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Sutton Common (South Yorkshire): a monument at risk in England's wetlands

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Abstract

The work on the Iron Age site at Sutton Common, South Yorkshire, UK, has provided both inspiration and a testing ground for the development of English Heritage's strategy for wetlands. This paper concentrates on the non-technical aspects of the developing conservation management of the site, which includes *in situ* preservation of selected waterlogged remains, and summarises the main results of the Monuments at Risk in England's Wetlands project, the new strategy for which it formed the basis.

Introduction

This paper concerns the wider, non-technical, issues surrounding the *in situ* preservation of archaeological sites, alongside the technical aspects of preserving waterlogged remains. The principle site-specific issues of *in situ* preservation of archaeological sites containing waterlogged remains have been widely discussed elsewhere (eg Coles 1995; Kenward and Hall 2000; Coles and Olivier 2001). The need to keep the group water table high, in order to maintain an anoxic environment that inhibits microbial activity, requires that such an archaeological site cannot be preserved *in situ* without a certain degree of control of the hydrology of the site. In practical terms this means that wetland sites cannot be preserved in isolation as 'monument islands', but that a successful conservation management plan must involve consideration of the hydrological catchment of the wider region. As the legal framework does not provide mechanisms to enforce control of the hydrology, the agency wishing to achieve a successful conservation management of monuments in wetlands must therefore consider alternative methods.

English Heritage, the principal agency responsible for the management of archaeological sites in England, has in the last three decades commissioned a number of wetland projects, for example at Flag Fen and Seahenge, as well as survey programmes in the Somerset Levels, the Fens of East Anglia, the mires of the north-west of England and in the area around the Humber (recently summarised in *Current Archaeology* 172). On completion of the final survey, that of the Humber wetlands, English Heritage could look back at a programme of academic research that in terms of scale has few, if any, parallels in Europe. Nevertheless, the need for further work on the future management of these wetlands was required with particular reference to the conservation management of wetlands and wetland sites. In 2000, English Heritage commissioned the Monuments at Risk in England's Wetlands (MAREW) project from the University of Exeter. This programme was to provide a general picture of the condition of England's wetland archaeological resource and the risks it faces, and to create a benchmark against which future changes in England's wetlands could be monitored. It was to pay

particular attention to the effect of hydrological changes on the waterlogged organic archaeological and palaeoenvironmental remains in wetlands. It was also to form the basis for a new English Heritage strategy for wetlands.

The active conservation management strategy of the Iron Age site of Sutton Common, in South Yorkshire, started in 1997 and this enigmatic site with extensive waterlogged remains has acted both as an inspiration to many aspects of the new English Heritage strategy for wetlands, and as a testing ground for a range of core aspects of the conservation management approach advocated in the strategy. It is therefore valid, in this paper concerning the wider issues of *in situ* preservation of wetlands sites, to discuss the main aspects of the work at Sutton Common, before discussing the main results from the MAREW project and the key features of the English Heritage strategy for wetlands.

Sutton Common

The name 'Sutton Common' is used by the Ordnance Survey for three fields south of the small town of Askern (centred

around National Grid Reference SE 563122) in the parish of Sutton, South Yorkshire. Sutton Common is dissected by the palaeochannel of the Hampole Beck, which is now completely drained. Until its enclosure in c 1850, the area was wet and peat formed the soil of the Common. Two enclosures of prehistoric date (South Yorkshire scheduled monument 291) form a pair of features on opposite sides of the palaeochannel. Both enclosures are situated on 'islands' of sands and clay of the '25-foot drift'/Lake Humber clays. The larger of the two enclosures is situated on the eastern side of the former Hampole Beck, the smaller of the two enclosures on the west side (Fig 13.1). Various suggestions have been made as to what the site's function was, ranging from that of a Roman camp or camps (eg Whiting 1936), to a 'lowland hillfort', refuge camp, a site with extensive grain storage facilities, an elite settlement, a site with ideological connotations signified by its locations between various wetland landscapes or possibly a combination of these (eg Parker Pearson and Sydes 1997 and elsewhere), but none of these suggestion can be proven to be more valid than others.

The prehistoric enclosures at Sutton Common have received considerable attention by archaeologists. In the 1860s, the site was mapped by Scott Surtees, and later, in the 1930s, Charles Whiting undertook the excavation of a number

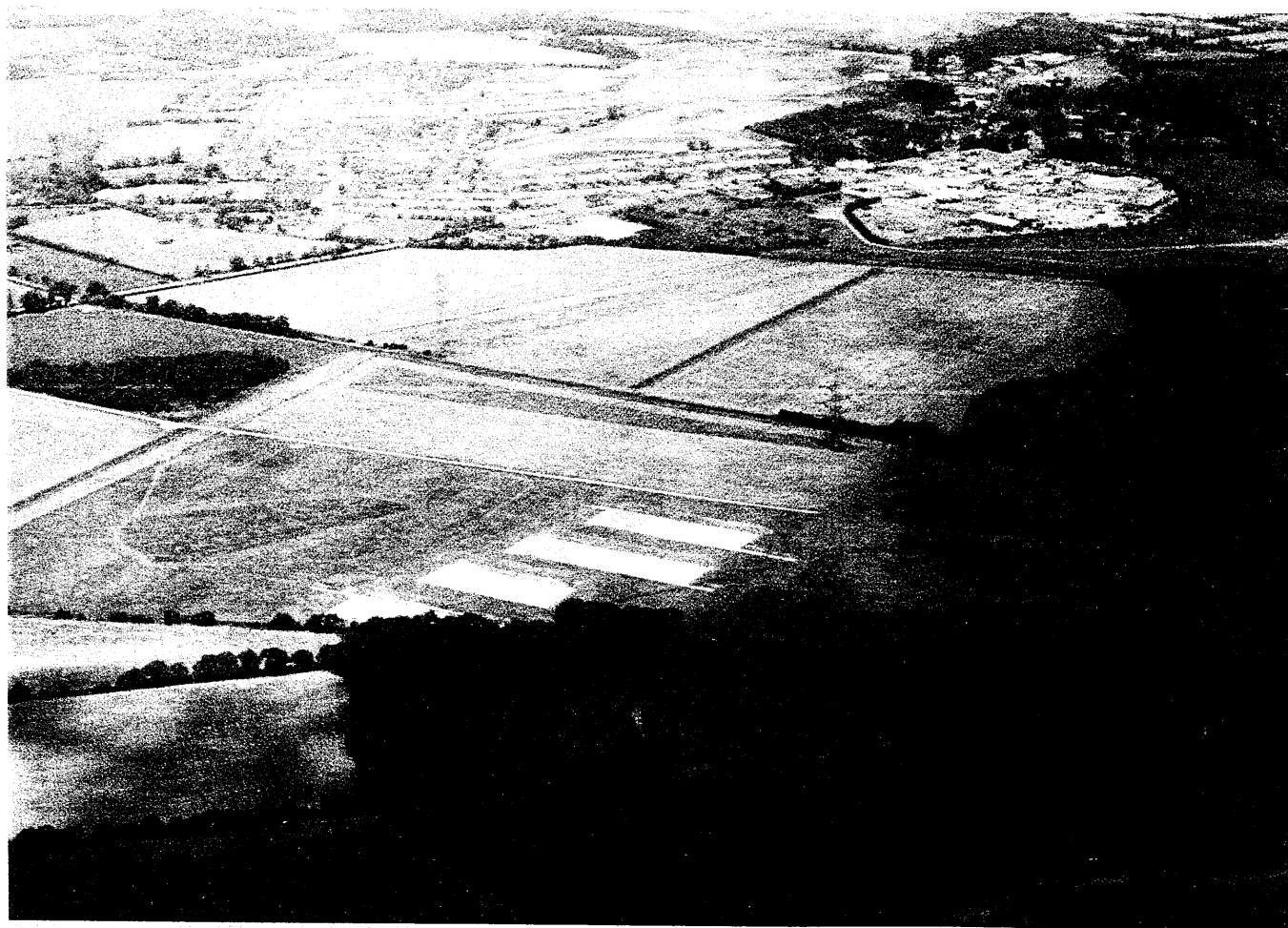


Fig 13.1 Aerial photograph of Sutton Common, showing the remains of the two enclosures straddling the palaeochannel of the Hampole Beck (photo Neil Mitchell; copyright CCT/AP UK)

of trenches across both enclosures (1936). He described the site as a Roman camp (or two camps), which showed well-preserved archaeological remains, including parts of a ladder, and structures, including upstanding wooden remains. No further archaeological fieldwork was undertaken here until after the bulldozing of the larger enclosure in 1980. In 1987, the South Yorkshire Archaeology Unit, with support from English Heritage, undertook the assessment of the waterlogged deposits of the smaller of the two enclosures. This was the first of a number of assessments aimed at determining the state of preservation and the rate of desiccation of the organic remains. Work with similar objectives followed in 1988, 1992 and 1993, the latter by the University of Sheffield. The information on these assessments were collated and discussed in Parker Pearson and Sydes (1997).

In 1997, following the transfer of land to the Carstairs Countryside Trust (CCT) with financial support from English Heritage and the Heritage Lottery Fund, a conservation management strategy could be developed and implemented with the full support of the new landowner. A high-resolution digital survey of the area was undertaken, which showed that the elements of prehistoric landscape were caused by the variable desiccation of organic and inorganic sediments at Sutton Common, indicating that wet-preserved deposits still existed across the site (recently summarised in Chapman and Van de Noort 2001). Further work in 1998 reassessed the state of preservation and rate of desiccation of the site. It concluded that the survival of features, some organic, inside the larger enclosure beneath the ploughsoil was good, although the 'occupation layer' had not survived the recent agricultural activities. Opportunities for long-term *in situ* preservation of archaeological features of the area exist, and have since formed the basis for the work undertaken by CCT, English Heritage and the other agencies involved in the work at Sutton Common (see the Acknowledgements for a fuller description of the organisations involved).

On the basis of the work undertaken in 1998, it was recommended that a programme aimed at (re-)creating a wetter environment would not only place the monument in an environmental context which is more akin to its contemporaneous surrounds, where its functions and meanings can be much better understood and explained, but additionally, enhancement of *in situ* preservation of important elements of the waterlogged archaeological resource may be achieved. Moreover where desiccation has advanced considerably, preservation by record rather than preservation *in situ* should be considered and any programme aimed at creating a wetter environment should be accompanied by a programme of monitoring of the groundwater hydrology and its effect on the archaeological deposits. Hydrological data suggest that permanent waterlogging of the primary deposits within the ditches of the smaller enclosure and of parts of the palaeochannel of the Hampole Beck can be achieved; but the possibilities for *in situ* preservation of organic archaeological and palaeoenvironmental material in

the larger enclosure following the creation of a wetland are more problematic.

Since 1998, additional work at Sutton Common has been based on these recommendations. A programme of monitoring the water table and its impact on the burial environment has been instigated through the CCT sponsorship of a research studentship (currently being undertaken by James Cheetham at the University of Hull; eg Van de Noort et al 2001a and 2001b). In 1999, additional work was commissioned by English Heritage to assess the extent and state of preservation of archaeological remains in the interior of the larger enclosure, and to excavate the entranceway to the larger enclosure and a small part of the causeway linking both enclosures across the Hampole Beck. This resulted in a much improved understanding of the site and, in particular, the manner in which the two enclosures were linked in the Iron Age. However, the research also confirmed earlier concerns that the long-term *in situ* preservation of waterlogged remains within the larger enclosure is not feasible. In order to address this issue English Heritage has commissioned the University of Exeter to develop an excavation and research project.

A series of 'town meetings' in the Askern Miners Welfare engaged local people with the project, and have provided the springboard for discussion about how the conservation management strategy could be incorporated in economic development of this former coal-mining community. The need to engage the young people with the work at Sutton Common formed the basis for the project 'Rubbish and Archaeology' undertaken in a partnership between CCT, English Heritage and the University of Exeter (Van de Noort and Panter 2000). This project involves experimental archaeology and scientific research into the deterioration of organic and inorganic remains through an experimental burial project with archaeological researchers and local schoolchildren participating side by side. In September 2000, 152 school children buried objects after analysis. These were to be re-excavated during the subsequent Nation Science Week whereupon the objects would be analysed again (unfortunately this had to be postponed following the Foot and Mouth disease outbreak). The project is intended to provide the children with some insight into the creation of the archaeological record, with hands on experience of some simple and some more advanced scientific methods, and to involve them closely with the archaeological work undertaken in the past and in the future at Sutton Common.

In terms of policy, the work at Sutton Common confirmed considerable shortfalls in the legal framework when it comes to the protection of wetland sites. This includes the limited definition of what constitutes an 'archaeological site' and the exclusion of the palaeoenvironmental archive from protection through scheduling. It also includes the wide issue of responsibility for management of the drainage system, and the integration and delegation of responsibilities among a range of governmental and non-governmental organisations involved in the environment.

Monuments at risk in England's wetlands

The reasons for the Monuments at Risk in England's Wetlands (MAREW) project included the growing realisation within the archaeological community that despite the enormous progress made in archaeological wetland research, relative little progress has been made on archaeological wetland management. Notwithstanding the publication of *Wetland management; a survey for English Heritage* (Coles 1995), few examples of the successful *in situ* management of wetland archaeological sites exist in this country. Furthermore, the efficacy of the management and mitigation of the main threats to the wetlands in England, including drainage and peat extraction, through either the scheduling process or planning guidance (eg PPG16) is not clearly understood and, finally, research into the effectiveness of *in situ* preservation of wetland sites is poorly developed.

The aim of MAREW was the collation and assessment of information that was required to underpin the future strategy for the archaeological management of wetlands. It aims to provide quantitative data on the extent of the wetland heritage and the rate of its destruction and deterioration. The majority of data were obtained through analysis of existing literature and data, principal among these the 101 Sites and Monuments Record (SMR) offices in England and the monographs of the English Heritage funded wetland surveys, and through liaison with a large number of governmental and non-governmental agencies which hold data and information on wetlands – their destruction and conservation. One questionnaire, sent to all local authority archaeological officers, tested the awareness of wetland-specific issues, in particular the impact of changes of the hydrology on waterlogged archaeological and palaeo-environmental remains outside areas of development. A second questionnaire tested the awareness of the cultural heritage in wetlands amongst nature conservation and wildlife organisations.

MAREW concentrated on three categories of wetlands: upland peatlands; lowland peatlands and alluviated lands below 10m OD, totalling c 1.1 million ha of land (Fig 13.2). Several categories of wetlands, as defined by the Ramsar Convention on Wetlands, had to be omitted from the study, that is the rivers and their floodplains above 10m OD and the coastal wetlands. These areas were considered insufficiently researched in the field to allow for confident quantification of their archaeological potential. For the same reason the waterfronts of towns such as London and York and the 'urban wetlands' were omitted from the study. MAREW recommended that these areas should be the subject of separate studies.

The key results of MAREW can be summarised as follows (Van de Noort et al 2002). The identifiable archaeological resource of England's wetlands comprises 13,400 monuments, including 1800 monuments in upland peatlands, 4200 in lowland peatlands, and 7400 in alluviated lowlands. In addition, a significant number of unidentifiable monuments remain deeply buried, mainly in the alluviated

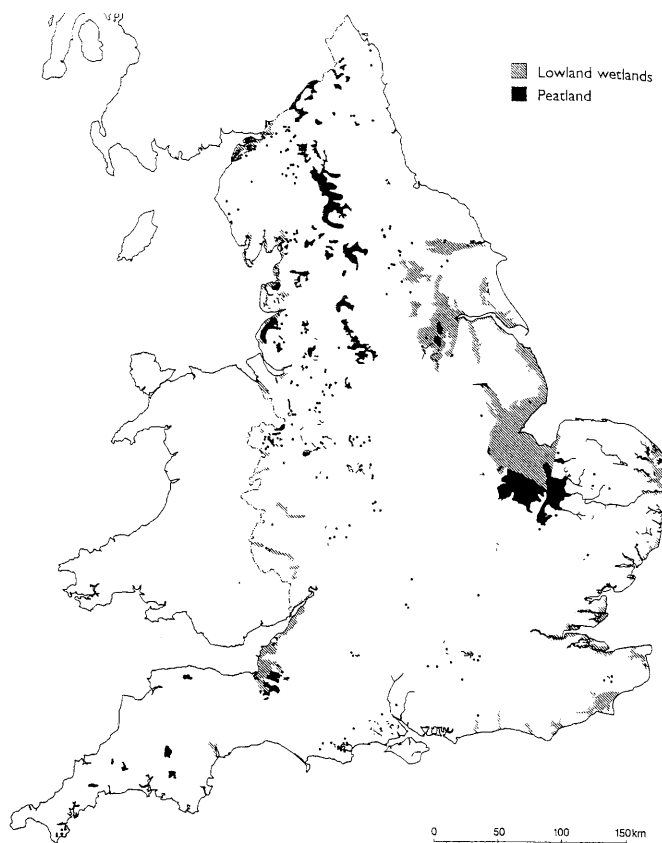


Fig 13.2 Map of the main wetlands in England, as defined for the purpose of the Monuments at Risk in England's Wetlands project (Mike Rouillard)

lowlands and beneath upland peat. We must also recognise the importance of the extensive body of palaeoenvironmental source material, forming either matrices of archaeological sites, or separate 'archives' that hold information on landscape and climate change (eg Burton and Hodgson 1987).

Seven key-causes of monument destruction in England's wetlands have been recognised. These are: drainage; water abstraction; conversion of pasture into arable land; peat wastage; peat erosion; peat extraction and urban and industrial expansion onto wetlands (Fig 13.3). Of these, the effect of drainage and the associated change of land use has the greatest impact either directly, through the lowering of the water table, or indirectly, for example through 'peat wastage'. Lowland peatlands have suffered more than other wetland areas, and MAREW estimates that at least 50% of the original extent of lowland peatland has been lost in the last 50 years alone. In the immediate future, the pressure of these threats on our wetlands is likely to be aggravated by the impact of climate change, especially sea level change (Bergkamp and Orlando 1999).

Over the last 50 years, the number of wetland monuments that have suffered from wholesale destruction is estimated at 2950. This includes mainly sites in lowland peatlands that have been destroyed through peat wastage (2020 monuments), peat extraction (230 monuments) and urban and industrial expansion onto wetlands (estimated at 700 monuments). Over the same period, the number of wetland

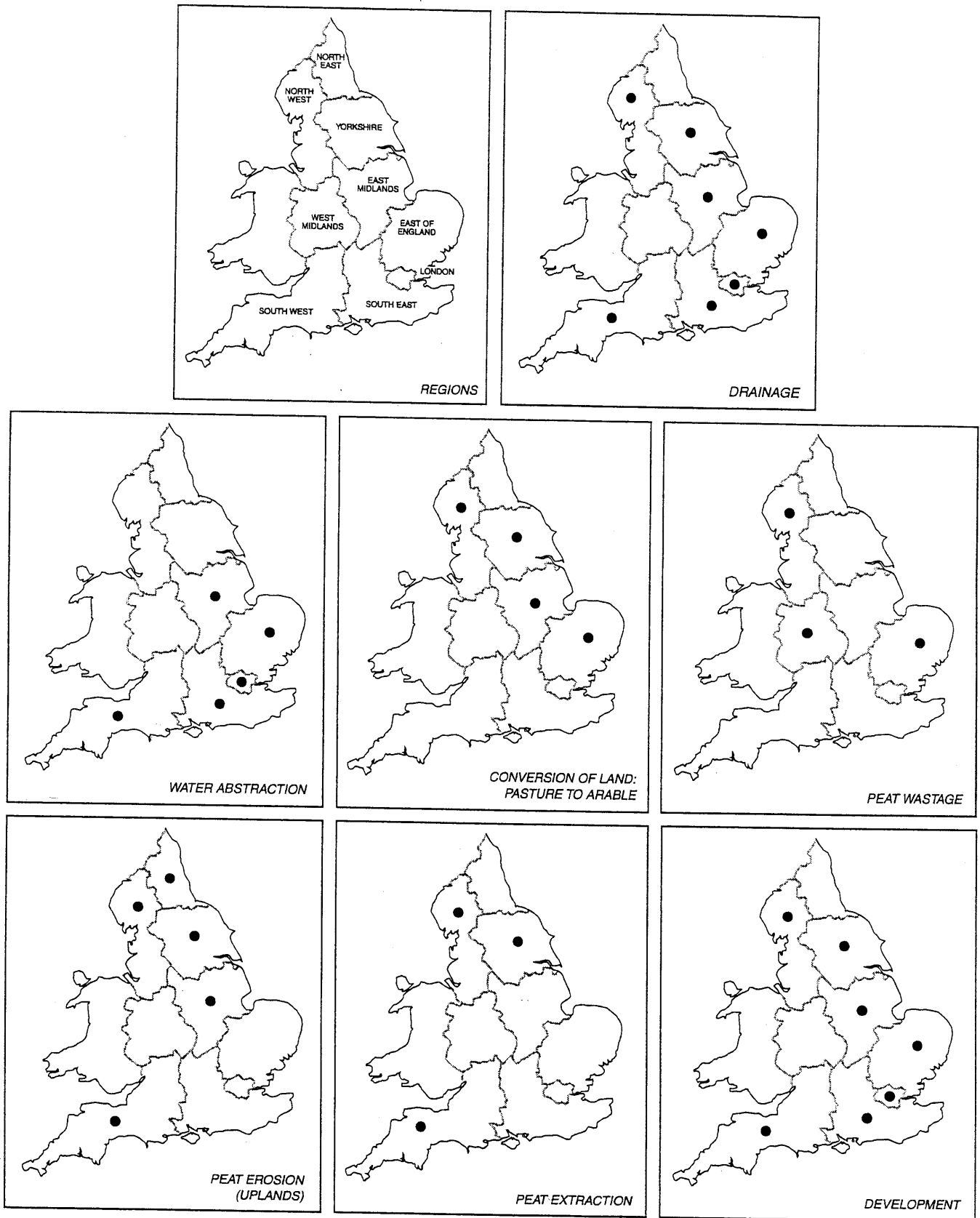


Fig 13.3 Characterisation of the threats to England's wetland regions as devised by English Heritage (Mike Rouillard)

monuments that have suffered from damage, desiccation and partial destruction is estimated at 10,450 (with some suffering more than one type of damage). This includes mainly sites in alluviated lowlands and lowland peatlands that

have been damaged through drainage (9020 monuments), and ploughing (1650 monuments suffering from drainage and desiccation are now also under arable instead of pasture land use), while 360 sites are no longer protected by upland

peat. An additional number of wetland sites survive more or less intact, buried beneath upland peat (estimated at 1440 monuments), lowland peat (estimated at 2940 monuments) and alluvial sediments in the lowlands of England (no estimate attempted). These sites are likely to be well preserved, although a number of key causes of change in particular water abstraction, drainage and urban and industrial expansion onto wetlands threaten this resource.

Appreciation of the wetland resource in the archaeological community was assessed by a short questionnaire sent out to all local government-based curatorial archaeologists. On the basis of the responses (64 out of 87 questionnaires were returned, 74%), 43 archaeologists (72% of respondents) stated that wetlands existed within their local government area, and 40 (67%) recognised that these wetlands included an archaeological resource or potential. Only six of the 43 local authorities with wetlands (14%) had policy procedures in place to deal with wetland-specific matters, although the type of procedure ranged from detailed statements that were taken into account in the planning process including the impact of hydrological changes beyond the limit of the development (eg Avon, Cambridgeshire and Somerset) to additional but limited requirements in briefs for archaeological work.

In its recommendations to English Heritage, MAREW drew on a range of 'best practice' examples from across the country and beyond (eg Coles 1995), and the experience at Sutton Common provided considerable inspiration. The management strategy at Sutton Common involved a range of practical mechanisms to protect the waterlogged remains, including the use of dams and changing the efficacy of the existing drainage system, in close cooperation with the local Internal Drainage Board. Alongside the practical work, the monitoring programme is ongoing. The need to consider the wider hydrological context of the Sutton Common site and the need to protect palaeoenvironmental archives had resulted in 'interagency' cooperation on the ground, with English Heritage, English Nature and Countryside Agency and others. The work at Sutton Common also highlighted a number of deficiencies in the existing policies and legislation. The outreach to the local community and education projects undertaken with local schools has contributed considerably to the appreciation and awareness of the archaeology of Sutton Common of the public. Finally, and most importantly, at Sutton Common we recognised that not all waterlogged remains could be preserved *in situ*. These remains will therefore be excavated as part of an academic research project aimed at unravelling the Sutton Common enigma (Van de Noort and Chapman 2001).

English Heritage strategy for wetlands

Considering the extent of the cultural heritage resource of our wetlands, and the present and future threats it faces, the

future conservation and management of the monuments in England's wetlands cannot be undertaken by the archaeological community alone. However, the cultural heritage value of wetlands sits alongside nature conservation and recreational values. MAREW recognised that the future of monuments in England's wetlands can only be addressed through cooperation with other organisations, and that this must form the cornerstone for any strategic approach.

English Heritage's strategy for wetlands is not only based on the management of individual sites within their wider landscape setting, but also the wider issues of outreach and education, procedures and policy and research.

Management strategies

To promote practical mechanisms to conserve and protect the cultural heritage by developing guidance and best practice for the integration of cultural heritage and nature conservation in wetland management.

Outreach and education

To promote and disseminate understanding of the cultural heritage of wetlands as an essential precondition for the development of successful management policies.

Procedures and policy

To promote the cultural heritage interests of wetlands in the work of local authorities, national, international and intergovernmental agencies.

Research

To promote applied research to underpin and inform the management of wetlands.

An implementation plan has been developed, which will address many of the issues raised by MAREW. In terms of management strategies, this will involve the production of an inventory of the most important wetland monuments in England, and the design and implementation of site-specific conservation management strategies. The development of mechanisms for a selection of these sites to function as 'beacon sites', ie platforms for interagency cooperation forms a key component of disseminating 'best practices'. The development of partnership with other agencies' conservation management strategies for wetland landscapes forms the basis for the successful preservation of wetlandscapes.

As for outreach and education, this will involve the furthering of cooperation and effective liaison between English Heritage and statutory organisations relevant to wetland management. It will also include the dissemination of information through the popular media and the provision of access to wetland archaeological research during excavations through 'open days', publicity and participation.

Concerning procedure and policy, English Heritage will develop, in consultation with Association of Local Government Archaeological Officers (ALGAO), a geographical information systems (GIS) resource for

curatorial authorities to be used in the planning process. This GIS resource will incorporate map data on the extent of the various types of wetland landscapes linked to an assessment of archaeological potential and contextual mitigation policies. It will also involve development and training of local authority archaeologists, managers and consultants on the hydrological context of archaeological sites in the planning process for consideration within the existing PPG16 framework. In consultation with ALGAO English Heritage will enter negotiations with the Peat Producers Association (PPA) on the adoption of a uniform archaeological policy in areas under commercial peat extraction and 'best practice' guidance on the cultural heritage for use by the peat industry, conservation bodies, landowners and farming and wildlife groups will be produced. Finally, English Heritage will continue to consider changes in legislation (eg the Culture and Recreation Bill), policy and planning regulations at all levels, where possible with its partners, including the Europae Archaeologiae Consilium (EAC) (Coles and Olivier 2001).

In terms of research, English Heritage will develop pilot surveys of the upland peatlands in England, linked to an assessment of the erosion of upland peat and develop assessments of the rivers and their floodplains above 10m OD, the intertidal wetlands and urban waterlogged resource. It will develop research programmes that provide qualitative assessments of wetland monuments that remain deeply buried by peat and alluvial deposits, develop research on the causes of peat wastage and develop research into the impact of statutory designation on archaeological monuments. The need for the development of research into wetland-specific prospection techniques is recognised. English Heritage will also develop research into the preservation of archaeological remains *in situ*, including the effect of the chemical oxidants on wetlands under pasture, the effect of bioturbation of different wetland tree and plant species and the dynamics of hydrology in various wetland landscapes and its impact on *in situ* preservation.

Conclusion

The future of wetlands in England and beyond benefits from its recent reappraisal and revaluation, mainly on the basis of the threatened flora and fauna, through the work of the Ramsar Convention on Wetlands and other organisations. The recent recognition by Ramsar that the cultural heritage of wetlands forms a vital part of the long-term sustainability of wetlands, has led to this being the theme for World Wetlands Day 2002 (Davidson in Coles and Olivier 2001).

The future of wetland archaeology rests essentially on the successful cooperation of organisations and individuals who have an interest in wetlands. Only through interagency cooperation can a substantial part of what remains of our

wetlands be protected. Only through 'whole wetland' management, for example as promoted by the National Trust at Wicken Fen in Cambridgeshire, can the sustainable *in situ* preservation of archaeological wetland monuments be delivered. Further research on a range of issues is required to play a constructive part in this process, and to ensure that the archaeological remains receive the optimal benefit from wetland conservation projects.

The future of Sutton Common will be assessed and the waterlogged archaeological remains here will be preserved *in situ* if we can restore the landscape to what it was before 1850. Whether we will succeed depends on a range of factors, not all under the control of those involved, varying from rainfall to the long-term impact of the agricultural fertilisers and nutrients added to the soil before 1997. Nevertheless, with the forthcoming excavations of the larger enclosure, the completion of the 'Rubbish and Archaeology' project and the study of the impact of the practical mechanisms to restore the Common, we expect the Sutton Common project to deliver a range of results that will benefit wetland archaeology for some time to come.

Acknowledgements

The 'Sutton Common project' is spearheaded by the Trustees of the Carstairs Countryside Trust (CCT), who own the land, in partnership with English Heritage, English Nature, Countryside Agency, the Universities of Exeter and Hull and Grantham Brundell and Farran. The project, which includes land acquisitions, wildlife and landscape enhancement, archaeological and palaeoenvironmental evaluations, research and conservation, and engineering works to raise groundwater levels has been made possible through the cooperation of the Sheard Family Trust and financial support from: English Heritage, Heritage Lottery Fund, English Nature, Countryside Agency, Darrington Quarries (Landfill Tax Credits) through Waste Recycling Environmental (WREN), James Goodhart, The Pilgrim Trust, the University of Hull and DEFRA's Countryside Stewardship Scheme. Help has also been given by Doncaster Naturalists Society and Crombie, Wilkinson Solicitors and Carter Jonas, Property Consultants, both of York. This innovative project forms one of the trial schemes in the Humberhead Levels 'Value in Wetness' Land Management Initiative. Participation with the Askern Community Partnership over public access and enjoyment of the site seeks to contribute to the environmental and economic regeneration of this Coalfields area in South Yorkshire.

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