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UNLOCKING THE FULL POTENTIAL OF OFFSITE MANUFACTURED TIMBER HOUSING IN WALES: THE CHALLENGE OF TIMBER PRICE VOLATILITY

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This briefing paper has been prepared following discussions within the Woodknowledge Wales Timber Frame Manufacturers Group. The purpose of the group is to better understand and address the barriers to sector development. The group currently consists of Ashdown Construction Group, Castleoak, Fforest Timber Engineering, Kenton Jones, Lowfield Timber Frames, PYC Construction, Roe Timber Frame, SO Modular, TRJ and Williams Homes.

PURPOSE

Unprecedented price volatility of timber is constraining the development of the timber frame manufacturing sector. This threatens the delivery of Welsh Government's affordable housing, MMC and zero carbon strategies. The purpose of this paper is to highlight issues of concern and offer first ideas to develop potential solutions.

CONTEXT

A massive spike in global construction softwood prices as seen over recent months negatively impacts the price competitiveness of timber-based low carbon build systems. It loads greater financial risk onto the timber manufacturing sector, an industry that already operates at extremely low margins.

This dramatic price increase is caused by a combination of disrupting factors both medium term (Covid-19 and Brexit) and long-term (climate change) which means that extreme international price volatility may become the new normal.

1. Catalysed by a combination of anthropogenic drivers, waves of novel pathogens are migrating

across the planet and becoming endemic in new geographical zones. This includes both animal and plant pathogens which jump between species thus increasing their scope for survival.

2. Global warming is affecting timber extraction in northern climate zones where cold winters are necessary to create the frozen ground conditions for wheeled extraction machinery to operate efficiently.

3. Lengthening periods of summer droughts are disproportionately affecting large areas of forests in both hot and cold climate zones. This has enabled massive spread of bark beetles in Canada, Siberia, Australia and Central Europe. For example, 240 million m³ of beetle infested softwood will be harvested in Germany in the next 4 years leading to temporary conifer sawlog oversupply. However, we believe that the ability to increase sawnwood production is constrained by existing sawmill capacity.

4. Droughts combined with lightning strikes and inconsiderate human behaviour have exacerbated incidence of forest fires in both plantation and semi-natural old growth forests.

5. Lockdowns with concomitant focus on immediate domestic environs means that Covid-19 has caused a massive spike in demand for softwood products used in home and garden improvements. Counterintuitively, USA housing starts have increased significantly driving US lumber markets.

7. Additional to US softwood pricing, increased demand in the UK for pallet wood, fencing and amenity products (such as decking) has negative impacts on supply of homegrown C16 softwood as

sawmillers focus on non-strength graded timber products with higher profit margins.

8. 'Exceptionally high global demand for timber, as its carbon storage potential in construction is grasped and embraced across construction, combined with supply pipeline restrictions, are motivating pricing upwards: demand is outstripping current production capacity.' TTF May 2021.

9. 'Brexit-related factors are also affecting the ability of importers to import. Around 80% of the softwood used in Britain's building, fit-out and refurbishment sectors comes in from countries in the European Union and further afield on the Continent. This rises to around 90% in new-build housing.' TTF May 2021.

10. 'The situation for buyers, both on upward price trajectories and on tight supplies, is thus unlikely to change at any time in the near future.' TTF May 2021.

11. Supply of homegrown machine strength graded C16 construction softwood in England and Wales is constrained by the limited processing capacity available south of Carlisle; only two larger sawmills can supply British C16 softwoods, despite an increasing demand for this homegrown construction timber.

EXPERIENCES FROM WELSH MANUFACTURERS

The following quotes demonstrate the challenges faced by Welsh timber frame manufacturers due to high price volatility:

'In the 12-month period from the end of June 2020 to the end of June 2021, timber prices will have risen by 107% over certain product lines.'

'Lead-times for homegrown timber has increased to 14 weeks and prices can only be confirmed on delivery. This leads to nervousness to commit from both the manufacturers and the clients alike.'

'Many main contractors who have established a strong allegiance to timber frame over the past 10 – 15 years are reverting to brick and block build methods due to the volatility in material price and availability. This is possible at present as the

specifications being requested are not onerous enough.'

'The potential to innovate is being extremely hampered as higher performing sheet materials are being shelved to try and cope with the demand for run of the mill products such as OSB and Plywood.'

'The design and build procurement route is still driving cheapest price, and with Housing Associations and Local Authorities still looking for fixed price contracts. It's almost impossible to confidently predict what will happen from placement of order to first delivery to site, which is generally 8 – 10 weeks.'

CONCLUSIONS

An unprecedented combination of factors has caused a massive spike in construction softwood prices globally which is constraining the development of the timber frame manufacturing sector and thereby threatens the delivery of Welsh Government's affordable housing, MMC and zero carbon strategies. The current increase in timber price shows no sign in abating and underlines the problem of the UK's massive over-reliance on imported construction timber.

RECOMMENDATIONS

As a long-term solution to help reduce our over-reliance on imports there needs to be a substantial tree planting programme so that our forecast production will, as a minimum, match our forecast consumption e.g. an approximate doubling of Welsh timber output.

However, the new Natural Resources Wales (NRW) [Timber Sales and Marketing Plan](#) (TSMP) for 2021 to 2026 provides an opportunity for change, as it allows NRW to consider a triple bottom line alternative sales approach for up to 30% of the output. We believe that this provides an opportunity for Welsh Government to help mitigate international price uncertainty by supplying its timber in a way that better supports the strategic development of Welsh industry in general and the Welsh timber manufacturing sector in particular.