

## **Can trees save the planet?**

### **The National Forest Company's position on climate change and tree planting**

There are many reasons why it is good to plant trees. This statement specifically addresses the contribution of The National Forest's trees to addressing climate change. It has been developed by the Directors who expect to review it regularly, as they keep abreast of research and policy in this critical area.

## **The threat of climate change**

No-one knows exactly what the effects of climate change will be. But there is an increasing consensus that it is potentially the biggest single threat to life on earth. Critical habitats may be lost; rising sea levels will threaten vulnerable communities and environments; extreme weather conditions will become common; the economic costs of dealing with climate change will be great if we do not invest now in reducing its effects.

The predicted climate changes for the Midlands, where the Forest is planted, are amongst the highest in England, with rising average daily temperatures, a decrease in summer rainfall and an increase in winter rainfall.

Against these changes we may enjoy some benefits, such as new bird and animal species and being able to grow a wider range of plants, including more exotic trees, as well as enhanced opportunities for outdoor leisure.

Can the creation of a mixed, wooded landscape help to reduce the negative effects of climate change and assist us in coping with it?

## **Reducing greenhouse gases ('climate change mitigation')**

Current evidence is that trees and forest soils do absorb carbon but they do not magically 'lock up' the ever increasing amounts of greenhouse gases released into the atmosphere. Known as 'carbon sequestration', the process whereby carbon dioxide is absorbed through the tree's photosynthesis depends on the soil and the age of the trees: there are no simple ways to calculate the contribution to meeting targets and the impact, particularly of young trees, may be limited. But as the trees mature, they will make an increasing contribution to the United Kingdom's ambitious long term aim of achieving a 60% reduction in carbon emissions by 2050.

It is therefore fair to say that tree planting is a long term investment towards a more stable planet but it cannot alone compensate for activity that generates carbon emissions. Individuals and businesses will also have to undertake changes to their lifestyles, activities and priorities.

However The National Forest is helping to reduce carbon emissions, in a number of ways:

- Firstly, The National Forest is indeed 'locking up' carbon for the future. By planting around ½ million trees a year and creating other habitats, The

National Forest is securing more carbon-friendly land use than from agriculture or industry and sequestration will indeed happen.

- Secondly, we are developing and promoting locally sourced wood fuel. It is close to being a carbon neutral source of energy and by substituting a potentially waste product, (thinnings), for fossil fuel we preserve dwindling sources of the latter and reduce greenhouse gases. At the same time, using wood fuel creates a market and pays for sustainable management of the woodland. Wood products, as promoted by our work to develop a wood-based economy, also lock up carbon.
- Thirdly, attractive woodlands for people to enjoy near where they live will provide a healthy environment and the opportunity to participate in leisure pursuits without intensive carbon-producing travel.

### **More resilient environments (climate change adaptation)**

In addition to 'mopping up' or reducing carbon gases, woodland and other habitats can help us adapt to the *effects* of climate change. For example:

- Shade from trees in playgrounds will make hot summers more bearable for children.
- Trees will filter pollutants and reduce soil erosion by wind and water.
- Trees can provide shade that moderates temperatures in buildings and reduces energy costs (financial and environmental).
- Selective planting in flood plains can help manage rising water levels.
- Planting specimen trees in parklands will anticipate any loss of older trees from storm damage.
- Planting more resilient species is possible in new woodland.
- In uncertain times, a mixed, wooded landscape is strongest and most resilient, with linked woodland allowing species to migrate to more suitable environments. Our habitats include wetlands, parklands with occasional trees, natural regeneration and broadleaved woodlands.

### **Who we work with in tree planting for climate change reduction and adaptation**

We work with a wide range of people and organisations to support the creation of the Forest, which in turn makes a positive contribution to the challenges of climate change, as outlined above. Given the figures and the complexities we do not promote tree planting as a single response and would hope that partners see it as part of their wider efforts to make a positive environmental contribution.

We have not developed our own calculation of carbon offset (the amount of carbon 'saved' by planting) but are happy to provide contacts for partners and supporters

who wish to use one of the independent sequestration formulae. Of course, calculations change as woods get thinned, trees mature and forested areas increase. For this reason, our approach is to talk through the options and rationale for a particular scheme, recognising the overall benefit of woodland creation.

### **So, can trees save the planet?**

The answer is probably that there is no single way in which we can decisively turn round the currently ominous situation. But creating a resilient, wooded landscape, with its many and varied benefits, has to be a plus. Locking in carbon and stabilising landscapes improves quality of life and the health of the planet, regardless of the details of the figures.

As The National Forest matures it is our hope that it will be known as a place where people worked creatively and intelligently to meet the challenges of climate change - a place where, with due care, we helped the evolution of the landscape and made it stronger for the future.

Dinah Nichols  
Chair

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