I
n 1870, agricultural land improvement outside Dorchester-on-Thames involved levelling the ramparts of the Iron Age oppidum at Dyke Hills. Colonel Lane-Fox, later the first Inspector of Ancient Monuments, wrote to the Saturday Review of 2nd July describing damage to the site: ‘Hitherto the neighbouring ground has been grazed, and the harmless sheep is no foe to history; but it has lately occurred to the owner of the ground that a few shillings more of yearly profit might be gained by turning pasture land into arable; and to such a sordid motive as this, these precious antiquities are at this very moment being sacrificed.’

This was one of the high profile cases that contributed to Sir John Lubbock’s National Monuments Preservation Bill in 1873, which eventually reached the statute book in 1882 as the first Ancient Monuments Act.

Sadly, despite 120 years of increasingly effective ancient monument legislation in the UK, archaeological damage caused by cultivation remains a largely unresolved problem. In England, many thousands of archaeological sites – including nearly 3000 scheduled monuments – are still being ploughed. It is particularly ironic that Dyke Hills should remain one of these. This lack of progress stands in stark contrast to the immense gains of the 1980s and 1990s in mitigating damage by development, road-building and aggregate extraction.

In many respects, delivering effective protection for sites in cultivated landscapes remains the black hole in land-based archaeological resource management. However, with Government now considering future approaches to heritage legislation in England and Wales and with major reforms of agricultural policy imminent, it may at last be possible to make headway with this most challenging of problems.

**Agricultural policy and archaeology**

During and after the second world war, concerns over food security dominated agricultural policy and promoted rapid mechanisation and intensification. This trend was exacerbated further by UK entry to the European Common Agricultural Policy (CAP) in 1973. Although damage to archaeology from ploughing was not a new phenomenon, post-war intensification of farming accelerated the pace dramatically.

The impact of intensive agriculture has long been recognised by archaeologists. In the 1970s a series of regional surveys highlighted the severity of the threat and led in 1980 to a landmark conference, *The Past under the Plough*. Plough damage surveys have continued sporadically ever since. This accumulating evidence stimulated a number of legal changes. New ancient monument legislation in 1972 and 1979 introduced payments to farmers to encourage improved management of ancient monuments. More importantly, the 1986 Agriculture Act placed a duty on the Secretary of State to strike a ‘reasonable balance’ between the interests of agriculture and environmental conservation, including archaeology. As a result, archaeological conservation became an objective of environmental farming schemes – Environmentally Sensitive Areas and Countryside Stewardship – when they were launched in 1987 and 1991 respectively.

Despite 120 years of heritage legislation, Dyke Hills, Oxfordshire is still under the plough. Photograph English Heritage

**Tide of change?**

Radical changes are set to take place in the next decade. International trade pressures and concerns over the environmental damage caused by the CAP will result in phasing out of production subsidies. Already there are proposals to ‘de-couple’ subsidies from production, to reduce the intensity of farming. More importantly, there are plans to use increasing amounts of the annual £3 billion farm subsidy to expand environmentally beneficial farming practices, including a major new agri-environment scheme.

In 2005, Environmental Stewardship will be launched in England. This should attract far more farmers than current schemes and put greater areas into environmental management. Potential benefits are high and the Department for Environment Food and Rural Affairs (Defra), English Heritage, ALGAO and the CBA are working hard to ensure that archaeology will have a high profile in this new scheme.

**Significant challenges**

Despite this, the heritage sector faces significant challenges if it is to address the problem of plough damage effectively. Foremost is the weakness of existing ancient monument legislation with respect to cultivation.

When the current Ancient Monument Act was passed in 1979 it introduced a requirement to seek consent for works to scheduled monuments, in order to prevent or mitigate damaging activities. One exception to this was the Class Consent 1 arrangement, which effectively permits continued unlicensed cultivation of scheduled monuments to a constant depth, on the assumption that this would not cause further damage. While

**These agri-environment schemes had great potential to benefit the heritage because they integrated archaeological site management with other environmental interests across the farm. Over the 16 years of their operation, they achieved a great deal in terms of benign management for archaeological sites and other historic features. Nevertheless, the schemes have been largely unsuccessful in dealing with sites under arable cultivation, mainly because payments were unattractive compared to farm subsidies for continuing and intensifying production: subsidies which now require some £3 billion of public expenditure each year in the UK.**
the logic of this arrangement is deeply flawed – constant depth ploughing will incrementally bite deeper whenever soil compacts or erodes – it was dictated as much by practical considerations as by legal difficulties.

First were difficulties in choosing sites to remove from cultivation, for no sound methodology for rapid multiple-site assessments of risk had been devised to allow national priorities to be identified. The numerous plough damage assessments carried out over the years have usually involved site-specific, expensive and often destructive techniques that could not be usefully and cost-effectively scaled-up in order to evaluate the thousands of sites affected.

Second, there are significant impediments to delivering improved management on many sites. Although ancient monument legislation does include powers to require and compensate the cessation of ploughing, it includes no powers to require subsequent active management. Consequently, legally imposed cessation could result in long-term neglect, with problems of scrub growth, root damage and animal burrowing. Equally, conversion to grass cover is often not realistic on arable farms with no stock. Nevertheless, surprisingly little work has been carried out to develop the viable use of minimum cultivation approaches for long-term archaeological site management or on techniques to allow active monitoring of the impacts of minimum tillage below the ground.

Third, even where enhanced management is negotiable, there have been very limited resources in heritage budgets for rewarding land managers willing to deliver changes.

Towards a solution?
Faced with these challenges, any strategy for addressing plough damage needs to operate at a number of levels. Firstly, it needs to deliver greater political and media awareness of the issue. Secondly, it needs to build a compelling evidence base for the scale and severity of the problem and, finally, it needs to address the practical challenges. In England, the first step towards a comprehensive evidence base was the Monuments at Risk Survey (MARS), published in 1998. Not until MARS was it possible to present a nationally comprehensive picture of the state of the resource. The survey demonstrated that one archaeological monument had been destroyed each day since 1945 and that – with the checks and balances now in the development control system – agriculture has become the main cause of unmitigated archaeological damage.

This national survey of the resource has stimulated a number of follow-up projects. For example, English Heritage has sponsored Exeter University to undertake Monuments at Risk in England’s Wetlands. This examined threats – including ploughing and agricultural drainage – to the archaeology of wetlands, an area of acknowledged weakness in the MARS report. English Heritage has also launched a study of threats to all scheduled monuments in the East Midlands, building a more comprehensive picture of the pressures than that provided by the 5% sample of sites examined by MARS. Scheduled Monuments at Risk in the East Midlands is the prelude to similar exercises in other English regions. Alongside these follow-up evidence-gathering projects there has been work to tackle the practical challenges of plough damage. Of particular importance was sponsorship by the Ministry of Agriculture (now Defra) of a major study of cultivation impacts on archaeology by Oxford Archaeology, in collaboration with the CBA. The Management of Archaeological Sites in Arable Landscapes, is now published on Defra’s website. The project usefully reviewed past evidence of cultivation damage and devised a rapid assessment methodology for determining those sites most ‘at risk’. Defra and English Heritage are now jointly sponsoring Conservation of Scheduled Monuments in Cultivation (COSMIC). This brings together the Scheduled Monuments at Risk methodology and the detailed assessment process developed by the Arable Landscapes project to provide innovative large-scale field trials in the East Midlands. In parallel with this, the English Heritage Centre for Archaeology is developing a simple and cost effective approach to ‘real-time’ monitoring of plough depth in relation to archaeological deposits. This work, still in its infancy, is looking at ways of establishing where cultivation is actively causing damage.

Next steps
In July 2003, the Government launched a consultation on the future of heritage designation in England, Protecting our Heritage: Making the System Work Better. An equivalent Welsh Assembly paper followed in September. These wide-ranging papers identified plough damage to archaeology as a serious issue and invited comment.

In parallel with the English consultation paper – and armed with the evidence provided by MARS and its successor studies – English Heritage published a campaign document to raise the profile of the plough damage problem with the media, opinion formers and politicians. The Ripping up History campaign has been a considerable success, stimulating substantial media coverage, obtaining endorsement from politicians, and bringing the issue to the attention of Ministers in DCMS and Defra. The campaign also gained recognition by influential organisations outside the heritage sector, including the Campaign for the Protection of Rural England and, most importantly, the National Farmers Union. Attention was again focussed on the issue when Heritage Counts was launched in November. A special New Statesman historic environment supplement accompanying the launch contained articles debating the issue by Tony Robinson and Andrew Clark of the NFU.

The initiative now lies with Government as it develops a Heritage White Paper to follow up its consultation exercise. In her preface to the DCMS consultation paper, Tessa Jowell wrote that heritage legislation must be sufficiently robust to protect what is fragile and sufficiently flexible to allow change. English Heritage believes that if the Secretary of State’s objective is to be delivered successfully, any new legislative framework must finally address the protection of the most fragile of all our historic remains: the past under the plough.