

# Woodland Creation Case Study

## 800 Wood, Cambridge

Enhancing biodiversity, research and the local community



### Why create 800 Wood?

Following a change in land management on part of the existing estate, Cambridge University seized an exciting opportunity to create a new multi-purpose woodland, commemorating its 800th anniversary in 2009 whilst also providing ecological, educational, public and commercial benefits.

The University-owned Madingley Estate is made up of over 500 hectares (ha), largely arable and grassland but also comprising a Site of Special Scientific Interest (SSSI), parkland, and lakes. Teaching and research features highly within the estate, with a Centre for Continuing Education, livestock farming to provide animals for the Veterinary School, and woodland used for ecological research. It is also home to the 15 ha SSSI ancient woodland Madingley Wood, designated in 1981 but boasting over 340 years of research studies. The newly available land was adjacent to this important SSSI, and therefore represented the perfect opportunity to extend and buffer the core woodland, whilst also providing a comparison site for future research.

### Key facts

- **Type of woodland:** Broadleaf woodland with ash, oak and maple as the primary species, plus an area of natural colonisation
- **Size of woodland:** 10 ha
- **Grant used:** England Woodland Grant Scheme together with funding from SITA Trust and Cambridgeshire County Council
- **Key objective:** Create a native multi-purpose woodland to provide diverse benefits

*“The woodland really is multi-purpose: from biodiversity and research through to recreation and wellbeing, whilst respecting the heritage of the site”*

Peter Wilderspin, Rural Surveyor,  
University of Cambridge



# Planning the woodland

The Estates Division of the University were responsible for the creation of 800 Wood, officially opened to the public by HRH the Duke of Edinburgh on 20th April 2009. With forestry agents Lockhart Garratt and the support of their local Forestry Commission Woodland Officer, the working group set about determining the best woodland creation approach to ensure it would deliver against all identified objectives whilst also enriching the environment and landscape.

There were a number of existing landscape features that needed to be incorporated into the woodland design, including the creation of a vista to maintain the view north to Ely Cathedral, a Late Iron Age settlement and a mains water pipe cutting diagonally across the site. The team were looking to plant a diverse range of native species, to boost biodiversity but also potentially provide timber in future, and they also wished to integrate natural colonisation if possible.

The Forestry Commission England Woodland Grant Scheme was utilised to support with tree establishment, as well as grant aid from the SITA Trust and the provision of bike racks by Cambridgeshire County Council.



## The creation of 800 Wood

Three primary tree species were selected for 800 Wood: ash (43%), pedunculate oak (26%) and field maple (7%), with the remaining areas populated with minor tree and shrub species for diversity. All existing site features, such as the archaeological site, were protected through the careful allocation of open space and rides, making up 22% of the total woodland area. Some of the rides were designed to form a giant figure of '8', to mark the 800th anniversary commemoration.

Linking Madingley Wood with the new 10 ha planting of 800 Wood was key and was achieved by incorporating a continuous 20m natural colonisation zone along the length of the shared boundary, ringfenced to protect seedling colonisation from browsing deer and rabbits with a broad ride set outside of the fence line.

Extra features integrated within the woodland design included a timber stacking and turning T at the entrance to aid future timber harvesting, the inclusion of bicycle racks and an information board at the entrance, a wetland scrape, a new hedgerow along the road edge, a kissing gate for disabled access, and steps to link the site to existing public rights of way.

Planting took place in the winter of 2007-8, following best practice in terms of establishment technique for the creation of new native woodland, resulting in the planting of over 15,000 trees and shrubs. Spiral guards and tree shelters were used for protection in the early years, with plenty of space allowed for ongoing maintenance. Local schools were invited to get involved with the planting, as well as providing illustrations for a site information board. The Duke even planted one tree himself.



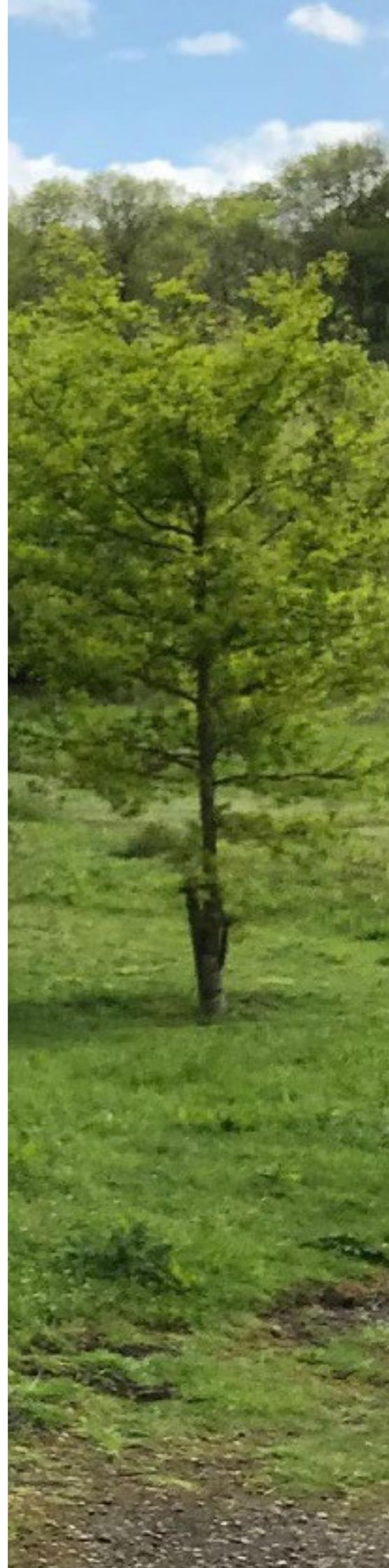
# The benefits

Now well-established, 800 Wood continues to deliver numerous benefits both for the University and the wider community, having met the original objective of creating a genuinely 'multi-purpose' forest:

- **Public access.** The wood is popular amongst the local community, providing a nature haven for recreation and relaxation, with clear health and wellbeing benefits.
- **Biodiversity.** A diverse range of tree and shrub species, including a high number of flowering and fruiting types, has attracted a variety of invertebrates, birds and mammals, and the change in land use from arable to woodland has significantly enhanced biodiversity across the site. The strip of natural colonisation is developing and has allowed a variety of species to colonise the site with minimal intervention. Orchids have colonised the ride area between Madingley Wood and the strip of natural colonisation.
- **Research and conservation.** Various research projects and ecological studies are ongoing within 800 Wood, including Butterfly Conservation monitoring White Spotted Pinion moths and Anglia Ruskin University studying root development in young trees, alongside research into ash dieback and the spread of invertebrates from Madingley Wood through to the areas of natural colonisation. Ash dieback has been monitored by repeat surveying of over a thousand trees, leading to the discovery of high survival, particularly in the wet downhill areas of stunted trees. In addition, analyses of the chemical properties of leaves of 8 species over a season have been used to calibrate hyperspectral sensors which will be utilised in future to map species and track their health across woodlands. A project to measure the carbon content of planted woodlands, natural colonisation areas and the ancient woodland site is underway.
- **Expansion of woodland and green corridor.** The adjacent ancient woodland SSSI Madingley Wood has been successfully extended and buffered, with additional green corridor benefits at a landscape scale.
- **Education.** Forest School takes place within 800 Wood ensuring that local children can learn from and be inspired by the woodland.
- **Heritage.** The heritage of the site has been respected and maintained, with the Iron Age settlement and viewpoint to Ely protected.
- **Potential for future commercial return.** The management team are already looking to diversify the woodland's structure with small scale hazel coppicing, as well as conducting early formative pruning of oak to secure future timber quality. Plans will need to adapt to the extent of ash dieback that is affecting the wood.

## Reference

The establishment of 800 Wood at Madingley, Karen Russell, Rachel Buckingham Howard and Justin Mumford, Nature in Cambridge No 54 2012 p60-64



## Top tips

1. Ensure good planning right from the start, with a robust woodland maintenance programme to get the planting well established in the first place, followed by a longer management plan. This includes regular cutting of rides for public access, managing infrastructure such as benches, cutting back of shrubs and thinning trees
2. Use biosecure and diverse planting stock to ensure future resilience
3. Leave enough space for rides - they get narrower as trees and shrubs grow!
4. Don't only think about planting trees: there are other methods of tree establishment, such as providing opportunities for natural colonisation near existing mature woodland
5. Control deer and rabbit populations, and use tree protection or fences to guard against browsing
6. Commit to maintenance throughout the lifetime of the woodland
7. Control weeds in managed areas, but areas of natural colonisation can be used to let nature take its course

***"Keeping woodlands going forward doesn't happen by magic!"***

Karen Russell, Forest Agent, Oakbank Game and Conservation

## Learn more about woodland creation

*If you'd like to create woodland for the benefit of nature and your local community, find out how the Forestry Commission can help: visit [gov.uk/forestrycommission](https://www.gov.uk/forestrycommission).*