

case study to investigate the life cycle carbon emissions and carbon storage capacity of a cross laminated timber, multi-storey residential building.

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ABSTRACT

Forests are a store of carbon and an eco-system that continually removes carbon dioxide from the atmosphere. If they are sustainably managed, the carbon store can be maintained or increased, while the trees removed and converted to timber products can fix and long term carbon store. The total carbon store in the forest and associated products therefore increases over time, given appropriate management. This increasing store can be further enhanced with afforestation. The UK's forest area has increased since the early 1990s, although the rate of increase has declined since its peak in 2006, and it is a smaller picture in the rest of Europe. The increased sustainability in construction is a key market incentive for afforestation, which can make a significant contribution to reducing carbon emissions. The case study presented in this paper states the carbon benefits of a Cross Laminated Timber (CLT) solution for a multi-storey residential building.

A Case Study to Investigate the Life Cycle Carbon Emissions and Carbon Storage Capacity of a Cross Laminated Timber, Multi-Storey Residential Building

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