

BARNINGHAM NET ZERO COMMUNITY INTEREST COMPANY

Barningham Tree Planting Project

Overview

We have an aspiration to create a community woodland which will require considerable consultation, planning and money to achieve. In the meantime, we can undertake immediate activities to improve the local environment, support wildlife and enhance biodiversity – namely, planting of more trees in appropriate locations to supplement existing vegetation cover.

Tree Planting Activities

We can arrange for planting or replacement of single trees, hedgerows or work on larger schemes, including establishment of copses. In grazing areas, trees will be protected by stock fencing with protective guards used at all locations. There is no charge to the land owner.

After publicising our work in the free local newssheet, *The Flyer*, several landowners contacted us to express interest in having tree and hedgerow planting on their land. Work currently planned in the Barningham and Newsham area includes establishment of over 3000 m² of copse, over 30 standalone or small tree clusters, over 300m of new hedgerow and repairs to over 200m of existing hedgerow. We expect to complete this work over two winter planting seasons.

We will be undertaking this work in partnership with **Trees for Teesdale**. As the umbrella organisation, they will provide insurance cover, equipment, materials and trees. They will also supervise the work and provide training for new volunteers. We have established a volunteer team from Barningham and Newsham to provide this local service and further volunteers are sought from across the area.

The work is mainly done in the winter when the trees are dormant, although we can construct some stock fencing in advance. Work sessions are typically 2 hours duration, with dates scheduled based on availability of the volunteer pool. These can be on weekdays or weekends.

What Trees are Available

Trees for Teesdale currently offers alder, ash, beech, birch, chestnut, larch, oak, pine, rowan or willow. Additional species are available for hedgerows. A mixture of species can be planted. The selection of appropriate species will be recommended by **Trees for Teesdale** and will need to suit the conditions and local habitat.

Barningham Net Zero is also working on sourcing fruit and flowering trees to provide further enhancement of the local area.

BENEFITS OF TREE PLANTING

Benefits for biodiversity and wildlife

The provision of continuous “corridors” of habitat allows wildlife to move more freely over longer distances with better protection against predators and more diverse food sources. It also enhances the breeding pool by connecting populations, helping to keep species healthier in an increasingly fragmented environment.

About 30% of Teesdale tree cover has been lost over the past 50 years. Consequently a substantial planting programme is needed to restore dale woodland habitat.

Increasing woodland and hedgerow cover will benefit many species, particularly those that need a large foraging range including birds, bats and some ground animals. Woodland and hedgerow habitat support diverse populations of insects, which are an important source of food for other species. Insects also undertake important activities such as pollination, conversion of decaying matter into soil carbon and contribute to formation of stable soil structure.

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Benefits for climate change

Trees and woodland ecosystems play an important role in locking up carbon, a process that continues throughout the life of a living tree. Carbon dioxide from the atmosphere is absorbed by trees during photosynthesis and stored in their leaves, branches, trunks and roots. As carbon dioxide is a major contributor to climate change, many carbon off-setting services are based on planting of trees to off-set carbon emissions that cannot be otherwise avoided.

The carbon off-set capacity of northern hemisphere woodland is much less than that provided by southern hemisphere rain forests, where there is no dormant winter season and trees mature quickly. Nevertheless, even in northern climates including the UK, woodland does provide a mechanism for carbon storage and contributes to our strategy for achieving net zero. For the UK to achieve the government's target of net zero emissions by 2050, it is estimated that 1.5 billion new trees will be needed and 20% of farmland (or 17% of UK land) will need to be converted to tree planting, growing biofuels or restored as peat bogs.

Benefits for water management and reducing flooding

Woodland and hedge cover catch rain drops on their leaves and branches, thus slowing down rain fall onto soil and increasing the likelihood of infiltration into the ground. This reduces the rate of overland run-off into water courses and reduces peak flows which lead to downstream flooding.

By taking up water through their roots, trees also provide an important water store and reduce the transmission of water through soil into water courses, which again reduces the peak flows that cause flooding.

Trees can also be used to stabilise flood plains and river banks, thus preserving river channels and minimising erosion effects that can occur during high water flow conditions.

Benefits for watercourses

Trees and shrubs provide shading on watercourses and help to protect them from rising air temperatures. Many species that live or spawn in freshwaters are sensitive to elevated temperatures and a few degrees increase is sufficient to cause harm. Trees also drop woody debris into rivers which provide habitat and food sources for many species of plants, insects and fish.

Benefits on farmland

On farmland, there are several compelling reasons to plant trees. Trees help to reduce soil erosion by providing natural barriers that protect soil and crops. This not only reduces the loss of valuable topsoil but also reduces the run-off of pesticides, herbicides and fertiliser into watercourses. The Environment Agency estimates that 25% of phosphates and 50% of nitrates in rivers come from agricultural sources. This pollution is not only damaging to water quality but also costs farmers money in lost chemical treatments. Tree belts also provide effective physical barriers against spray drift of pesticides as well as collection of ammonia emissions from livestock units.

Trees and hedgerow provide important habitat for pollinators, which are critical to the success of many types of crops. Planting around arable field edges also helps to protect plants against drought by reducing wind speeds.

Trees can also improve animal welfare by providing shelter and reducing exposure to cold.