

Protecting historic monuments on farmland

Technical guidance booklet



Cover image - Stone Circle, Beltrim, Co. Tyrone

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OUR HISTORIC ENVIRONMENT

Northern Ireland as we see it today is the result of 9000 years of human habitation and modification. Over the years each generation has made successive changes to the landscape by building dwellings, defences and workplaces as well as creating places for ritual, worship and burial. Everything which has been created by these previous generations forms part of our historic environment.

When we look across the rural landscape today we can see its long agricultural history in the pattern of farmsteads, field boundaries and tree-planting. Incorporated within this are the archaeological features, such as standing stones or raths ('forts'), historic buildings and designed landscapes, which often form important local landmarks. Since the Second World War, however, our rural landscape has undergone a period of rapid change. With the introduction of more powerful farm machinery and the demands of the modern farming economy, many elements of our historic environment have been changed or removed before we have had time to realise what was being lost.

All of these features are valuable elements of our heritage, and contribute to our sense of place: they are a finite and non-renewable resource and once they have been destroyed they cannot be replaced. Northern Ireland Environment Agency (NIEA) is the Government Agency responsible for recording and protecting our built heritage and works with land owners to ensure that we carefully manage this rich historic resource found in our countryside.

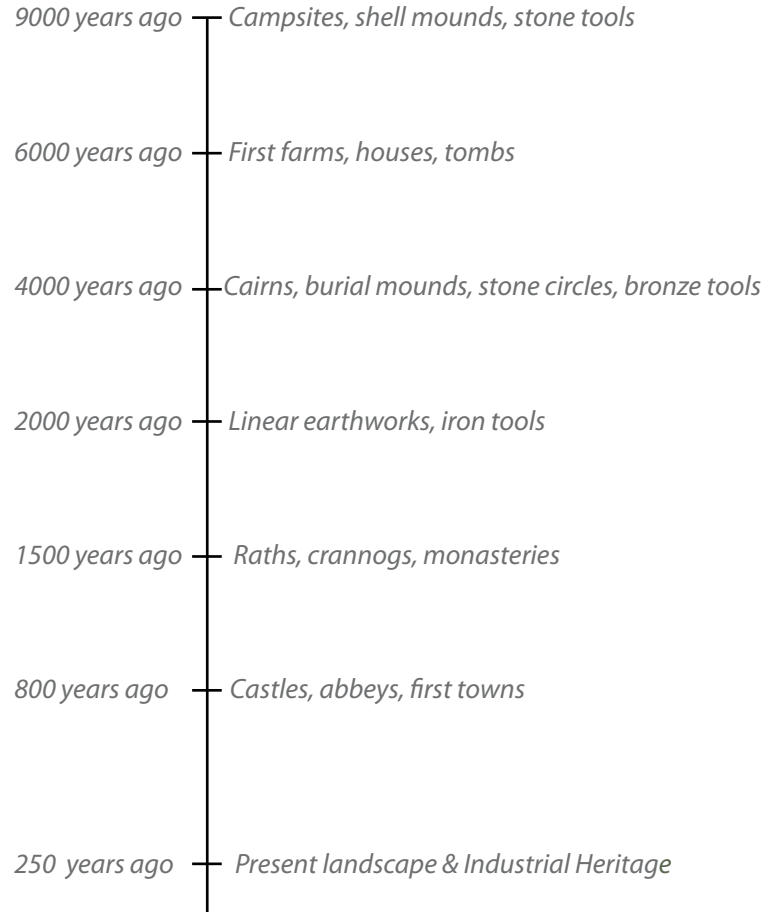


Rath & crannog in Lisleitrim, Co. Armagh



Slideryford portal tomb, Co. Down

HOW OLD ARE FEATURES IN THE COUNTRYSIDE?



FEATURES OF THE HISTORIC ENVIRONMENT

There are upwards of 16,000 recorded historic monuments or archaeological features dating to before 1700AD across Northern Ireland. These include; megalithic tombs, (sometimes known as 'Giant's Graves'), standing stones and stone circles, cairns, raths ('forts'), mottes, churches and castles. New monuments are frequently found in the course of farm improvements, road building and new pipeline work.

There are over 700 designed landscapes recorded in the Heritage Gardens Inventory for Northern Ireland. Of these, 150 have been included in the Register of Parks, Gardens and Demesnes of Special Historic Interest. Designed landscapes date from the 17th century onwards and were often created as the setting for important historic houses. Many also contain plants or trees of significant botanical interest.

Throughout the countryside there are at least 10,000 rural industrial complexes. This includes a wide range of buildings, from windmills to corn or flax mills and their associated features such as mill races or sluice gates. These are an important element of our rural character: they should be retained as far as possible in their original form and the buildings considered for re-use.



Red Bay motte & tower house, Co. Antrim



Flax mill at Grillagh, Co. Londonderry



Castleward Demesne, Co. Down



World War II pill box, Gilford, Co. Down

Over 500 sites of Defence Heritage interest, such as pill boxes and Royal Observer Corps posts, are located throughout the countryside. These sites represent Northern Ireland's significant contribution to 20th Century conflicts such as the World Wars and the Cold War.

Perhaps most relevant to every landowner are the traditional farm settlements, both lived in and deserted, with their associated features such as wells, limekilns and gate pillars. Enclosing all of these are the field boundaries which provide the essential character of each district.



Traditional gate pillars, Rathlin Island, Co. Antrim

SCHEDULED HISTORIC MONUMENTS

A selection of the archaeological sites in Northern Ireland are Scheduled under Article 3 of the Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995.

Sites are selected for scheduling for a variety of reasons, for example because they are particularly rare or because they are a good example of their type.

Scheduling does not affect the ownership of a monument, but does mean that any work carried out on it requires Scheduled Monument Consent from NIEA:Built Heritage. This is to ensure that no damage occurs. Non-damaging farming activities, such as occasional light grazing, are encouraged to help keep vegetation under control and prevent invasion of scrub.

Scheduled monuments are regularly monitored by NIEA Field Monument Wardens who can offer advice on their best management.

If you have a scheduled monument on your land you will have received papers from NIEA indicating the protected area and detailing the legal implications.

MANAGING THE HISTORIC ENVIRONMENT ON FARMLAND

As 80% of the 1.4 million hectares of land in Northern Ireland is in agricultural use it is not surprising that the majority of our archaeological and heritage features are found on farmland. Government policy on sustainability and cross compliance in relation to land management means that all Departments and Agencies now have a duty to co-operate with each other to prevent damage to our historic environment.



White Fort cashel, Cashel, Co. Londonderry



A field monument warden inspects recent fencing work around a rath with the landowner



A DARD inspecot, NIEA archaeologist & the landowner discuss the best management for this megalithic tomb at Magheramore Co. Londonderry

Since the introduction of Cross Compliance in January 2005 all landowners receiving direct payments from Department of Agriculture and Rural Development (DARD), are obliged to maintain their land in Good Agricultural and Environmental Condition (GAEC). The GAEC measures include the protection of archaeological sites, which must be retained and cannot be damaged. All landowners who receive Less Favoured Areas Compensatory Allowance Scheme (LFACA) or agri-environment scheme payments from DARD are also subject to the Code of Good Farming Practice, which imposes similar conditions. Failure to comply with these conditions can result in a reduction of DARD payments.

Under the Environmentally Sensitive Areas Scheme (ESA) and the Countryside Management Scheme (CMS) archaeological features are classified as priority habitats. NIEA works in partnership with DARD in providing advice to landowners to ensure that all archaeological sites on farmland are managed appropriately and in return landowners may receive an area-based payment. These agri-environment schemes also encourage sensitive management of other features of our rural heritage, such as field boundaries, limekilns and gate pillars.

To help landowners avoid causing damage DARD provides a management advice leaflet entitled Archaeological Features. Carefully following these prescriptions will ensure that landowners do not breach the terms of their agri-environment scheme, Good Farming Practice or Good Agricultural and Environmental Condition Measures.

THE AFFECTS OF FARMING

GRAZING

Light grazing is usually the best management for archaeological sites as it keeps scrub growth at bay and enables all the features to be seen and appreciated.

Maintaining a good grass sward also helps to protect buried remains. It is often surprising how much archaeological material survives underground, even where there is little surface indication, so it is important to prevent trampling and erosion. Grazing monuments, with a low number of stock, for short periods during the drier months, is ideal management.

Landowners should regularly check the condition of their monuments and if poaching or erosion occurs stock should be excluded from the site until grass cover has re-established. An electric fence can be useful for controlling stock access, or where suitable, grazing a monument with sheep instead of cattle can be a good alternative.

Feeders and drinkers should always be placed well away from any monument as they inevitably lead to concentrated trampling.

Trampling damage can also be found around the base of standing stones or megalithic tombs because livestock like to use them as scratching posts or for shelter. If left unchecked, erosion around the base of standing stones can develop into deep hollows and the stones can topple over. Earthwork monuments such as raths ('forts') can also be damaged by livestock wearing deep tracks over their banks, or rubbing against them, causing large eroded areas.



Cattle grazing a rath at Ballymaganlis, Co. Down



Cattle trampling around feeder



Stock have eroded a hollow at the base of a standing stone at Lissan, Co. Fermanagh



Erosion damage on the bank of a rath at Drumilly, Co. Armagh

Superficial damage at any monument can be easily remedied by scattering grass seed over bare areas. If, however, an eroded hollow has developed it may be necessary to fill it in with a dump of soil. Erosion around standing stones or tombs can often be a recurring problem and in these cases placing a good layer of sharp stone in and around the monument may help deter stock and protect underground remains. On earthworks further damage can be avoided by using cut branches to block stock paths or cover the eroded areas to prevent further rubbing.

In cases where a monument has been severely damaged by animal trampling or erosion it may be necessary to fence it off from surrounding farmland and/or to carry out more substantial repairs.

FENCING

While fencing a monument off from surrounding ground can have advantages it can also lead to problems, so the landowner should carefully consider whether or not it is really necessary. NIEA: Built Heritage and DARD usually only recommend permanent fencing where a monument is suffering from severe damage, or needs time for recovery after stock erosion.

If a fence is to be erected the location must be given detailed consideration. Usually it will be best placed some distance out from the monument rather than close against it, and it must be located so as to avoid damaging any recognisable archaeological features. The fence posts should be carefully driven into the ground, ensuring minimal ground disturbance. A gate must be provided to allow occasional light grazing, but it should be positioned to minimise the potential for stock to cause further damage to the monument.

Once a fence has been erected, an appropriate grazing regime will need to be introduced to ensure that vegetation is kept under control, while avoiding any further trampling or erosion. Short periods of light grazing during the summer are usually ideal, with occasional strimming or spraying as necessary to keep scrub or weeds down.

Fencing work should always be carried out following DARD specifications, which can be found in the Protective Fencing leaflet. NIEA: Built Heritage or DARD can provide specific advice on the best approach to fencing around a monument if requested.



Fencing erected to prevent cattle erosion to this motte at Drumsked, Co. Antrim



A wider margin of unploughed ground should have been left around these standing stones at Crew Lower, Co. Tyrone

PLOUGHING AND OPERATING FARM MACHINERY

Ploughing is very damaging to all archaeological remains, both above and below ground. The upstanding remains of earthworks, such as raths ('forts'), are gradually worn away by ploughing, and buried archaeological layers and features are destroyed. Ploughing too close to earthworks also leads to the gradual erosion of the perimeter, while ploughing close to standing stones can undermine them.

NIEA: Built Heritage advises that monuments should never be ploughed. Even those sites which have been ploughed over in the past will still contain underground remains that should be left as undisturbed as possible. An unploughed margin, ideally an area of 10 metres, should be left around all monuments as underground features can often extend well beyond the visible remains of the site and are particularly prone to plough damage.

Where a monument is located in an arable field it is best left as an island of permanent grass which can be strimmed or mown in non-grazing years.

Care must also be taken when operating any agricultural machinery or vehicles close to a monument. With large, modern machinery it would be all too easy to accidentally clip a standing stone and knock it over, or to cause a masonry monument to collapse. The weight of these vehicles or machinery can also damage underground features such as burials or cause subterranean structures such as souterrains or 'tunnels' to collapse.

MANAGING TREES AND SCRUB ON MONUMENTS

Trees on historic monuments often create dramatic landmarks in the countryside, but they also cause many problems and are very damaging as their roots disturb buried archaeological layers. Where mature trees are already growing on an earthwork there is no need to cut them down until they reach the end of their time. The condition of such trees should, however, be regularly checked and if they show signs of disease or instability they should be felled as soon as possible. The felling work must be done carefully to ensure no damage to the monument and the stump and roots must be left in place so that there is no ground disturbance. The stump can be treated with an appropriate herbicide, to prevent re-growth.

When a tree blows over during a storm it can lift a large rootplate out of the ground. If this happens on a monument the rootplate can often lift a lot of archaeological material with it. In this case the rootplate should be cut from the trunk and placed back where it came from to settle and rot down. This will help to protect any exposed archaeological remains.



Mature trees & stock erosion on a mound at Tallyard, Co. Armagh



A court tomb overgrown with whin, Carnanbane, Co. Londonderry



A tree has displaced the capstone of a megalithic tomb at Tireighter, Co. Londonderry

Where trees grow on earthwork monuments they can shade the ground underneath. This deters grass from growing, resulting in bare areas which are prone to livestock erosion. Cutting back specific branches or removing an occasional tree can help to let in light and encourage grass cover to regenerate. Landowners are often keen to plant new trees on an earthwork, especially where previous trees have died off or fallen, but NIEA: Built Heritage strongly advises against this because of the problems it can lead to as the trees mature. Any tree planting in the fields surrounding a historic monument must leave a 20m unplanted zone from the edge of the site and planting or harvesting machinery must avoid driving close to or across the monument.

Where trees grow close to the ruins of old buildings, or stone-built monuments such as tombs, they can undermine them or gradually push stones out of place, leading to collapse. Where this is a problem owners should request advice from DARD or NIEA: Built Heritage, who can inspect and recommend the best course of action.

Scrub, such as thorn trees, whin bushes or brambles, can be very invasive and if left unchecked can quickly engulf a monument. Rathes ('forts') often have thorn hedges planted around the perimeter bank and these can be well maintained by regular facing back and topping as necessary to keep them under control. Occasionally, however, scrub, particularly whin bushes, may need to be removed from a monument and it is essential that it is done carefully to ensure no damage is caused. Bushes must never be burnt or pulled out using a machine. Instead they must be cut off close to ground level, leaving the stump and roots in place and if necessary the stump can be treated with an appropriate herbicide. The waste material must be removed well away from the monument for disposal. Where bramble is a problem it should be regularly trimmed and can be sprayed with an appropriate herbicide. DARD can supply a Scrub Control information leaflet which recommends suitable treatments.

MANAGING VEGETATION ON MASONRY MONUMENTS

Ruins of masonry monuments, such as castles and churches, often become densely overgrown with ivy, and trees or shrubs can take root on the walls. In severe cases this can cause irreparable damage, through root growth and displacement of masonry, eventually leading to the collapse of the ruins.

Where there is a heavy growth of ivy on walls it is best to keep it regularly trimmed back as close to the wall as possible, while being careful to ensure no damage to the masonry itself. This will help to keep the weight of foliage to a minimum. Once trimmed back the ivy should then be sprayed immediately with an appropriate herbicide within an hour of cutting to be effective. Main ivy stems should be cut close to ground level, removing a section at least 300mm long. The stump can then be drilled and filled with herbicide to prevent re-growth. The ivy growing on the walls should be allowed to die back naturally, with a second treatment of herbicide if necessary.

It is essential that there is no attempt to pull ivy off walls as mats of ivy which can be holding loose sections of masonry in place. Following the treatment described above, withered ivy stems should be left until conservation work can be carried out.

Any trees which are growing on the walls must be cut and poisoned as soon as possible to prevent their roots causing substantial damage. Treatment is similar to that for ivy – the trunk should be cut as close to the base as possible and the stump then treated with herbicide to prevent re-growth. Again, trees, even young saplings, must never be pulled off walls as they can be rooted very deeply into the masonry.

NIEA: Built Heritage provides detailed guidelines for addressing these issues in the Dealing with Vegetation on Historic Masonry Monuments booklet. Another booklet, The Conservation of Scheduled Masonry Monuments is also available.



Ivy growing on the ruins of Castle Curlews, Kirlish, Co. Tyrone

It is essential that no work is undertaken on masonry monuments without first consulting NIEA: Built Heritage, & if it is a scheduled site, Scheduled Monument Consent may be required prior to commencing work.



Stone circle at Copney, Co. Tyrone

MANAGING MONUMENTS IN MOORELANDS OR LOWLAND RAISED BOGS

Upland or hill peat has been developing in Ireland from about 1200BC and slowly growing over the remains of the earliest settlements, field systems, and tombs of Stone Age and Bronze Age communities. The same process has taken place in the lowland raised bogs, where the peat can conceal archaeological remains such as 3000 year-old wooden trackways, built to cross the wet ground by some of our early ancestors.

The majority of areas of peat in Northern Ireland have been targeted for turf cutting in the past and many areas of moorland or bog have also been drained and subject to intensive reclamation schemes within the last 50 years. This has resulted in the loss of many historic monuments. In those areas of peatland which still survive, however, the monuments are often very well preserved. There are also many monuments which remain buried under the bog, and these are still occasionally uncovered during turf-cutting, like the stone circle shown in the photograph.

Peatland also preserves organic remains, such as bog butter, leather and wooden objects and occasionally even bog bodies, and when turf-cutting by hand such objects can sometimes be found. Any newly discovered objects or monuments should be left undisturbed and reported to NIEA: Built Heritage as soon as possible so that a record can be made.

Light grazing, during the summer months, and preferably with sheep, is ideal management for monuments in moorland or lowland raised bogs as it keeps vegetation under control, while protecting the sites from stock damage.

When flailing or burning heather in areas near historic monuments landowners must be careful to ensure that the site and surrounding area is left undamaged.

REPAIRING MONUMENTS

Many of the monuments in our countryside are several thousand years old and it is not surprising that they occasionally need some upkeep to maintain them in good condition.

The most common repair needed is to areas of livestock erosion. Small areas of erosion can be easily dealt with by a light dump of soil, scattered with grass seed. Any material used for infilling must be sourced from an area well away from the monument itself. For more severe areas of erosion, on earthwork monuments, where a steep or vertical face has developed, it may be necessary to use thick sods which can be built vertically like a wall. The sods must be placed so that the roots are in contact with the ground beneath to allow them to bed in. This work is best carried out in early spring or autumn, otherwise the sods will need to be thoroughly watered in dry weather to prevent them from drying out.

When carrying out repairs on monuments hand tools only should be used rather than machines, which can accidentally cause more harm. Before undertaking any repair work to a historic monument landowners should consult NIEA: Built Heritage for advice. If it is a Scheduled Historic Monument then Scheduled Monument Consent may be required.

Once repairs to a monument have been carried out, it is wise to restrict animal access to the area for a time to allow recovery.



Cut branches placed around the base of a rath to prevent further stock erosion



Sheep erosion on the bank of an earthwork prior to repair at Linford, Co. Antrim



Sods were built up against the eroded face to conserve the earthwork



Mullycovet mill before repairs,
Co. Fermanagh



Mullycovet mill after repairs,
Co. Fermanagh



A small farm lime kiln surviving in a good
state of repair

REPAIRING FARM BUILDINGS

Old farm buildings are an important part of the historic environment and a vital element in defining the character of the countryside. Wherever possible they should be repaired and kept in active farm use as this is the best way to ensure their continuing survival. Carrying out small regular maintenance jobs is advisable to avoid more extensive, expensive repairs at a later date. Work should be undertaken in a sensitive way, using local materials and traditional skills as far as possible. Modern cement mortars should be avoided as they can lead to problems when used in old buildings. It is usually better to use a lime mortar.

Advice on the selection and application of mortars is available from NIEA: Built Heritage.

While maintaining a slate roof may be the ideal, a tin roof, as in the picture, is perfectly acceptable for waterproofing a building. A stitch in time is always the best approach and keeping water out is one of the best ways of ensuring that a building remains in good, usable condition into the future.

Wherever possible other traditional farm features should also be retained. Gate pillars, wells and lime kilns were once found on almost every farm, but many have now been removed, making the preservation of those that remain all the more important. DARD can provide grant-aid towards repairing both traditional gate pillars and farm buildings to those landowners participating in agri-environment schemes. Information leaflets entitled Traditional Pillars and Gateposts and Traditional Farm Buildings are also available from DARD.

FINDING HISTORIC MONUMENTS

Any work involving ground disturbance, such as ploughing or digging drains and foundations, can reveal underground features which were not previously known. The most common example of this is when a plough lifts a roofstone of a tunnel or 'souterrain', exposing an underground passage. Although it is tempting to explore souterrains, this is not advisable as they may be very unstable. These structures are over 1000 years old and many are at least partially collapsed.

Cist burials, dating to the Bronze Age, about 4000 years ago, are another type of monument which can be uncovered during ploughing. These buried 'boxes', made of stone slabs, contain human remains and often a decorated pottery bowl. Other farm operations, such as clearing scrub, can also reveal previously hidden features.

If a new monument is uncovered it should be left undisturbed and NIEA: Built Heritage should be informed as soon as possible, so that the site can be recorded and advice supplied on the best method of securing or preserving the feature.



A cist burial found at Ballyloan, Co. Londonderry



Ploughing lifted a roofstone for this souterrain at Craigy Hall, Co. Antrim



Inside a souterrain



A quern stone found at Granaghan, Co. Londonderry



A selection of axes found during dredging works on the River Erne, Co. Fermanagh

FINDING ARCHAEOLOGICAL OBJECTS

Archaeological objects can turn up from time to time and the observant landowner often finds items of interest. These can include flint or stone tools, such as arrowheads, axe heads, fragments of pottery and human or animal bone. By law such finds must be reported to NIEA: Built Heritage or the Ulster Museum within 14 days. Such objects remain the property of the landowner but may be removed for a period of study and then returned. When objects are found they should be left as undisturbed as possible so that their context can be recorded.

Deliberately digging for archaeological remains or artefacts is illegal under Article 41 of the Historic Monuments and Archaeological Objects (NI) Order 1995, unless licensed by NIEA. Landowners should not allow metal detectors to be used to search for archaeological objects on their land as this is also strictly illegal without a licence.



A selection of arrowheads found after ploughing at Old Freehold, Co. Antrim

HOW DO I FIND OUT ABOUT THE HISTORIC FEATURES ON MY FARM?

All known historic monuments, industrial heritage features, historic parks, gardens and demesnes, battle sites, defence heritage structures and maritime heritage features are officially recorded by Northern Ireland Environment Agency: Built Heritage and these records are in the Monuments and Buildings Record, Waterman House, 5 - 35 Hill Street, Belfast BT1 2LA.

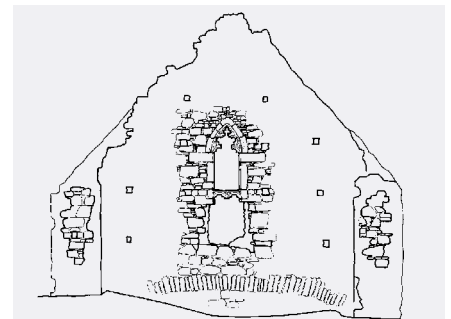
Information on recorded sites may be consulted in the public reading room at Waterman House, between the hours of: 9.30am – 1pm and 2pm – 4.30pm, Monday to Friday.

Information can also be requested in writing ,
or by telephoning: (028) 9054 3004,
or by e-mailing hm@doeni.gov.uk

Details of archaeological features throughout Northern Ireland are also available on-line at www.ni-environment.gov.uk



An archaeologist records details of an ogham stone reused as a gatepost at Gertree, Co. Antrim



Detail of the east gable window prior to conservation work, Culfeightrim Church, Co. Antrim

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www.ni-environment.gov.uk

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.



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