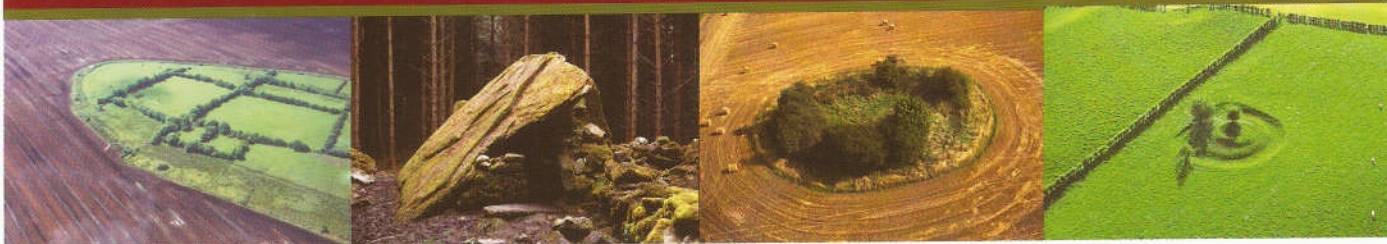




GOOD FARMING PRACTICE AND ARCHAEOLOGY



AN ROINN COMHSHAOIL, OIÐHREACHTA AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT



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PLATE 1. Bronze Age Rock Art (C. Manning)

The Irish countryside is rich in ancient settlements and ritual monuments. These tell the story of generations of farming communities who have made their living from the land. Most townlands contain at least one ancient monument, many contain several. Some are constructed of earth or stone and may appear as banks of earth or humps and hollows on the ground surface, others are buried and have to be revealed by aerial photography or by excavation. Many historic buildings stand as isolated ruins in a field or have been incorporated into the later farm and outbuildings. Because so little of our early history is written down the preservation of monuments is essential to an understanding of our past.

The traditions and beliefs of older generations have prevented much interference with the 'fairy rings' or 'giants graves' and mass rocks on the farm. The wholesale availability of heavy modern machinery however, has meant these ancient man-made features are seen as an obstacle to the easy passage of machinery, and are likely to be removed with little thought for what history they might contain. Field boundaries which may incorporate the remains of ancient monuments have been cleared to make larger fields. Poor lands, never before ploughed, are drained and reclaimed or afforested.

Plate 2. Medieval castle
at Dunamase, Co. Laois
(C. Brogan)

WHAT MONUMENTS ARE ON YOUR FARM?

The National Monuments Service has produced a series of maps for each county with all known archaeological monuments marked on them. *The Record of Monuments and Places* includes both upstanding monuments and levelled sites, cropmark sites and other areas of archaeological potential. Copies can be examined in County Planning Offices, County Libraries, County Museums, Teagasc Offices, and Department of Agriculture and Food Offices.

Only a small selection of our ancient monuments are in State Ownership. The remainder are protected by the State under the National Monuments Acts but the care and preservation of these features depends largely upon the interest and respect of the individual landowner. In this booklet we will give some practical advice with suggestions for the day-to-day management of ancient monuments on the farm. We have also included a brief history of Irish farming over the last six thousand years.



2.

Grassland farming has been the most extensive land use in Ireland since the introduction of domesticated plants, cattle and sheep some 6,000 years ago. At Céide in North Mayo, approximately four square miles of enclosed farmland cultivated by Stone Age farmers is preserved beneath a mantle of peat. In this early period of Irish agriculture cattle were also used for transportation and traction. The domesticated horse was introduced into Ireland only in the Late Stone Age/Early Bronze Age, approximately 1,500 years after the first arrivals of cattle and sheep. Wild pigs were native to Ireland and over time were domesticated, gradually becoming an important element of animal husbandry and chosen especially for votive offerings to the gods in prehistoric ritual ceremonies. The overwhelming importance of cattle in the Iron Age (500 BC to 300 BC) and Early Christian economies (AD 300 to AD 1200) is documented in Irish Law tracts and accounts of the

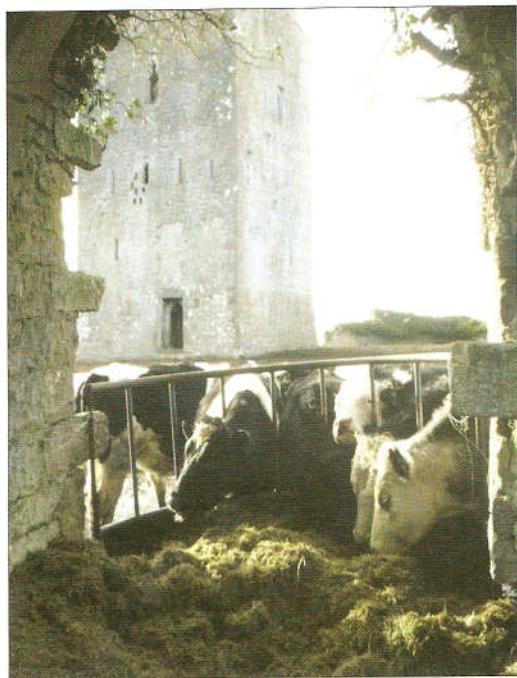
lives of early Saints. Cattle-raiding is regularly reported in the annals and in the epic poems and heroic stories of the period such as *Táin Bó Cúailnge*.

In a society without coinage, cattle became the accepted unit of currency and enclosed farmsteads, i.e. the ringfort or 'rath', the norm. The enclosure of large areas of permanent pasture within later demesnes preserved traces of these early farming communities. Within these parklands and estates, trees were often deliberately planted in rings or on ancient monuments in order to create an eye-catching landscape feature. With the break-up and division of large estates during this century many features of historical and architectural interest such as deerparks, garden follies, walled gardens and ice-houses are abandoned to ruin. If possible, these features should be retained.

PLATE 3. The survival of ancient farmlands such as this at Rath Croghan, Co. Roscommon testifies to the great antiquity of farming in Ireland.



Grassland provides the best conditions for the preservation of monuments. However, damage is likely to occur when seeding areas are placed on or close to the monument. Poaching of the surface caused by stock can seriously erode sites. Fencing is unnecessary if the field is lightly grazed. The monument and a buffer zone of 20m around it should not be interfered with through activities such as quarrying, drain excavation or associated farm works which would cause disturbance of the ground.



5.



4.

PLATE 4. At the Hill of Ward in Co. Meath low stocking rates and fencing has helped preserve this ancient site.

PLATE 5. Stock should not be housed or allowed access to upstanding historical buildings.

ILLUSTRATION: Coiled Bronze Armlet from Ballymahon, Co. Meath.

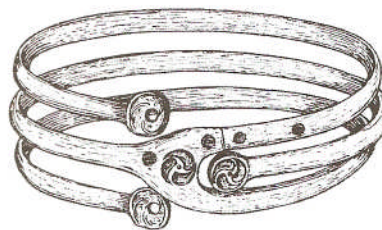


Plate 6. Site troughs or ring-feeders well away from monuments.



Plate 7. Field boundaries can appear irregular when they curve to incorporate monuments or respect the original position of levelled monuments as seen at this hillfort at Rathgall, Co. Wicklow.



OUR ADVICE FOR PRESERVING ANCIENT MONUMENTS IN GRASSLAND

Correct stocking levels should be maintained as overgrazing or poaching can damage ancient monuments.

Site troughs, ring-feeders and fences away from the monument.

Historic buildings should not be used for sheltering livestock.

Plan farm roadways away from or around monuments rather than across them.

Control the growth of gorse (furze or whins), scrub, woody plants on the monument. These should be cut at base and the stumps treated to prevent re-growth.

Never uproot trees on a monument as this may cause further damage to archaeological layers.

Do not deep plough if you have to re-seed within an ancient monument.

Cleared stones or farm waste should not be dumped on an ancient monument.



ILLUSTRATION (top)
Cross-inscribed stone.
Kileen td., Co. Longford

ILLUSTRATION (bottom)
Wooden Object,
Rathmore, Co. Mayo.

MANAGING ANCIENT MONUMENTS IN ARABLE LAND

The land of Ireland has been cultivated for wheat and barley since the Stone Age. We can still see the remains of this in the form of buried plough marks made by wooden ploughs some six thousand years ago. In prehistoric times sickles were made of flint and saddle querns or hollowed-out stones were used for crushing primitive grains. In time, several new cereals were introduced to the Irish diet, with rye and oats appearing during the Late Bronze and Iron Ages (800 BC - AD 300). Rye became a particularly important crop in Early Christian times. The widespread use of the more efficient coulter plough, introduced from Roman Britain at this time coincides with an expansion of farming

communities onto the heavier drumlin soils of Leitrim, Monaghan and Cavan which had been sparsely settled up to this. The coulter plough was replaced around AD 600 by the mouldboard plough, a heavier plough which turned the sod and did away with the need to cross-plough. Corn-drying kilns, rotary querns and horizontal water-mills were developed to process grain. Amongst the wide range of vegetables grown at this time were peas, beans, celery and onions. Tillage reached a new intensity in south and east Ireland in the medieval period with the introduction of crop rotation.

PLATE 8. Monuments should be left as islands of uncultivated ground within arable fields and protected from damage by a generous unploughed margin. (Department of the Environment, Heritage and Local Government)



8.

MANAGING ANCIENT MONUMENTS IN ARABLE LAND

The current trend towards larger fields in arable farming has resulted in the removal of portions of ancient monuments which had survived in the earlier field boundaries. Levelled monuments can appear as cropmarks. Dug features such as ditches and pits retain moisture in dry conditions showing a different colour than the surrounding crop. Traces of buried settlements can also be identified as spreads of worked flints or concentrations of potsherds and dark patches in tilled fields. Subsoilers or mole ploughs in modern use on the farm are causing new damage to those monuments which lay undisturbed for centuries below previous plough depths.



9A.



9B.

PLATE 9A AND 9B. In areas under continuous cultivation many monuments are no longer visible at ground level, having been eroded and levelled by reclamation and ploughing. These appear as cropmarks under certain conditions such as this site. Plate 9A is the land before it was ploughed and Plate 9B is after. This is now a ploughed-out medieval farmstead.



ILLUSTRATION. Beehive Quern, Bunnafinglas, Co. Mayo



PLATE 10. Souterrains of the early Christian period are regularly found during ploughing.

10.

PLATE 11. Many sites remain submerged just under the surface of the soil but can be uncovered by excavation. The foundations of an early house are exposed here by excavation. (Con Manning).



11.

OUR ADVICE FOR PRESERVING ANCIENT MONUMENTS IN ARABLE LAND

Know the monuments on your land by examining the Record of Monuments and Places maps.

Upstanding monuments should be left as islands of uncultivated ground within arable fields and should be protected from plough damage by a generous unploughed margin of at least 5m around the edge of the monument. Remember that the monument may extend further than the features visible above ground.

Fields with levelled monuments or cropmark sites, where no visible remains survive should be excluded from tillage and put into pasture if possible.

Minimise plough depths where there are known levelled sites or cropmark sites in tillage.

Always route drainage works around monuments and levelled sites.

Ensure that sub-soilers or mole ploughing and spiking goes around upstanding monuments and are never used across levelled or cropmark sites.

Avoid burning stubble on or near ancient monuments.

Cleared stones or farm waste should not be dumped on archaeological monuments.

Contact the National Monuments Service or the National Museum of Ireland if you discover ancient objects or structures.



ILLUSTRATION.
Flint and Chert,
Feltrim Hill,
Co. Dublin.

MANAGING ANCIENT MONUMENTS IN PEATLANDS

Bogs are the safety deposit boxes of the past! Within the spongy wet layers of dead plant life, bacteria which cause the decay and degeneration of plant remains and animal tissue, cannot survive. Thus buildings, roadways and everyday objects survive for countless centuries within peat. This acts as a storehouse for microscopic plant pollen and insect remains which can tell us about the vegetation cover surrounding earlier settlements. At Corlea, Co. Longford, part of a large Iron Age roadway dating to 148 BC has been excavated and preserved.

This roadway and many objects discarded by its builders amongst foundation material are presented to the public at a visitor centre near Keenagh, Co. Longford. Traditional peat cutting has yielded many significant discoveries including pre-historic weapons, personal ornaments, occasionally with their wooden or leather containers, wooden vessels and wicker objects of all types. Some of these finds were sacred objects deposited in a ritual or votive manner. Peat has also been used as a natural fridge with bog-butter in containers placed in the bog to be reclaimed by the owner at a later time.



12.

PLATE 12. Traditional peat cutting in the Midlands has yielded many important discoveries.

PLATE 13. An Iron-Age wooden trackway at Corlea Bog, Co. Longford.



13.

MANAGING ANCIENT MONUMENTS IN PEATLANDS

Many farms contain poorly drained fields, marshy areas or marginal lands covered by peat. Within these landscapes ancient structures and objects can be remarkably well preserved. Damage to ancient features in a wet area is caused when the land is allowed dry out as a result of drainage or

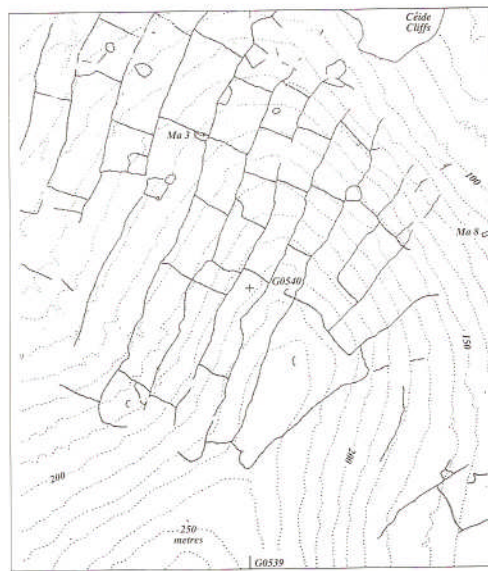
the removal of peat from the surface of the site. Circular man-made islands, known as crannógs, are a unique settlement form in wetlands. These survive as mounds in marshy wet terrain or as scrubby islands defined by wooden posts.



PLATE 14. In some upland or poorly drained areas ancient landscapes are protected by a covering of blanket peat which has developed over the monuments since their abandonment. Here at Céide, Co. Mayo a field wall has been uncovered by excavation.

PLATE 15. In wet and marshy areas, fulachta fiadh or ancient cooking places regularly survive as small horseshoe-shaped mounds made up of small pieces of burnt stone and charcoal.

PLATE 16. Illustration of a detailed plan of Céide fields in Co. Mayo. (after Caulfield).





17.

Plate 17. A Megalithic tomb appearing out of a bog in Tipperary.

OUR ADVICE FOR PRESERVING ANCIENT MONUMENTS IN PEATLANDS

Keep drainage away from known monuments such as crannógs or fulachta fiadh in waterlogged or peaty ground, Even drainage in the general environs of these monuments will seriously affect the survival of ancient structures and objects.

Avoid removing peat from the surface of an ancient monument. Always contact the National Monuments Service or the National Museum in the event of discovery of early man-made features.

Maintain a waterlogged object or structure in a stable wet condition by reburial in peat as such materials begin to disintegrate as soon as they are uncovered.

Avoid removal unless absolutely necessary to avoid damage or destruction.

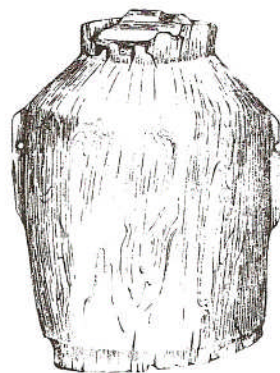


ILLUSTRATION: WOOD
VESSEL WITH BOG
BUTTER, MEELICK,
CO. MAYO

MANAGING ANCIENT MONUMENTS IN WOODLANDS

When man first settled in Ireland some 9,000 years ago he had to cope with a heavily wooded terrain. A wide range of native species including oak, elm, scots pine and ash formed these primeval forests. Trees provided building material, food and fuel for the first hunting/gathering communities who settled in small clearings along river estuaries and lake shores. With the appearance of the first farmers, broad sweeps of woodland were cleared using only stone technology. During the Early Christian period, areas were cleared, resulting in the disappearance of one of our native tree species, the scots pine.

This species was subsequently re-introduced in the seventeenth century along with several other trees such as sycamore, beech and walnut, initially introduced to decorate demesne parklands. A wholesale reduction in general woodland occurred from AD1600 onward with the use of timber both at home and abroad. By 1918, only 0.5% of the land of Ireland was covered with trees. However, with availability of grant aid from the EU and the need to remove land out of primary food production a massive increase in afforestation is presently underway.



18.

Plate 18. Ultimately the roots of trees will damage burials or structures surviving below the sod. This mound in Co. Dublin covers burials probably contained in a stone box or cist, accompanied by burial goods. Roots will destroy these funerary remains.

MANAGING ANCIENT MONUMENTS IN WOODLANDS

Trees can cause a lot of damage to ancient sites at all stages in the process from planting through to clear-felling. At the planting stage ploughing can churn up the site making it impossible to reconstruct the history of the monument. Further damage can be done by the developing root systems of the tree. Mature trees felled during storms can uproot large portions of the monument. The monument can also be scarred by machinery and the dragging of timbers across at the clear-felling stage.

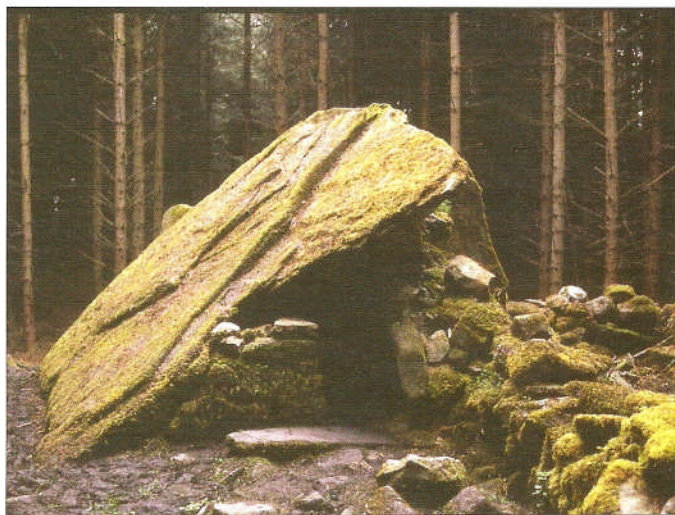


20.

PLATE 19. Modern tree planting involves ground preparation, ploughing, drainage and the digging of planting furrows with heavy and powerful machinery capable of destroying most archaeological structures.

PLATE 20. Keep trees well clear of the monument. The unplanted area around this wedge tomb is insufficient and trees are starting to encroach on the monument. Burren Wedge Tomb, Co. Cavan.

PLATE 21. The environs of this burial cairn will change dramatically as these young trees grow. Killaragh Cairn, Co. Cavan.



19.

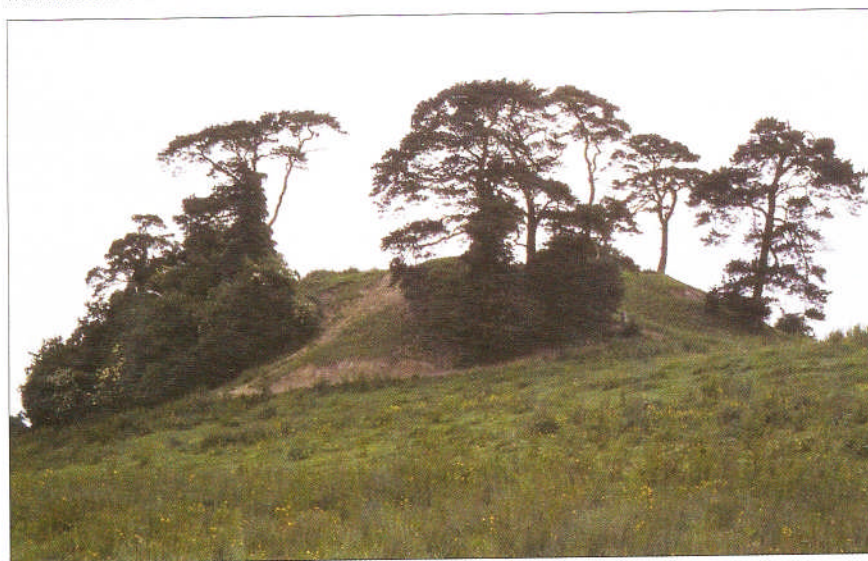


21.



22.

Plate 22. A Stone Row at Shantemon, Co. Cavan. A generous clearance has been left around this monument in the woods.



23.

Plate 23. Planting on top of earthworks leads to disturbance of archaeological layers. Motte at Callan, Co. Kilkenny.

OUR ADVICE FOR PRESERVING ANCIENT MONUMENTS IN WOODLANDS

Consult the available Record of Monuments and Places maps to check what upstanding monuments, levelled sites or cropmark sites are within the zone you intend to plant.

Keep trees well away from ancient monuments. Leave an unplanted margin of 20m or more from the outer edge of an upstanding monument, levelled site or known cropmark site, creating a glade or clearing.

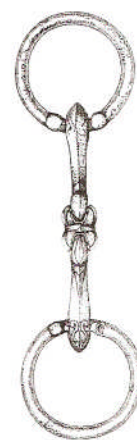
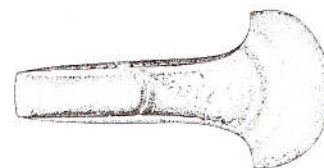
Provide access to the monument along forest trackways or fire breaks.

Boundary fences should exclude rather than cross ancient monuments.

Contact the National Monuments Service or National Museum of Ireland in the case of new discoveries.

Prohibit machinery or vehicles from crossing the unplanted margin around an ancient monument.

Remove existing trees from upstanding monuments by cutting the tree at base and treating the stump to prevent re-growth.



*Illustration: (Top)
Decorated, flanged
bronze axehead,
Clondalkin td.,
Co. Dublin.*

*Illustration: (Bottom)
Bronze bride-bit,
Clongill td.,
Co. Meath*

ANCIENT MONUMENTS AND THE LAW

All archaeological monuments are protected under the National Monuments Acts 1930 to 1994. The National Monuments Service keeps a record of all such monuments and sites. These form the **Record of Monuments and Places**. When the owners or occupiers or any persons propose to carry out, or to cause, or to permit the carrying out of any work at or in relation to a Recorded Monument, they are required to give notice in writing to the National Monuments Service two months before commencing that work. This time will allow the National Monuments Service to advise on how the work may proceed in tandem with the protection of the ancient monument.

If a particular monument is in danger of destruction the National Monuments Service may further protect the site by the placing of a Temporary Preservation Order or a Preservation Order. Under a Preservation Order, no work can be carried out on the monument without consent in writing from the National Monuments Service.

As Guardians, the State may undertake necessary maintenance without affecting the Owner's Title to a Monument.

If a monument is of sufficient importance the state may acquire it. It is then said to be a National Monument.

Certain categories of rural development which were until recently exempted from the planning process may now require planning permission. In all cases where development is close to a site of archaeological significance the Local Authority must refer the application to the National Monuments Service and take their advice into consideration when making their grants/refusals of planning permission.

It is unlawful to excavate for archaeological remains without a licence from the National Monuments Service. It is also illegal to use or to be in possession of a detection device at, or near, an archaeological monument without a licence. Farmers should not allow metal detector users on their land. All archaeological objects, for which there is no known owner, are vested in the State unless this right is waived. A reward may be paid to the person who found the object and to the owner or occupier of the land upon which the object is found. This is at the discretion of the Director of the National Museum.



REPORTING DISCOVERIES ON THE FARM

If you find a previously unknown archaeological object or monument on your land, report it to the National Museum of Ireland or the National Monuments Service within four days, giving your name and address, with a brief description of the object or site and its location. Leave the object or site where it was found unless it appears to be in danger of immediate damage or destruction. The Director of the National Museum of Ireland has the legal right to investigate and secure all find sites under threat of destruction. Leave all investigations to professional archaeologists.

CONTACT ADDRESSES:

THE DIRECTOR,
NATIONAL MONUMENTS SECTION
DEPARTMENT OF THE ENVIRONMENT,
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HOW TO GET FURTHER INFORMATION

THE RECORD OF MONUMENTS AND PLACES maps and lists are displayed in County Libraries and Local Authority Offices. FDS Offices, Teagasc Offices and County Museums also have copies. Any enquiries regarding Recorded Monuments should be addressed to the Director of the National Monuments Service.

For more detailed information a series of county-based Archaeological Inventories with brief descriptions of individual monuments is currently being produced by the Archaeological Survey of Ireland. (Please see page 22).

IRISH FIELD MONUMENTS and **THE CARE AND CONSERVATION OF GRAVEYARDS**, published by the Office of Public Works and available at Government Publications Sale Office, Molesworth Street, Dublin, outlines the principle monument types and care of rural graveyards

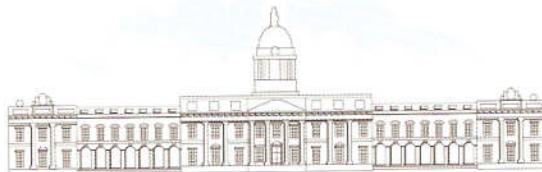
Extensive areas of the midland raised bogs of counties Galway, Kildare, Laois, Longford, Offaly, Roscommon, Tipperary and Westmeath are currently being milled to serve peat-fired generators or for peat products. An intensive survey is currently being carried out in these counties. The National Monuments Service are anxious to hear about previously discovered structures in bogs.

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