



# HOW TO MAKE PEAT



**Serves:** the whole community, including its rare and beautiful wildlife. Also benefits the wider world, storing massive amounts of carbon and reducing climate change.

## INGREDIENTS

- Permanently waterlogged ground – for example, a hollow in which water accumulates
- Wetland plants – such as rushes, reeds, sedges, mosses

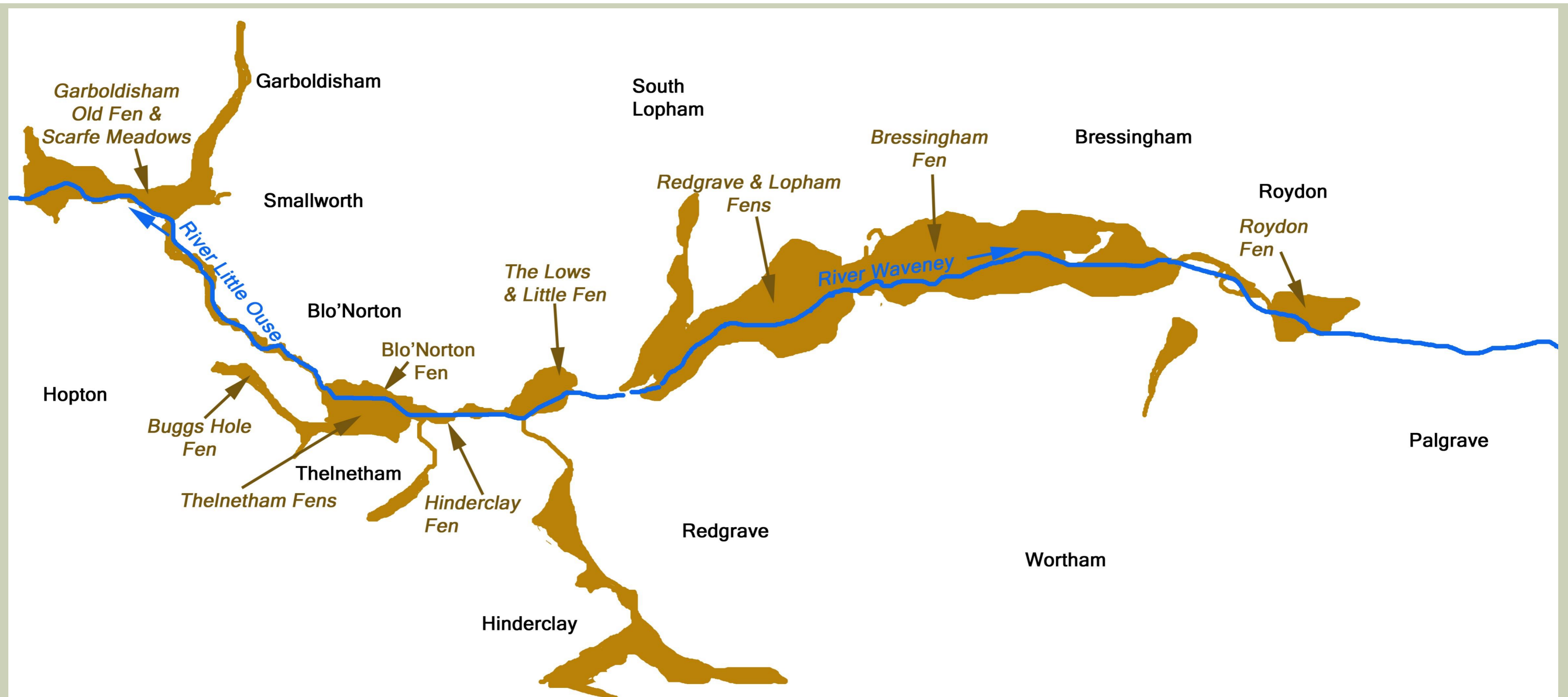
**Ready in:** around 2,000 years. If left longer, expect the surface to rise by around 1mm per year.

**Cooks tips:** vary the recipe by using either acid or alkaline (chalky) water. Peat made using only acidic rain water typically grows a relatively low number of species, including Sphagnum mosses and heathers – for a much richer mixture of plants, including Great Fen-sedge, Black Bog Rush and Marsh Orchids - use chalky ground water. The valley fens of the Little Ouse and Waveney headwaters are rich in plant species, and the animals that depend on them, because they are formed in hollows in the chalk bedrock and fed with chalky water.

## METHOD

- As wetland plants die, allow their remains to accumulate in the water (low oxygen levels in the water prevent complete decay)
- Maintain a constant supply of water to the partially decayed plants so that new layers are added every year
- Leave without stirring/disturbing for at least 2,000 years or until you have a thick black or brown soil (organic matter content of between 30 and 100%)
- When ready, use for heating, cooking or leave to grow amazing and rare wildflowers, dragonflies etc.
- Sit back and enjoy

# WHERE'S OUR PEAT?



In the upper reaches of the Little Ouse and Waveney, peat fills the valley of the rivers and their tributary streams, with some wider expanses in low-lying areas, particularly between Redgrave and Roydon. The fens that have developed on the peat are labelled in brown.

# HOW OLD IS OUR PEAT?

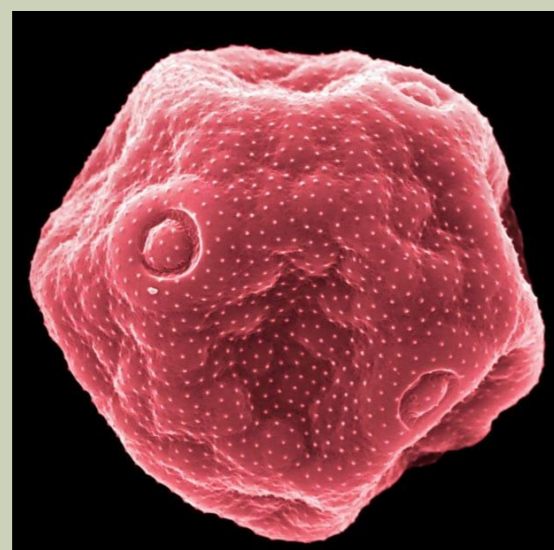
- In the Britain, peat began to form in flooded hollows just after the end of the last glaciation – 8,000 to 10,000 years ago
- Radiocarbon dating shows that peat growth on Parkers Piece, opposite the windmill, began around 8,050 years ago.
- In the Little Ouse/Waveney valley, peat formed in hollows created when the underlying chalk was dissolved by rain water at the end of the last Ice Age. Carbon dioxide in the air dissolves in rain making it acidic – the colder it is, the more dissolves and the stronger the acid.



# STORIES IN THE PEAT: CHANGING LANDSCAPES

- Because peat consists of partially decayed plants, it stores a record of the vegetation of the area going back almost to the last ice age.
- Minute pollen grains, fern and moss spores, seeds and sometimes pressed leaves can all be identified in the peat.
- Sometimes the remains of animals are found – hard carapaces of beetles, dragonfly wings, European pond tortoise shells and the bones of birds and mammals. Finds in Norfolk have included a pelican's wing, the now globally extinct Irish Elk and primitive oxen (aurochs), as well as beavers, boar, wolves and brown bear.
- We can see how the vegetation changed from forest to more open landscapes as the climate changed – although always with wetland areas on the peat-filled hollows and valleys.

# PLANTS AND ANIMALS IN THE PEAT



Minute pollen grains (above) and fern spores (left)



Mammal bones, beetle wing cases, and reptile and snail shells



# STORIES IN THE PEAT: HUMAN HISTORY

- The peat contains plenty of evidence of human activity – from the mid-Mesolithic period onwards
- Although the peaty sites were too wet for habitation, they show the changes in vegetation associated with early agriculture. Many pollen grains are very light and blew into the peat-filled hollows from the surrounding, drier land. Seeds, pollen and evidence of disturbance in the peat show that:
  - Around 8,000 years ago this area supported wetland vegetation, boggy areas and small pools – much as it does today!
  - Since then, periods of woodland cover have alternated with more open conditions, often associated with agricultural weeds, indicative of settled farming.
  - Cereals were farmed in this area from the Bronze Age onwards – around 3,800 years ago.
  - Hemp and hops –for making cloth and beer – were grown from Roman and Anglo-Saxon times onwards –from just over 2,000 years ago.

# THE RIGHT TO DIG PEAT

- Peat turves were a vital resource, especially for the poor
- In all of the local villages, fuel allotments were set up to ensure fair distribution of the rights to dig for peat
- Most of these were set up in the 19<sup>th</sup> Century, following the Enclosures, when only the least productive land was left for the poor to use
- Typically a household could cut 8000 turves a year
- Over time, digging for peat by villagers tended to be replaced by letting of the land and the shooting rights, and the income used to buy coal, or to make grants to residents in need
- Peat digging continued on a small scale well into the 20<sup>th</sup> century

# BLO' NORTON FUEL ALLOTMENT

- **In 1839 the Charity Commissioners recorded:**  
*Blo Norton Fuel Allotment (inclosed 1822). 2 allotments (15 and 10 acres) for fuel and letting. Households could cut 8000 turves annually.*
- **In 1875 the Charity Commission formalised the rules of the charity:**
  - **Cutting turf and fuel:** *the Trustees shall take steps to discontinue the gratuitous use of any portion of the land of the said Charities by the poor inhabitants of the said Parish for the purposes of cutting and getting fuel therefrom, and they shall cause so much of the said land as has been so used to be let from time to time, either with or without the right of cutting fuel thereon....to inhabitants of the said Parish at reasonable rents....*
  - *The clear annual income of the Charity shall be applied by the Trustees... in the purchase of coal or other fuel to be resold by the Trustees at a reduced cost to deserving poor persons resident in the Parish of Blo Norton.....the Trustees shall also be at liberty in special cases to make gratuitous gifts of coal purchased out of the Charity funds in favour of deserving and necessitous persons resident in the said Parish and who shall be considered by the Trustees to be suitable objects of such assistance*



# DIGGING FOR PEAT



Cutting peat from the local fens to dry as fuel probably dates back at least to the Middle Ages. It remained an important fuel source until the railways brought cheap coal to the area.

This picture shows the late Albert Driver of Redgrave demonstrating how he and his family used to cut peat on Redgrave Fen. The cut peat would be wheeled along raised 'barrow-ways' across the fen and then along 'drag-ways' and footpaths to the village.

The holes left by peat cutting rapidly filled with water and were colonised by rare and specialised algae ('stoneworts') and by many species of dragonflies and damselflies.



# BARROW WAYS AND TURF PONDS



This image of Redgrave Fen and Lopham Little and Middle Fens in 1947 shows the network of raised barrow ways running across them. Between the barrow ways you can make out some of the 'turf' ponds from which peat has been dug – looking like black dots.

# STORIES IN THE PEAT: DESTRUCTION AND RESTORATION

Drainage and ploughing for agriculture, particularly over the last 150 years, together with more recent abstraction of ground water for drinking supplies, led to loss and damage of surface peat layers.

Creating wetter ground conditions lets fen plants return from seeds deep in the soil or from surviving near-by fens. Mowing or grazing will then help maintain the habitat.

Parkers Piece in the mid-1980s



Parkers Piece today

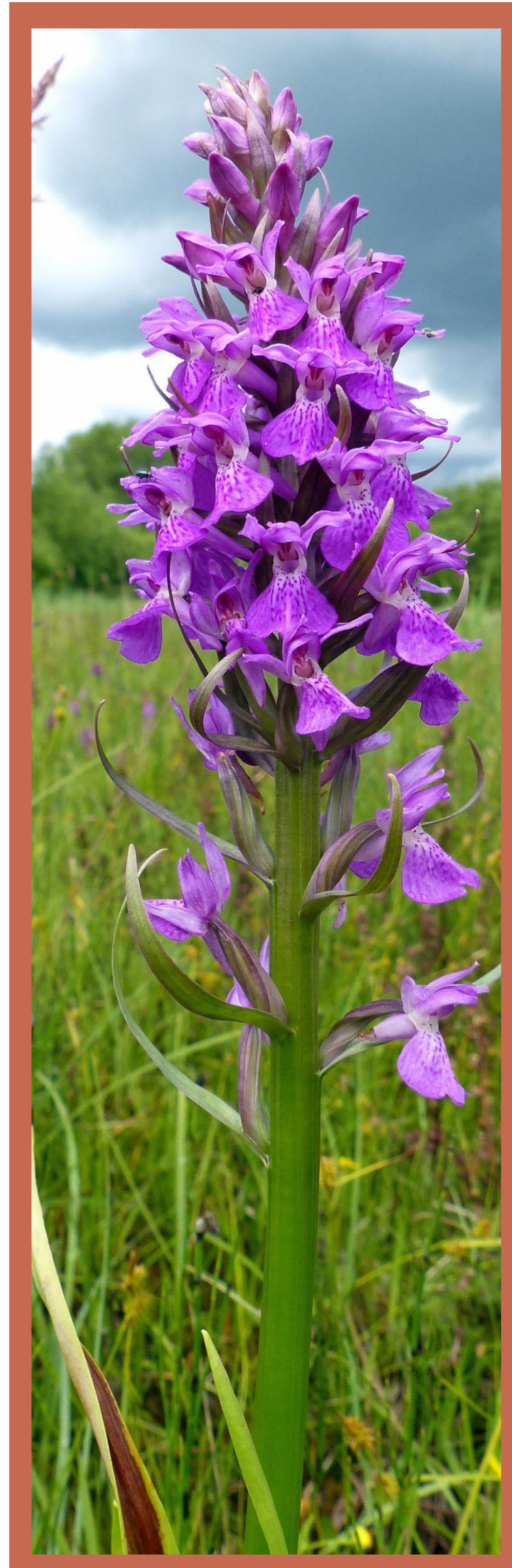


# PEAT, FENS AND WILDLIFE

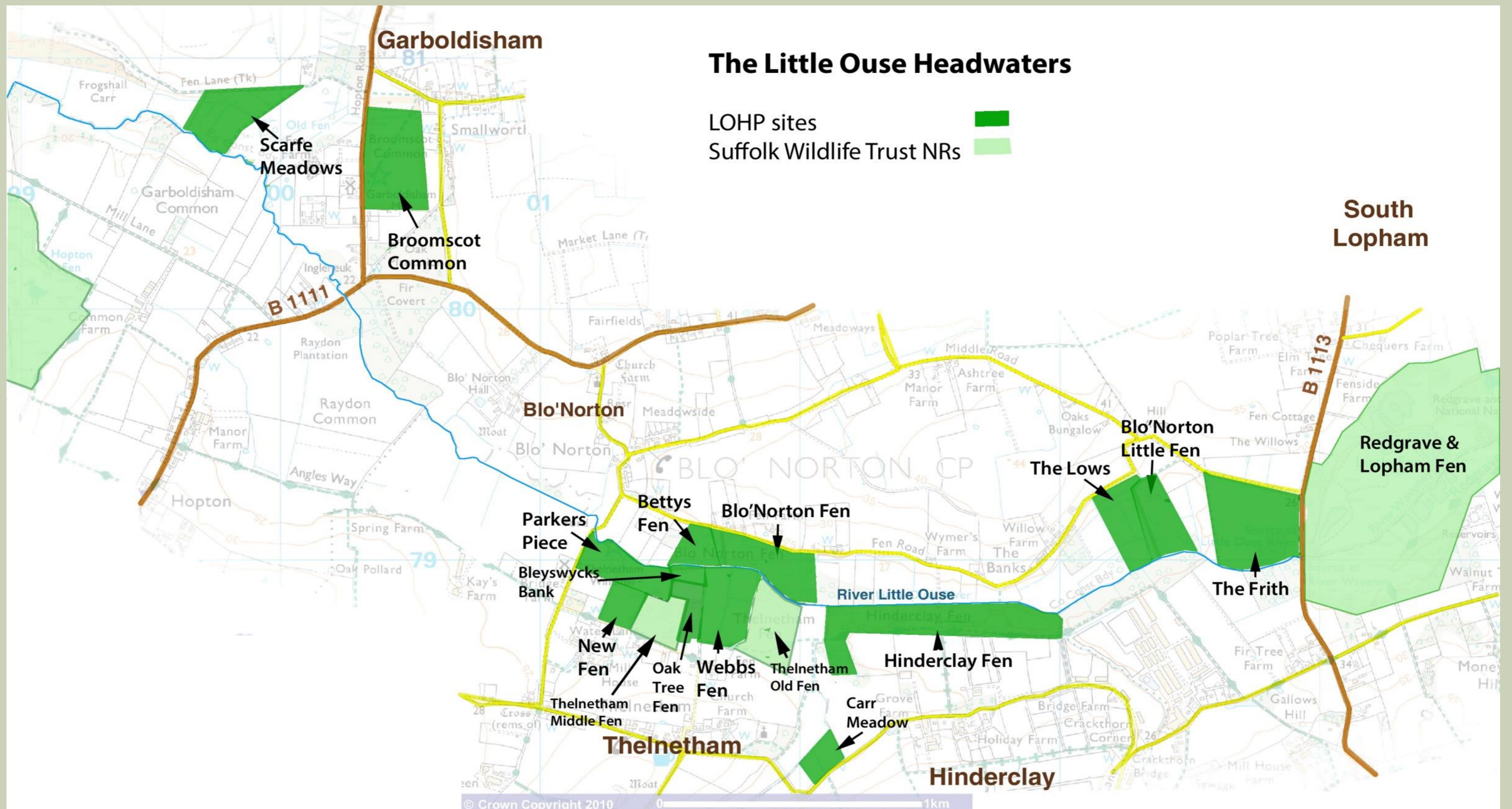
Our local peat is alkaline, fed by chalky water. It supports a rich assemblage of plants and animals. The peaty hollows, with turf ponds, marshy areas and wet woodland, are called fens.

Many of the Little Ouse and Waveney headwaters fens are protected as Special Areas of Conservation, Sites of Special Scientific Interest and County Wildlife Sites in recognition of the international, national and regional importance of their wildlife.

The Little Ouse Headwaters Project and the Suffolk Wildlife Trust look after many of these sites to ensure that their precious and beautiful wildlife can be enjoyed by local people and visitors for many years to come.



# PROTECTING OUR FENS: CONSERVATION SITES



# PEAT MATTERS

- Peat is part of our past. It contains a unique record of our area over thousands of years, and provided a vital fuel for our ancestors.
- It's also part of our future. We no longer need it for fuel, but the beautiful landscapes and wildlife it supports are vital to our wellbeing.



