

## AFFORESTATION AND TREE PLANTING: AN ENVIRONMENTAL MANAGEMENT PERSPECTIVE

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At present, increasing tree cover is not without controversy, especially in those parts of the country where local communities feel that 'enough is enough' and do not want more afforestation. Issues abound. Who should decide what trees to plant and where? Why can't local communities have a determining role? How much planting should there be and where? What species and provenance should be used? How does tree planting and woodland management fit into the wider land use of an area? Can farmers be stimulated into planting more trees as shelter for livestock? Can more tree planting have a positive effect on landscape and on river and water management? Should there be any government support for commercial tree planting where there are ready markets for the timber? How much of government support should be for maintenance of existing woodlands? These are all issues which CIEEM members can contribute to. I know many of you are; see, for example, the recent report from Scotland's National Academy<sup>1</sup>.

Should we plant more trees in Britain? The ecological answer is an unequivocal yes, as all of the palynological evidence shows that since humans first settled in our country, they have significantly reduced its tree cover. And the environmental management answer is yes, with a caveat: provided it is done in an environmentally sustainable way. That means, for example, regenerating woodland through reduced grazing and browsing pressures rather than over reliance on new planting.

There has been a long-standing mantra in the state forest service of 'the right tree in the right place at the right time'. What this means depends on who gives advice. Commercial foresters say quick growing conifer species in the wetter areas of the country should predominate, as has been done since the first experiments in the early 20<sup>th</sup> century. This means non-native species, especially Sitka spruce *Picea sitchensis*, largely on nutrient deficient, carbon rich soils to mimic the conditions of the native source area in the north west Pacific region of North America. The 'right time' is to ensure a continuous harvest of timber to reduce foreign imports and to provide a steady supply of timber to the processing mills. However, the rhetoric of the state forestry service and the industry it supports is not ecological or environmental commonsense. They plant non-native species which are proven to be invasive, INNS in other words, with poor ground preparation breaking the vegetation cover still occurring, releasing carbon, and causing soil and nutrient loss into water courses with negative effects on fish biology, especially salmonoids. At thinning and felling, heavy machinery is used again causing ground disturbance with carbon and soil loss. In commercial plantations, once the canopy closes, the ground is predominantly covered with an acidic needle rain. Only during subsequent rotations are there opportunities for richer biodiversity, even then the tendency to plant again on peat and other carbon-rich soils is of great environmental concern.

The real questions are what sorts of trees, and where and how should they be planted? There must be a greater emphasis on the planting of native species with so many available and appropriate for the local natural environment through seed collection and working with nurseries. The long-term investment in buying, planting and managing these areas with income streams many decades away, if at all, fully justifies the concentration of future government grant aid in their establishment and management. This means a radical shift from the unjustified state support for commercial plantations where there is a ready market for the outputs into support for native trees planting. Just as important is the need for government grant support to rescue native woodlands from their ecological decline. This means focussing, for example, on 'Scotland's Rainforest', where recent assessments have demonstrated its parlous state and the need for urgent investment, as well as in the remnants of Scots pine *Pinus sylvestris* particularly in the drier east of Scotland. Livestock farmers are now recognising that having trees on their farm provides shelter for their stock from inclement weather at all seasons, but the grant support is difficult to access as it is not geared to agroforestry.

This needs to change, provided any potential negative side effects on birds are avoided. The related question is how should trees, woods and forests fit into the landscapes of the future? Developing local and regional landscape plans is the way forward, as tried in a few parts of Scotland, although evidently no longer on the Scottish Government's agenda. In this regard, ensuring input from environmental professionals in the EIA process is more essential than ever.

I offer eight key principles for future woodland and forestry planting and management:

1. Use species predominantly native to the area and to the local environmental conditions.
2. Do not plant on carbon rich soils and peats.
3. Plant trees along water courses for nutrient supply and for water temperature reduction.
4. Focus maintenance resources on the high nature value 'native' stands in poor ecological health.
5. Cease the grant-aiding of commercial afforestation, with funding switched to native tree planting and management.
6. Use species mixes as they are most likely to build higher resistance to diseases and pests, noting accelerating pressures from pathogens.
7. Engage environmental professionals in designing new woodlands and managing existing ones to ensure the greatest multiple benefits; work with CIEEM on this!
8. Use the EIA process to argue for the best outcome to address the twin crises of climate change and biodiversity loss.

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<sup>i</sup> The Royal Society of Edinburgh (2024). *Inquiry into public financial support for tree planting and forestry*. The Royal Society of Edinburgh, Edinburgh. Available here: <https://rse.org.uk/wp-content/uploads/2024/02/RSE-inquiry-into-public-financial-support-for-tree-planting-and-forestry-2024.pdf>