

Neil Parish MP
Chair of the EFRA committee
Houses of Parliament
London
SW1A 0AA

13 October 2021

Dear Mr Parish,

Tree Planting and Woodlands inquiry

During the most recent evidence session for the Tree planting and Woodland inquiry, on 14 September, Tony Juniper, Chair at Natural England, made some statements during his evidence for which Confor requires additional evidence to be provided to ensure the committee has all the relevant facts available to it.

Mr Juniper stated that

“...long term, the best carbon storage we are going to get is from native woodlands, comprised of broadleaf species.”

The issue of the type of woodland that delivers the best results in terms of carbon storage or wider carbon reduction benefit has been widely debated. However, key to answering the question of what type of forest provides the greatest carbon benefit, is the timeframe used and whether to include carbon impacts beyond the forest.

From the evidence that Confor has seen, prepared by Forest Research who advise the UK and devolved governments, it is productive forestry, which includes a high proportion of fast-growing conifers, that has the greatest overall benefit in terms of reducing carbon in the atmosphere. This is especially true if the aim is to reduce emissions in the coming decades, not a much longer time period.

Mr Juniper’s statement would be correct if the aim was to measure only the carbon stored in a planted new woodland and the timeframe is hundreds of years, i.e., not the coming decades where we need to act urgently to avoid damaging climate change. In such a specific set of circumstances, the evidence does show that more carbon will be stored in a native woodland where there is no harvesting of trees than in a sustainably managed productive woodland where trees are harvested.

However, it is important to note that the climate crisis requires more urgent action and the Government’s net zero target is set for 2050. This requires mitigation strategies that can deliver results more rapidly. When it comes to trees that sequester carbon in a shorter time frame, conifers have the advantage of fast growth over broadleaves. Additionally, they have the benefit of storage in wood products and substituting for carbon-heavy products like brick, steel and concrete.

A 2015 study produced by Sandy Greig¹, a member of the Forestry Commission's Carbon Advisory Group, highlighted the disparity between broadleaf and productive plantations in carbon storage terms. Eskdalemuir Forest in southern Scotland provides a good source of comparison between productive and native woodland as it is composed of productive conifers (harvested after 40 years) and native broadleaf species (in addition to Scots pine). The evidence from Eskdalemuir shows that in the first ten years, conifers store 2.2 tonnes of carbon per hectare per annum versus 1.9 tonnes per hectare per annum for broadleaves. For conifers, this increases to 16.8 tonnes per hectare per annum in the second decade (versus 13.4 tonnes for broadleaves) and to 24.8 tonnes in the fourth decade (when broadleaves reach 10.2 tonnes).

A study from Bangor University's School of Natural Sciences² published online by *Nature* in June 2021 offers new important information about the decarbonisation capacity of productive woodland. Eilidh Forster and Professor John Healy investigated different scenarios to identify the best tree strategy for greenhouse gases mitigation over the 100-year period to 2120. The strategy based on productive conifers produced decarbonisation up to 269% higher than that obtained from native broadleaf woodland. As the study looked at the whole lifecycle of the tree, it found that, in addition to the quantity absorbed while standing, each hectare of productive conifers would store 1,700 tonnes of carbon through the resulting harvested wood products (HWP). HWP would contribute to decarbonise other sectors of the economy by displacing high carbon materials while continuing to store the absorbed carbon. According to the author, when a shorter time period is applied the results are broadly the same.

At this point I would note that critics of the industry often seek to imply that much if not most domestically grown wood is burnt for energy, thereby trying to underplay its carbon benefit. The evidence³ shows that this claim is not true. Over 60% of harvested softwood (from conifers) is sent to a sawmill, while almost all harvested hardwood (from broadleaved trees) goes to energy. Of the remaining softwood less than 40% of that goes to energy.

Confor supports the principle of the right tree in the right place and, I would add, for the right purpose. Native woodland is excellent for biodiversity and part of the UK's heritage; however, when considering the best kind of trees for carbon in the short to medium term, the evidence is strongly in favour of conifers and productive woodland. As a report⁴ that Confor produced shows, they also provide significant biodiversity benefit and, because they are managed and wood is harvested, there is also significant jobs benefit contributing to local, mainly rural economies. As the world needs and uses more wood, we also need to take more responsibility for producing our own supplies of wood.

¹ Greig, S. (2015) *A long term carbon account for forestry at Eskdalemuir*. Accessible here: <https://www.confor.org.uk/media/247010/eskdalemuir-carbon-full-report-june-2018.pdf>

² Forster, E.J., Healey, J.R., Dymond, C. *et al.* (2021) Commercial afforestation can deliver effective climate change mitigation under multiple decarbonisation pathways. *Nat Commun* **12**, 3831 (2021). <https://doi.org/10.1038/s41467-021-24084-x>

³ <https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/forestry-statistics-2020/2-timber/>

⁴ <https://www.confor.org.uk/media/247794/confor-biodiversity-forestry-report.pdf>



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All types of woodland have a vital role to play in addressing the climate crisis we face, but there are wider advantages and a greater carbon benefit in planting productive woodland and using wood products in a way that maximises their lifecycle. As this is such a key point, we would ask that the committee recognises in its final report that despite these comments on trees and carbon storage reflects the views of Mr Juniper rather than the settled views of the scientific community.

I am copying this letter to EFRA committee members, Forestry Minister Lord Goldsmith and Tony Juniper at Natural England. I am also happy for it to be published alongside other written evidence submitted to the Tree Planting and Woodlands inquiry.

Yours sincerely,