

Special section

Survey, environment and excavation in the English Fenland

The Fenland (FIGURE 1)

Coastal wetlands were one of the characteristic landscapes of northern Europe. Around the shallow North Sea were zones between sea and land, the flat damp worlds of samphire and saltmarsh, eels and waterbirds. In Denmark, in north Germany, in the Low Countries that are named for this, and in eastern England, those marginal lands have largely vanished (Coles & Lawson 1987), and a sharp frontier of artificial defences now separates a drained, made and domestic land from the wild sea beyond.

In England, the Fenlands round the Wash were the most extensive wetland in Great Britain. Lying in the modern counties of Cambridge, Lincoln, Norfolk and Suffolk, the Fens cover about 4050 sq. km (1 million acres). In the Iron Age the whole region was fen and saltmarsh, about 2 metres above sea level, relieved only by occasional islands thrusting out of the surface, most of them in the south. The wetland had formed since the last Ice Age. Initially the base of the Fen was dry, but later the rising water table drowned the landscape, and freshwater fen developed, alternating from time to time with marine saltmarsh episodes. Many archaeological sites and monuments were buried and preserved

The peat regions of the southern Fenlands were drained in the mid 17th century (FIGURES 2 & 3), transforming the fen from uninhabitable waste. In place of marshes, a series of main drains and subsidiary dykes divided the landscape into a regimented network of rectangular agricultural fields, the sea kept out by reinforced medieval defences.

Fenland research

After drainage, the wasting-away of organic deposits revealed ancient land surfaces, and finds of prehistoric flint axes and metalwork were made. Frequently hundreds of disintegrated tree trunks, 'bog-oaks', were removed from arable fields, and occasional man-made objects, such as dug-out boats, were discovered,

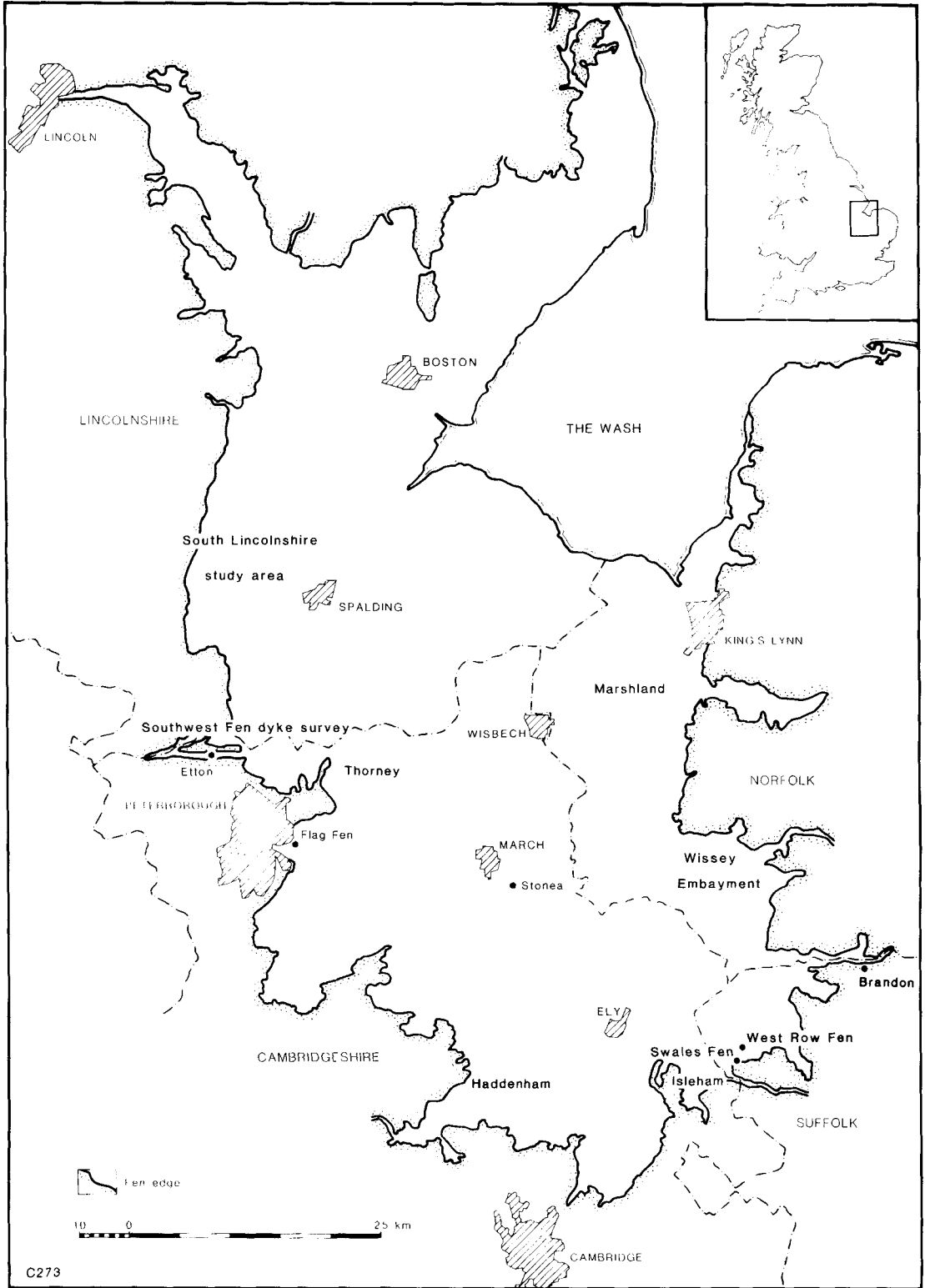
preserved by the wet environment. Drainage of Whittlesey Mere (1848–52) revealed a hoard of medieval silver and a group of large limestone blocks, doubtless a cargo for an important monastic building or Cambridge University college. Sir Cyril Fox brought together the state of archaeological knowledge for the southern Fens in *The archaeology of the Cambridge region* (Fox 1923).

Soon afterwards a Fenland Research Committee was set up; the results produced by its members – among them Gordon Fowler, Clifford Darby, Grahame Clark and Harry Godwin – laid the foundation of modern work. Among key developments was Fowler's recognition (1932) that the meandering banks of mineral soils, 'roddons', represented the early drainage channels of the fen. Godwin and colleagues, working on the stratigraphy and environment of the buried deposits, established a 'classic' sequence of lower peat, then fen clay, then upper peat (Godwin & Clifford 1938; Godwin 1940). A third advance was the excavation of an early prehistoric site at Peacock's Farm, Littleport, dating the Fenland stratigraphy by archaeological means (Clark *et al.* 1935). After 1945, work by the Fenland Research Committee concentrated on the Roman period (Phillips 1970).

The Fens were brought back to archaeological attention by the development of Sites and Monuments Records in the 1970s, by the wish to expend limited state resources on the most significant sites, and by the development of wetland archaeology and palynology. The early work had showed the excellence of sites and preservation of environmental evidence, yet many areas – presumably whole buried landscapes – were blank and unstudied.

The Fenland Project

The Project has its origin in a one-year assessment, 1976–7, of the surviving archaeology of the Cambridgeshire wetlands, a programme initiated by the then Archaeological Advisory



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FIGURE 1. The Fenland region.

Labels in bold type indicate places and areas discussed in the papers that follow.

The Fen Edge marked here is in some regions a distinct break in topography and soil that is plainly visible on the ground and from the air; elsewhere, it is a more uncertain line.



FIGURE 2. *Fen landscape on the ground, near Thorney: a clear, open landscape today, in which critical differences of height are small and sometimes inverted. Peat deposits, shrink, oxidize and blow away, while the silt and clay is more resistant to erosion; so silt deposits which were once lower than the peat are higher in the modern landscape.*

Committee, and organized by the Cambridgeshire Archaeological Committee. The objective was to ascertain what waterlogged or other sites or monuments remained worth preserving or excavating.

The first-year survey results warranted more work; and sites already known to be of national significance at Maxey were excavated when Francis Pryor and his team joined the Committee. The Fenland Project, formally set up in 1981, extended activities into the whole Fenland region. It is controlled by a directing committee of representatives from English Heritage, the Royal Commission on Historical Monuments (England), the British Museum, the University of Cambridge, and the four Fenland counties (Coles & Hall 1983). The Project is mainly funded by English Heritage, with input for specific projects by the British Museum, Cambridge and Cardiff universities, and the Manpower Services Commission (for Haddenham). The committee also oversees any other

Fenland work funded by English Heritage. Results are published as a monograph series in *East Anglian Archaeology* [see the review article on pages 377–80].

The objectives of the Project are to record the environment, stratigraphy, landscape and archaeology of the Fens. When this is complete the most important areas will be considered for preservation: excavation may be necessary if there is unavoidable threat.

The work of the Fenland Project falls into three main categories, survey, environmental studies and excavation, represented by articles here.

1 Survey

Although of low altitude and slight relief the fenland landscape is complex. The islands are normal dryland areas subject to the usual modern threats. The latest marine deposits lie at about 3 metres above Ordnance datum (OD) and support no occupation before the Iron Age:



FIGURE 3. Fen landscape from the air, near Littleport: the dark is peat; the branching patterns of lighter soil are roddons, the silt-filled ancient channels of natural drainage which were once lower than the peat but now stand above it as ridges of clay silt.

where there was peat coverage and no protective mineral cover, soil erosion reveals prehistoric land surfaces at about zero OD, which is approximately the level of the Bronze Age fen. In other words, all sites in the peat fen later than the Neolithic period have now been exposed and are subjected to ploughing and desiccation. In practice, pits and ditches survive, still permanently waterlogged, from many of these more recent sites, as proved by excavation at Stonea. Best preserved are sites of the Neolithic and Mesolithic periods which are buried and sealed by peat and marine clays.

The survey aims to record in detail the sites, monuments and landscapes, with a view to identifying those that are best preserved (in terms both of minimum disturbance and of preservation of wet material). But how to make a significant impact on so large an area within the seven-year life of the survey project? Techniques have been developed to survey large blocks of land at a rate of about 10,000 hectares

per person per annum. All significant areas within the blocks are walked in 30 m transects: wider transects are made in barren fen deposits that have always been wet and uninhabitable. Monuments and artefact scatters are plotted on 1:10,560 Ordnance Survey maps. Soil boundaries are also mapped, following the work of the Soil Survey of England and Wales. From this information can be reconstructed the Fenland landscape at each archaeological period. Hall (1987: 14–17) gives a full account of the methodology of fieldwork and recording.

Here, **David Hall** presents **survey results from Cambridgeshire** of prehistoric occupation sites, buried barrow-fields, an unsuspected Iron Age occupation of the fen islands, an intensive Roman saltern industry on the marine silts, and drainage and reclamation in the early middle ages.

From Lincolnshire, **Tom Lane** examines **Iron Age settlement** on marine silts, which is unique

to that county; and **Peter Hayes** reviews extensive Early and Middle **Saxon settlement** on the Lincolnshire fen.

Bob Silvester shows Roman occupation in the **Norfolk fen**, as well as much Early and Middle Saxon settlement, previously unsuspected, on marine silts.

Rog Palmer, in a Cambridgeshire example, shows a role for **aerial survey** complementary to ground work.

2 Environmental studies

In the early Flandrian, a deciduous forest developed over the Fenland basin. However, the rapidly rising sea-level of this period soon promoted waterlogging, resulting in peat formation, and led to the progressive landward encroachment of marine conditions. Since the mid Flandrian there has been a fine balance between freshwater and marine influences, with organic sediments, fen peats, accumulating during periods of freshwater dominance, and the deposition of inorganic material, sands, silts and clays, during phases of marine dominance. Thus alternating peat and mineral strata have built up the Fenland surface.

The nature and extent of the different types of deposit, at any given period, can be used to reconstruct past Fenland landscapes. Here, **Martyn Waller** reports on the Project's **litho- and bio-stratigraphical studies and radiocarbon dating** programme (dating is by Roy Switsur of the Cambridge Botany Department's Godwin Laboratory). Preliminary results indicate that variations, within each of the sub-regions of the Fenland, were far greater than has previously been suggested.

Charly French presents *Fenland stratigraphy* and buried sites as revealed by '**dyke-survey**' along cleaned ditches and drains.

3 Sites

Fenland settlement is very much influenced and directed by local topography, partly because slight differences in elevation mean radically differing conditions, partly because the area available is limited and partly because there was a desire to use particular resources. For these reasons settlement was often concentrated along the fen-edge, as in the sand and chalk regions in the south-east, or on islands, exemplified by Stonea where there was activity from the Neolithic to Roman periods.

A remarkable series of sites of all periods has been identified, among them Flag Fen (Pryor, French & Taylor 1986) and Stonea (Potter & Jackson 1982), on which recent reports are available. The Bronze Age settlement at Flag Fen, discovered by dyke survey, consists of well-preserved timber buildings on a wooden platform. The British Museum excavations at Stonea revealed a large stone building that was the focus of a Roman planned settlement.

By contrast with well-preserved wet sites, such as Flag Fen and Haddenham, the early prehistoric settlements on sand ridges in the south-eastern Fen are rapidly desiccating and being ploughed away. Preservation depends on whether a site was low enough to remain wet in the first place, then on modern drainage and agriculture. Despite three centuries of damage, preservation is often good; Roman and later sites are generally under greatest threat because the water table is lower now than in those eras.

Ian Hodder & Paul Shand report on a **long barrow at Haddenham**. Although the monument, protruding through the fen surface, suffered damage, the wooden mortuary chamber, with several phases of construction, was intact – the first substantial wooden structure preserved under a British Neolithic barrow.

Edward Martin & Peter Murphy describe the **Bronze Age site at West Row**, Suffolk, and **Edward Martin** describes a '**pot boiler**' site, with a timber-lined pit lying underneath, which compares well with Irish examples.

Christopher Evans & Dale Serjeantson describe the **Iron Age enclosures and houses at Haddenham**, where preservation was remarkable.

Just beyond the fen edge, **Bob Carr** (working for the Suffolk Archaeology Section, not the Fenland Project) describes the important **Saxon site at Brandon**.

How does the view of the Fens change?

Although Fenland palynology and archaeology have been studied for a long time, the Fenland Project has brought to light a mass of new evidence, new sites, new landscapes. Stratigraphical work has shown that the peat–clay–peat sequence does not apply to all Fenland, especially near the sea where there is a complex palimpsest of marine silts, some of them post-Roman. Even where that 'classic' sequence occurs the dates of onset of marine conditions

are appreciably different in different embayments.

The surface survey has used new techniques to reconstruct the Fen landscape and extent at any given time. Knowing these constraints on settlement shows where to look for sites on the fen edge that might be partially buried and waterlogged. The work of the Project has proved a major study of the close relationship of settlement and landscape.

Many more sites are now known in their true context. The distribution of early prehistoric sites and barrows is very specific. Iron Age sites, once said to be absent from the Fen, are numerous, both on the southern Fen islands and on the Lincolnshire marine silts. Roman settlement has been identified on the Norfolk siltlands. The number of salterns recognized throughout the silt fen suggests that the ground-water was then brackish, unsuitable for producing corn; the economy depended on animal husbandry and industry. Saxon settlement of the silt fen has also been shown to be considerable; the late Saxon period saw the beginning of drainage in the silt fen. Continued piecemeal in the early middle ages, Fenland reclamation was finally completed in the 17th and 18th centuries by drainage of the peat fen.

What of the future?

Arable agriculture of the Fenland, mostly root crops and brassicas, is unlikely to be much changed by current EEC policies. Drainage will continue, and peat waste away as it becomes dry and unstable. The lowering of the fen surface will necessitate maintenance of the watertable even lower, and the process will continue until all peat has disappeared.

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It is evident, therefore, that all sites not buried deeply by marine deposits are at risk. Mesolithic and Neolithic sites and landscapes preserved in the marine deposits are a safe resource – although, invisible, they are largely unlocated. Sites in the peat present a difficult problem of preservation. Putting a monument down to grass is not sufficient: as the water table is lowered, all its wet deposits will dry out, leaving just another dry-land site. One approach would be to maintain a group of sites bunded and kept with a high water table – an expensive solution with a continuous management requirement, which is being operated on a small scale at Flag Fen. The alternative of excavation is also expensive; to investigate a small, representative sample of Fenland sites would take all English rescue-archaeology funding for many years.

In the immediate future the Project will excavate some important and threatened sites. The surface survey will lead to a more detailed study of about 150 selected sites and monuments – the most important and representative of their type. The Chairman of the Project, Dr J.M. Coles, is working with the Field Officers in preparing a detailed dossier of these sites, with recommendations for English Heritage; future work will have to address the individual problems of each of these starred areas and sites.

In a final contribution to the special section, **L.P. Louwe Kooijmans** reviews the **Fenland Project's first survey report**, with a viewpoint from across the North Sea.

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