low embodied carbon build methods needs to be the key driver.
- Government seems to favour incentivising MMC in social housing and especially PMV.



Type of wood needed and whether this can be sourced in UK

- The major species used for UK construction timber is European Whitewood.
- The maximum strength grade commercially achievable from the UK is C16.
- Home-grown timber has the stigma of being sub-standard compared to Imported Timber.
- C16, home-grown timber is fit for purpose for use as structural sawnwood in panelised timber construction – but there is no incentive for its use in England.
- Welsh Government now provide a 10% uplift in grant level if home-grown timber is used in social housing.
- They are also investigating the sales policies for timber from the Welsh Government Woodland Estate (WGWE) to encourage greater use in construction.
- The section size produced will also have an impact on the success of home-grown timber.
- Insulation levels have reached a ceiling and air tightness and thermal bridging needs addressed.
- The cross section of structural timbers could switch from 38x140 (5320mm2) to 45x95 (4275mm2), alleviating the stability issues of home-grown timber.
- Engineered timber could be one area where the home-grown market could prosper with proper investment.
- Fire tests with different timber sizes and insulation types could give the home-grown timber industry a route to market.
- There needs to be better education about the risks associated with combustibility, especially in low-rise.

Challenges you face for the future

Source of supply of raw material –

- As things currently stand, we don't see supply being a major issue moving forward.
- Clearly the pandemic had a huge influence on the global economy, and this could obviously happen again.
- The war in Ukraine is also extremely worrying. Heaven forbid the war expands into Europe, the situation may change.

Workforce –

- Migrant workforce leaving the UK following Brexit has had an impact.
- Adopting a more automated factory set-up would help, but such a move would be very costly, and it would limit our ability it innovate.

Energy costs –

- Our waste is turned into a positive contributor to the business.
- A Ranheat 360KW biomass boiler converts our factory off-cuts into heating and hot water for our whole site.
- A Jenson 1MW boiler also takes our excess factory and site waste and puts electricity back into the grid.
- The generated heat goes into the drying of virgin woodchip which is obtained from forestry thinnings locally and sold onto consumes requiring biomass fuel.
- This process has virtually eliminated all timber waste going to landfill. Incentivising this approach through procurement would help reach net-zero targets.
- With the price of energy soaring, we are also investigating the viability of other renewable technologies, namely solar and wind.

Suggested recommendations for the inquiry

1. Introduce legislation to encourage timber construction – e.g. wood first (France), embodied carbon reduction (Netherlands), payment for carbon storage (Germany), increased social housing grant levels (Wales)

2. Introduce legislation to encourage the use of local or home-grown timber in construction.

3. Incentivise innovation in the timber construction sector through targeted financial incentives.

4. Support the production of timber components (Wood fibre insulation, I beams, glulam, CLT, timber windows) through targeted incentives.

5. Encourage afforestation, the planting of conifers and the management for higher value applications.

6. In terms of housing policy, ease off on MMC policies and focus instead upon higher fabric performance, reduced embodied carbon and standardisation

7. Support innovators in the timber construction industry to meet the new insurance/warranty requirements in a post-Grenfell risk environment as the risks associated with doing new things using timber (in particular related to fire and water) need managing.