



# Ripping up History



## Archaeology under the Plough

The landscape is our most precious historic document. Its archaeological sites and monuments are the only evidence we have for the majority of human history, and are fundamental to the fascination and diversity of the countryside, providing its narrative and contributing to its sense of place. Despite surviving for hundreds or thousands of years, these unique and irreplaceable remains are fragile and can easily be destroyed.

Since 1945, increasingly intensive cultivation has damaged many archaeological sites. Modern ploughing has done more damage in six decades than traditional agriculture did in the preceding six centuries. Among the sites being actively ploughed are nearly 3000 scheduled monuments – sites recognised as being of national importance to our heritage.

We are, quite literally, ripping up our history.

Farmers are not at fault. They have done what society has asked them to do and past agricultural policy has dictated. However, if this important inheritance is to be better protected in future, it is essential that government, archaeologists and farmers now work together to find a new and more sensitive approach.



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## The problem

In 1998 English Heritage published a national Monuments at Risk survey. This showed that since 1945, agriculture has been the single biggest cause of uncontrolled loss amongst archaeological sites. The survey demonstrated that 10% of destruction and 30% of damage to archaeological sites in the last half-century is attributable to agriculture and that about a third of all recorded archaeological sites in rural areas remain under the plough.

Damage is being caused by a number of cultivation processes including:

- conversion of grassland in which archaeological sites are well preserved to arable land;
- gradual encroachment of ploughing on sites surviving as 'islands' in arable fields;
- long-term erosive effects of repetitive cultivation; and
- deeper ploughing to grow certain crops.

These problems are continuing apace. Archaeologically sensitive grassland is still being turned over to cultivation.

Sites already under the plough continue to decline as the power of agricultural machinery increases and as new areas are subject to deeper ploughing for root crops. Even sites being ploughed to a constant depth can be damaged as soil is compacted or lost to erosion.

### FACT

Between 1950 and 2001, the area of permanent grassland in England fell by 637,000 hectares. This is an area 17 times the size of the Isle of Wight, containing an estimated 14,000 archaeological sites.

### FACT

Modern tractors are up to ten times more powerful and eight times heavier than a typical tractor in 1940. This makes ploughing more destructive. It also increases the need for potentially destructive subsoiling to counteract soil compaction.

### FACT

As the cultivation of root crops migrates to avoid disease, deeper ploughing impacts on areas previously less intensively cultivated.

### Intensive cultivation damages landscape character

**Above left** Padbury, Buckinghamshire, in 1953, with well-preserved medieval ridge and furrow. © Ministry of Defence.

**Above right** Padbury, Buckinghamshire, in 2003. Intensification has led to the destruction of archaeological remains, loss of hedgerows and field trees as well as a decline in biodiversity. © English Heritage.

### Cultivation equipment is increasing in power

**Below** Ploughing has levered up half of the lid of a Romano-British limestone coffin at Owmbly, Lincolnshire, and deeply scarred the remaining half. © English Heritage.







## The impact

Ploughing causes damage at a variety of scales, from individual artefacts to whole sites and entire landscapes. Some of our most fragile monuments and landscapes are suffering badly.

In the intensively farmed east of England few sites have escaped mutilation. In our wetlands, the best preserved archaeological sites are drying out and decaying as the result of agricultural drainage and cultivation. The distinctive prehistoric archaeology of our Downs and Wolds has also been devastated. Hundreds of burial mounds – often striking skyline features – have been ploughed away or damaged. Prehistoric field systems, once a common feature on our chalk hills, now survive only as isolated fragments. Even apparently robust sites, such as masonry-built Roman villas, are suffering serious damage as the mechanical power of farm equipment continues to increase.

Loss of these sites is depriving the landscape of its sense of time and place and its historic narrative.

### FACT

Neolithic long barrows are the oldest visible monuments in the landscape. More than half of the long barrows on the Gloucestershire Cotswolds, more than two thirds of those in Hampshire, and four fifths of those on the Lincolnshire Wolds have been destroyed or damaged by ploughing.

### FACT

Fewer than 10 out of 1200 burial mounds in Essex now survive as earthworks. The others, including all the county's long barrows, are ploughed flat.

### FACT

Three quarters of England's wetlands are used for arable farming. Over 10,000 wetland monuments are estimated to have suffered damage in the last 50 years, mainly caused by agricultural drainage and ploughing.

### FACT

Medieval ridge and furrow – once an extensive and highly characteristic landscape feature of the Midlands – is seriously threatened as grassland is ploughed up. An estimated 94% of East Midlands ridge and furrow has been destroyed. Surviving areas are still being lost.

### FACT

Only 2 out of 39 Bronze Age metalwork hoards recovered from Norfolk in the last 30 years had not been disturbed by agriculture.

### FACT

Ploughing is damaging over 100 Anglo-Saxon cemeteries in Norfolk and Suffolk.

### Plough damaged sites are irreplaceable

#### Above from left to right

Roman mosaics damaged by ploughing at Dinington, Somerset © Somerset County Council; and near Brackley, Northamptonshire © CJS; Pillerton Priors, Warwickshire © Bryn Walters and Stanwick, Northamptonshire © English Heritage also on cover.

### Nationally important sites are being damaged

**Below** At Arbury Banks, a scheduled monument in Northamptonshire, ploughing has destroyed half of the overlying medieval ridge and furrow and is damaging the underlying Iron Age fortification. © English Heritage.



## Nationally and internationally important monuments

Much of this damage is occurring to our most valuable archaeological sites, including those nationally important sites designated as *scheduled monuments*. This is because current heritage legislation permits essentially uncontrolled cultivation of otherwise protected monuments, irrespective of their significance. Even World Heritage Site status does not confer any additional protection from cultivation and many monuments within these internationally important areas are being intensively ploughed.

### FACT

Nearly 3000 scheduled monuments in England are currently under cultivation.

### FACT

A recent survey in the East Midlands has demonstrated that one third of all scheduled field monuments in the region are vulnerable to agriculture, making it the single greatest threat to their survival.

### FACT

Over a quarter of the individual nationally important scheduled monuments in the Stonehenge and Avebury World Heritage Site – prehistoric landscapes of iconic significance – are under damaging arable cultivation.

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## The way forward: three key actions

English Heritage wants to see a living and working countryside that can accommodate change and development while celebrating the evidence of its past. We welcome the Government's strategy for delivering a sustainable farming industry fit for the 21st century, but believe the continuing destruction of our most valued archaeological sites by cultivation cannot be an acceptable part of this vision.

We accept that this is a difficult problem for which there will not always be 'overnight' solutions. We also understand that resolving this problem requires the co-operation and support of the farming community. English Heritage therefore supports the central recommendation of the Policy Commission on the Future of Farming and Food that farmers should be rewarded for their good stewardship of the landscape. We believe that properly rewarded management of archaeological sites should be an important feature of this new 'contract' between farmers and society.

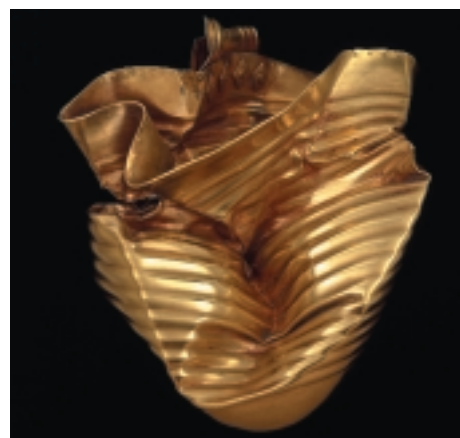
### Three key actions could provide far greater protection for our heritage:

Firstly, as the majority of significant archaeological sites under cultivation will normally be managed through voluntary agreements, we wish to see greater emphasis on the use of environmental farming schemes to deliver better protection. We therefore welcome the recent proposal by the Department for Environment Food and Rural Affairs to provide greater emphasis on conservation of the historic environment in their agri-environment schemes. **We encourage Defra to reflect this in its research programmes and in more effective measures to address the cultivation of archaeological sites when its new schemes are launched in 2005.**

### Intensive ploughing can damage landscapes, sites and artefacts

**Top** Neolithic enclosures in a heavily ploughed field south of Rudston, East Yorkshire. © English Heritage.

**Below** Bronze Age gold cup from Woodnesborough, Kent, crushed by the impact of a plough. © British Museum.



2 Secondly, we wish to see the current ineffective legislative framework for conserving scheduled monuments under cultivation replaced by modernised and workable protective arrangements. While this need not mean the cessation of cultivation on all scheduled monuments, it should deliver future management based on site-specific risk assessment and long-term monitoring of the impact of cultivation. **We therefore urge the Government to address this issue as part of its current review of heritage protection legislation.**

3 Thirdly, important and well-preserved archaeological sites in grassland should no longer be turned over to arable cultivation. **Defra should ensure this principle is reflected in the cross-compliance requirements for the new single farm payment and in its review of the current Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) Regulations.**

**Together, these actions will help to secure a future for our countryside's past.**