

Create a wilderwood

Creating new woodlands is a popular way to help combat climate change. Trees lock up carbon as they grow and, like all wildlife habitats, woodlands accumulate carbon in the soil.

Managing woodlands to benefit wildlife is identified as a priority in the Hertfordshire State of Nature report. This report also identifies that grasslands are some of our most threatened habitats and there have been more species extinctions and declines associated with grasslands than any other habitat. Putting these two things together, we have a vision for a new solution – Wilderwoods

Wilderwoods are more than trees – they are a beautiful mixture of habitats in one place – woodland, meadow and ponds. Full of sunny glades and meadows awash with wildflowers and their pollinators. Alive with birdsong and buzzing insects with places for birds to nest on the ground, in low bushes and in trees. By bringing together these different features into one project, we create something much more valuable than the sum of its parts. It allows ecosystems to truly function as they once did, providing clean air, absorbing carbon, purifying water and making healthy soils for trees and wildflowers to grow. We get all this at the same time as creating beautiful places for people to explore.

How to create a wilderwood

There is more than one way to create a wilderwood, and projects can be small and simple or large and complex, depending on resources and land availability – they all contribute towards solving both the climate and biodiversity crises simultaneously if the wilderwood principles are followed.

It is important to carefully plan the design of a wilderwood at the outset using the principles outlined below and to make sure the design it is compatible with the available management tools and resources.

- Survey the site and conduct a record search from the local environmental records centre first to make sure there aren't existing important habitats or species that could be damaged by planting or allowing trees to grow on top. Unrequired farmland and amenity land are often good places to increase trees, existing grassland with wildflowers and heathland are not.
- Have a think about your long-term vision for the wilderwood – what do you want it to look like in five, ten, fifteen years' time and what would you like to be living there? Once this is decided, prepare a simple plan to guide the creation of the wilderwood and also think about how the area will be cared for after the planting – who, how, when? As a general rule, trees that are planted will need about five years of care before they become established and can fend for themselves. Until then competing vegetation will need to be controlled to allow the trees to survive and thrive. Trees that have instead just been allowed to seed and grow naturally will be a lot healthier and will not require the same aftercare.
- Aim to create a complex mixture of woodland and meadow habitat, within the constraints of how you would like to manage it. The bigger the site and the greater the flexibility over management choices, the more complex and valuable the habitat that can be created. Designs based on forestry plantation principles are poor for wildlife and are not recommended here.
- Plan to create at least as much meadow area as wooded. This means that only half the total project area should be planted with trees.

- Create lots of wide paths and glades. These can contribute to the total meadow area. It is often woodland edges that support the most wildlife. Open areas should be large enough to be able to manage easily by mowing or grazing animals, as appropriate.
- Create lots of ponds and wet areas in the wilderwood; some in wooded areas and others in more open areas.
- It is often more successful and environmentally-friendly to allow trees to seed and grow naturally, rather than planting trees. But this is not always realistic and it may be necessary to plant some or all of the required trees. Some scarce native tree species are unlikely to get there unassisted and will need planting, such as wild service tree and small-leaved lime.
- A great alternative to planting trees can sometimes be to collect seeds and plant them direct or grow in pots for planting out.
- Meadow areas will need seeding with a mixture of native grasses and wildflowers appropriate to the soil type. If the soil is rich, such as on farmland or amenity grassland, it will take several years of mowing and removing cuttings before the soil becomes suitable for less common wildflowers to thrive. There are several possible techniques for these circumstances, such as using a cheaper more general-purpose wildflower seed mix with yellow rattle in it. After a few years when things are more under control, plug planting with rarer wildflowers will be beneficial.
- Only use certified native tree and wildflower stock, of local provenance if possible. This maximises the amount of wildlife they can support and minimises the risk of introducing tree diseases. Don't plant so called climate-adaptive non-natives like sycamore or walnut. These do not support the same amount of wildlife in our area.
- Plant trees that are appropriate to the area and soil type. If there are adjacent or nearby woods, you could collect tree seeds from there for planting. As a very general guide, oak-hornbeam woodlands in south and central Herts and in Middlesex, beech woodlands in parts of the Chilterns and ash-maple-hazel woodlands elsewhere. Sadly, due to ash dieback disease, we don't currently recommend planting ash trees and these can be substituted for now with other suitable trees, such as oak.
- Avoid straight-line planting of trees. This always looks unnatural and creates wind tunnels. Instead, aim to have a very open, randomly distributed planting scheme with plenty of spaces between trees. If management constraints are such that even spacing of trees is desirable, plant evenly in wavy lines.
- Make rides wiggly with a good mix of wider areas and bottlenecks. It makes them sheltered and warmer for invertebrates. Orientate primarily east-west but don't neglect darker north-south rides either. This will create conditions for different species of conservation concern, such as white admiral butterfly.
- Try and avoid using stakes and guards unless absolutely necessary because they are not very environmentally-friendly. You may wish to accept some losses and use the money saved on replacement trees. If trees need to be protected from deer or rabbits, it may be more cost-effective to fence the perimeter than to use individual tree guards, particularly if the project area is quite evenly wide in all directions.
- Plant small whips not big saplings. It's cheaper and they need less care. They will also require less watering, which is more water left in our chalk rivers.
- Space the intended canopy trees wide apart and infill the gaps with shorter, more shrubby tree species, such as hazel, holly, field maple and hawthorn.
- Wooded areas should be managed to encourage a diverse range of structure, including tall canopy trees, shrubby trees and scrub underneath the canopy trees and along the edges of rides and glades. Rides and glades to be kept open and full of a variety of nectar sources, such as wildflowers and areas of bramble.
- Meadow areas to be managed to remove nutrients and to prevent unwanted change to scrub and woodland. The ultimate way of achieving this is by grazing with livestock but this is

often unrealistic, and mowing is a great alternative way of achieving the key aims. Mowed areas need to have cuttings removed to prevent nutrients building up and damaging wildflowers. The best timing for this can vary but as a general rule, one annual cut in July may be best, although in richer soils, a second cut in October may be necessary. It is also essential to ensure that there is always about a third of the area of meadows, glades and path edges left uncut in any one year to provide shelter for invertebrates. This is a high priority because 70% of Herts Species of Conservation Concern are invertebrates. They also play a key role in supporting whole ecosystems, with most other animals and plants dependent upon them.

Put your name on the Wilder Actions Map! Please visit our website and add your tree related action to our Wilder Actions Map at hertswildlifetrust.org/wilderstalbans.

By combining our individual actions across our District we are making positive changes and improving the nature network around us. Every action, no matter how small, makes a difference.