

Carbon hauling carbon

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Back in 2013, carbon emissions and related climate change were becoming a priority issue for society and the Timber Transport Forum thought that it was time to quickly get a handle on the carbon footprint of timber transport. Society is finally catching up and both the Scottish and Westminster Governments have recognised there is a climate emergency with challenges for us all on how it is addressed.

Forestry, of course, is seen as one of the saviours and there are calls for more ambitious targets for new planting to soak up the carbon emissions from other sectors. Trees absorb carbon and mills are increasingly low carbon, burning biomass residue to help heat and power their processes. Sawn timber and board products sequester carbon for the lifetime of the products and can enter the biomass fuel supply chain thereafter. In addition, timber can displace more energy costly materials such as concrete and steel. So far, so good.

Timber haulage, however, remains stubbornly reliant on diesel. With a timber wagon delivering around six miles per gallon we are burning fossil carbon to haul wet logs (with much the same weight in water) across the country from forest to mill. Rail and coastal shipping can play a part in reducing emissions, but road haulage will continue to be required for the large major-



ity of timber movements.

The Forum's 2013 carbon footprint study was thorough – it took account of the fuel used by lorries on different types of road but also; the fossil fuel energy being used to manufacture and maintain vehicles, the energy cost of tyres over the life of the vehicle and the energy used to construct or maintain a typical density of forest and public roads. It then put the timber transport element in context looking at the whole forest and timber lifecycle from ground preparation and planting, through timber processing, retailing to end users and ultimately the end use, recycling and end of life scenarios for timber.

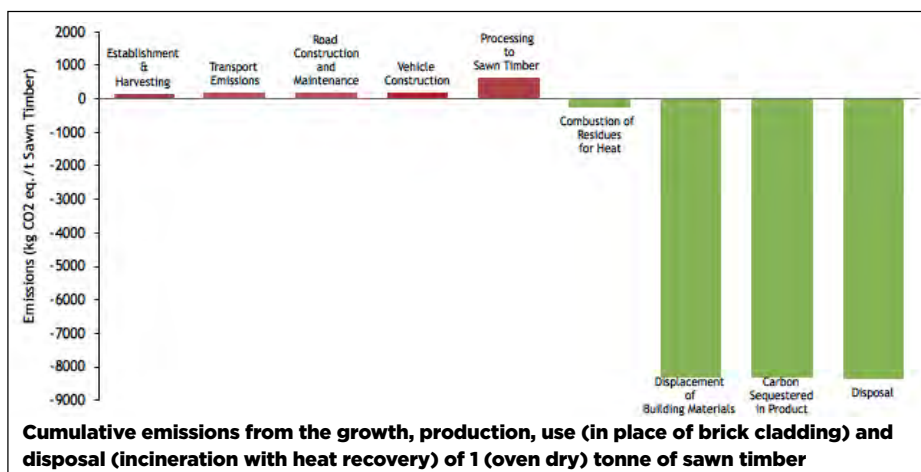
What became apparent through the carbon footprint study was, that although haulage was the largest carbon emitting processes in the supply chain, timber transport emissions are relatively small, accounting for only 6% of the emissions arising from producing one tonne of sawn timber and 15% for producing one tonne of biomass fuel. We also took some comfort that we were contributing to an overall very beneficial supply chain.

In the wider world there have been emission reductions in many sectors, through

energy efficiency and renewable energy supplies and now even car manufacturing is finally starting to move to electric at scale. Heavy freight however is the last bastion of diesel with transport generally being the one sector that has made little headway in reducing emissions.

Quite which way heavy haulage will go remains up for discussion. LPG gas (rather than diesel) engines provide a currently viable route to reducing emissions. TESLA has produced an electric 'semi' truck and Volvo has recently created an electric [shipping] container-carrying lorry prototype, but the weight of the battery reduces load capacity and range and, besides, where are you going to plug your lorry in? On YouTube you will find examples of electrified roads and tram-like electric motorway approaches to charging lorries en route. Hydrogen may be an answer in some places using the over-supply of renewable energy production capacity compared with grid capacity in some areas to produce hydrogen as a fuel for trucks. The technology is straightforward with hydrogen-fuelled buses already being used in the UK. The supply and fuelling infrastructure would need to be developed.

It may all seem somewhat futuristic but the age of diesel is waning and investment in research and development is going towards decarbonised transport. Timber transport will, as ever, need to adapt.



EVENT

We hope to address this and other issues at the 2020 Timber Transport Conference which will be held at the North Lakes Hotel in Penrith on 20 March 2020. Details and links to the carbon footprint study can be found at <https://timbertransportforum.org.uk>