

REPORT

Great Fen Project

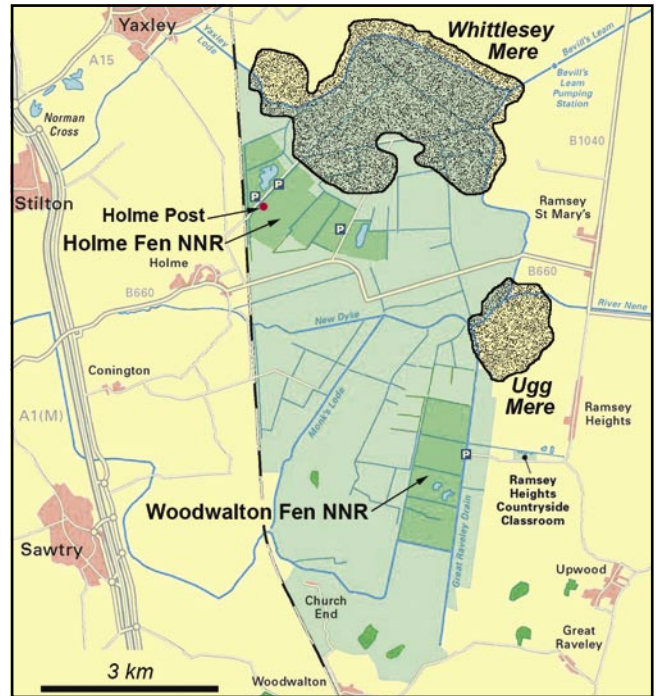
On the eastern fringes of the East Midlands, the wide expanses of the peat-floored fenlands are among the most distinctive and unusual of Britain's geological and landscape sites. The fens were great natural wetlands until about 500 years ago, but almost the whole area has been progressively turned into productive farmland, totally destroying a piece of England's natural environment. Now the Great Fen Project aims to reverse the process and turn a small part back to its original wetland state.

The plan is to re-create 3700 ha of fenland, mainly from land that is currently under arable farming. The chosen slice lies midway between Peterborough and Huntingdon; it includes two small National Nature Reserves that are currently unsustainable because their water tables are falling when managed solely for the benefit of the surrounding farmland. Across the new Great Fen, pumped drainage will cease and the land will be managed as a wetland, though some control will be needed to prevent undue long-term flooding of areas that have subsided from their original positions (much is now below sea level). The result will be to re-establish a very special part of Britain's ancient natural landscapes.

The project has mainly botanical values, as it will safeguard many unique plant species, but there are major geological benefits too in conserving a piece of one of the world's classic peat terrains. The Great Fen Project has a planned budget that exceeds £5M, which is mainly for land acquisition and its subsequent management; there is more data in the project's website at www.greatfen.org.uk.

Originally, the fens were huge wetlands of meandering rivers, raised bogs, birch woodlands, reed beds and grasslands. Beneath was the outcrop of the weak Oxford Clay, but the wealth of plant material preserved under water had created the peat that then nurtured the fen environment. But nature was forestalled in the early 1600s when the first of the fens were drained to turn them into valuable agricultural land. This was a long process, and it was 1850 when the last of the fen lakes, Whittlesey Mere was drained; this had been the largest lake in lowland England, though it was only about a metre deep when it was finally eliminated.

An unwelcome side-effect of the fen drainage was to cause extensive land subsidence, due firstly to compression of the drained peat, and then to wastage of the newly dried ground. Wastage is simple oxidation of the dry peat, so that it is lost to the atmosphere; this incidentally adds to atmospheric carbon dioxide, with whatever effect that has on global climates; the converse is achieved by conservation of the peat with its positive impact on the nation's carbon budget. Under the current drainage regime, peat loss is around 15 mm



Outline map of the Great Fen, with the conservation area shown by the light shading (after the Project's own map); the extents of the two original Meres are also indicated, as they were before their complete draining.

per year - a figure that is entirely controlled by the climatic mean temperature and the depth to the water table. The classic record of peat loss is provided by the Holme Post (see the *Mercian Geologist* for 2000), which stands inside the Great Fen's confines; there is now only about 2.5 m of peat at the Post, way down from the original 6.7 m.

The Great Fen Project is certainly bold, and should be hailed as an ambitious piece of environmental conservation. There are those who question its worth, expressing concerns over the loss of farmland at a time when food prices are rising. But the drained peat will eventually be lost anyway, due to the inevitable process of wastage. And when the peat has gone, the land will revert to an expanse of relatively barren soils on the clay that will be exposed from beneath. The total area of peat within the English fens is already down to less than half the area of its ancestral wetlands. A small slice preserved as the Great Fen would seem to be an appropriate use of land in a rapidly changing world.

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