SHANES CASTLE

A SPECIAL PLACE...

Parkland at Shanes Castle

SITES OF BIOLOGICAL AND EARTH SCIENCE IMPORTANCE HAVE BEEN SURVEYED BY NORTHERN IRELAND ENVIRONMENT AGENCY TO ASSESS THEIR SCIENTIFIC INTEREST. THE BEST SITES ARE NOW BEING DECLARED AS AREAS OF SPECIAL SCIENTIFIC INTEREST (ASSIs). IN DOING SO WE AIM TO SAFEGUARD THESE IMPORTANT SITES FOR THE BENEFIT OF PRESENT AND FUTURE GENERATIONS.

Shanes Castle has been declared an ASSI because of its parkland habitat and associated species. Historic parklands are usually composed of open-grown trees and shrubs which have significant amounts of standing and fallen dead wood. These open-grown trees provide a specialist habitat for rare and uncommon species of invertebrates, lichens and fungi.

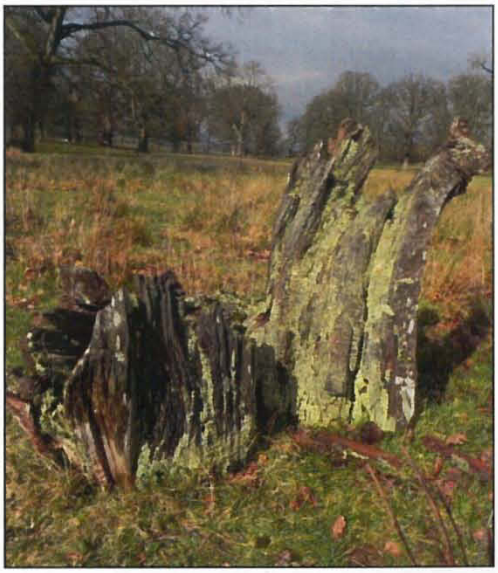
Veteran and ancient trees are a feature of the parkland

Shanes Castle supports one of the largest concentrations of open-grown ancient and veteran trees in Northern Ireland. Ancient trees usually have large girths, hollow trunks, large amounts of dead wood and often have a characteristic "stag headed" appearance due to their upper canopy dying back. Younger trees which have some of the characteristics of ancient trees are called veteran trees.

A wide variety of tree and shrub species are present in the parkland. Oak is the dominant tree species in the parkland at Shanes Castle, with other species such as Lime, Hawthorn, Beech, Ash, Horse-chestnut and Sycamore.

There are also several notable trees, including an ancient Oak with a girth of over 7m and a Cedar-of-Lebanon which, with a girth of over 9m, is the second largest tree of this species in Ireland.

The trees at Shanes Castle provide very important habitat for a variety of lichens, including some rare species. The site is important for lichens because of the variety of habitats available and historical continuity of woodland cover. It is one of the most important sites in Ireland for specialist lichens which are associated with dry bark on oak trees and decaying tree stumps.



Tree stumps at Shanes Castle are important for rare lichens

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Rhinoceros Beetle - the larvae of this beetle feed on decaying wood - Copyright: Roy Anderson

The site supports a range of fungi. These include bracket fungi such as Southern Bracket, Oak Bracket and Beefsteak Fungus. Shanes Castle also supports a variety of fungi which are associated with living tree roots including Scarletina Bolete, Purple Brittlegill, Oakbug Milkcap and the notable Rooting Bolete. There are also records for a number of rare fungi, including a Milkcap and a Brittlegill.

Beefsteak fungus - a bracket fungus found on the trees -Copyright: Robert Thompson

Shanes Castle, is an important site for bats - Copyright: Laurie Campbell

The parkland trees and shrubs support a high quality invertebrate fauna, including a number of species which are rare in Great Britain and Ireland. Decaying wood at Shanes Castle provides a particularly important habitat for a range of species including the larvae of the rare Rhinoceros Beetle, which creates characteristic tunnels through the wood. Several beetles are also associated with the bracket fungi on the trees.

Shanes Castle provides important roosting sites and feeding habitat for Daubenton's Bat and Nathusius' Pipistrelle. The site also supports a range of other bat species including Leisler's Bat, Common Pipistrelle and Soprano Pipistrelle.

Correct management is essential for special places like Shanes Castle to ensure the survival of the area's rich range of plants and animals. Northern Ireland Environment Agency is keen to work closely with landowners to maintain and enhance Shanes Castle.

One of the magnificent Oak trees at Shanes Castle

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DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT SHANES CASTLE, COUNTY ANTRIM. ARTICLE 28 OF THE ENVIRONMENT (NORTHERN IRELAND) ORDER 2002.

The Department of the Environment (the Department), having consulted the Council for Nature Conservation and the Countryside and being satisfied that the area described and delineated on the attached map (the area) is of special scientific interest by reason of the flora and fauna and accordingly needs to be specially protected, hereby declares the area to be an area of special scientific interest to be known as the 'Shanes Castle Area of Special Scientific Interest'.

The area is of special scientific interest for its parkland habitat and associated species. Shanes Castle is situated to the south of Randalstown. The site is part of the Shanes Castle demesne, which was established in the17th century.

The underlying geology of the Shanes Castle area is dominated by the Palaeogene age Upper Basalts although outcrop of these is extremely limited. The geology has however influenced the soils of much of the site, providing the parent material from which the soils have evolved. Away from the shoreline and the valley of the River Main, the soils are principally poorly draining surface water gleys. Both the area of the shore (formerly the lake bed prior to schemes to lower the water level of Lough Neagh) and the River Main valley are characterised by lake and river alluvium deposits respectively.

Historic parklands are generally characterised by old, open-grown trees with significant amounts of standing and fallen dead wood. Conservation interest is often associated with the specialist biological communities which are associated with these old open-grown trees. These include invertebrates (saproxylic and epiphytic assemblages), lichens (epiphytic communities) and fungi (principally saproxylic and mycorrhizal species).

The parkland is characterised by a landscape of improved and semi-improved grassland interspersed with open-grown trees, which occur at various densities. The site supports one of the largest concentrations of open-grown ancient and veteran trees in Northern Ireland. A variety of parkland tree and shrub species are present on the site. Oak *Quercus* spp. is the dominant parkland tree species with Lime *Tilia* sp., Hawthorn *Crataegus monogyna*, Beech *Fagus sylvatica*, Ash *Fraxinus excelsior*, Horse-chestnut *Aesculus hippocastanum* and Sycamore *Acer pseudoplatanus*. There are also occasional specimens of species such as London Plane *Platanus x hispanica*, Walnut *Juglans* sp. and Poplar *Populus* sp., as well as an avenue of Beech *Fagus sylvatica.* Several notable specimens are present on the site, including an ancient Oak *Quercus* sp., with a girth of over 7m and a Cedar-of-Lebanon *Cedrus libani* which, with a girth of over 9m, is the second largest tree of this species in Ireland. The parkland trees at Shanes Castle display a variety of features characteristic of veteran and ancient trees, including standing and fallen dead wood, exposed heartwood, hollowing trunks and bracket fungi.

Shanes Castle supports a high quality invertebrate fauna. Of particular note is the

assemblage of species associated with the parkland trees. This includes a number of very rare species, including a sap beetle *Epuraea terminalis* which is the only recent record for this species in Ireland and a wax fly *Conwentzia psociformis* which is the first record in Northern Ireland. A marsh beetle *Elodes elongata* which is classified as Data Deficient in the Red List of Irish aquatic Coleoptera has also been recorded on Elder *Sambucus nigra* flowers at Shanes Castle. Decaying wood provides habitat for a range of saproxylic species including the rare Rhinoceros Beetle *Sinodendron cylindricum*, whose larvae creates characteristic tunnels through the wood. Other saproxylic beetles recorded on the site include a longhorn beetle *Grammoptera ruficornis*, a soldier beetle *Malthinus flaveolus* and a beetle *Ptilinus pectinicornis* which bores into the exposed dry heartwood of trees, as well as several species of tumbling flower beetles, including *Anaspis frontalis* which is uncommon in Northern Ireland. Invertebrates associated with bracket fungi on the trees include a shiny fungus beetle *Dacne bipustulata,* which is sparsely distributed in Northern Ireland and a more widespread false darkling beetle *Orchesia undulata*, which breeds in the specialist fungi that decay the lower canopy branches.

The parkland trees at Shanes Castle also support an important assemblage of epiphytic lichens, due to the continuity of woodland cover and variety of available substrates. In particular, the open grown parkland trees have one of the richest known specialist lichens floras associated with dry bark and lignum on veteran Oaks *Quercus* spp. in Ireland. The lichen communities associated with the dry bark include notable species such as *Cresponea premnea*, *Arthonia anombrophila*, *Lepraria ecorticata*, *Opegrapha xerica* and the rare pin head lichens *Chaenotheca trichialis* and *Chaenotheca stemonea*. *C. stemonea* is of particular note because it is the first record in Ireland. Decaying Oak stumps within the parkland also support important lichen communities associated with damp lignin, including the rare *Cladonia incrassata* and *Cladonia parasitica*. Standing dead wood on an ancient Oak pollard at Mc Donald's Fort supports *Chaenothecopsis nigra*, the second known record for this species in Ireland. The wetter sides of the veteran trees also support crust-forming species including rare species such as *Bacidia biatorina*, *Pachyphiale carneola*, *Rinodina roboris* and *Opegrapha corticola*, and the commoner *Dimerella lutea*. Species of less base rich bark include *Arthonia vinosa*, *Anisomeridium ranunculosporum*, *Pertusaria flavida*, *Pertusaria hemisphaerica*, *Schismatomma niveum*, *Lecanora jamesii* and *Thelotrema lepadinum*.

The site supports a typical range of fungi. These include species which cause decay in trees, including widespread species such as Southern Bracket *Ganoderma australe*, Oak Bracket *Inonotus dryadeus* and Beefsteak Fungus *Fistulina hepatica*, as well as the rare *Ganoderma resinaceum*. Fallen dead wood provides a temporary niche for dead wood saprotrophic fungi, including Turkeytail *Trametes versicolor* and Hairy Curtain Crust *Stereum hirsutum*. In less intensively managed areas, Shanes Castle also supports a variety of ectomycorrhizal fungi, which are associated with living tree roots including Scarletina Bolete *Boletus luridiformis,* Purple Brittlegill *Russula atropurpurea,* Oakbug Milkcap *Lactarius quietus* and the notable Rooting Bolete *Boletus radicans*. In addition, these less intensively managed areas support several rare species including a Milkcap *Lactarius azonites*, which is the first record for Ireland and a rare Brittlegill *Russula maculata*.

Shanes Castle provides important breeding, roosting and feeding habitat for Daubenton's Bat *Myotis daubentonii* and the rare Nathusius' Pipistrelle *Pipistrellus nathusii*. The site also supports a range of other bat species including Leisler's Bat

Nyctalus leisleri, Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*.

The effects of past and present management have resulted in the presence of the semi-natural habitats at Shanes Castle. As such, they are important for a wide range of plants and animals, including birds, invertebrates and mammals. It is hoped that continued sensitive management of the area will ensure that the rich assemblage of species is maintained.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the flora and fauna of the area:

1. Any activity or operation which involves the damage or disturbance by any means of the surface and subsurface of the land, including ploughing, rotovating, harrowing, reclamation and extraction of minerals, including sand, gravel and peat.

2. Changes in the intensity of the grazing regime or seasonal pattern of grazing, cessation of grazing or changes in supplementary feeding practice.

3. Changes in the established method or frequency (or introduction), of rolling, mowing or cutting.

4. The application of manure, slurry, lime or artificial fertiliser.

5. The application of herbicides, fungicides or other chemicals deployed to kill any form of wild plant, other than plants listed as being noxious in the Noxious Weeds (Northern Ireland) Order 1977.

6. The storage or dumping, spreading or discharge of any material not specified under paragraph 5 above.

7. The destruction, displacement, removal or cutting of any plant, seed or plant remains, other than for:

   (i) plants listed as noxious in the Noxious Weeds (Northern Ireland) Order 1977;

   (ii) normal cutting or mowing regimes for which consent is not required under paragraph 3 above.

8. The release into the area of any animal (other than in connection with normal grazing practice) or plant. 'Animal' includes birds, mammals, fish, reptiles, amphibians and invertebrates; 'Plant' includes seed, fruit or spore.

9. Burning.

10. Changes in tree or woodland management, including afforestation, planting, clearing, selective felling and coppicing.

11. Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations.

12. Alteration of natural or man-made features, the clearance of boulders or large stones and grading of rock faces.

13. Operations or activities, which would affect wetlands (include marsh, fen, bog, rivers, streams and open water), e.g.

    (i) change in the methods or frequency of routine drainage maintenance;

    (ii) modification of the structure of any watercourse;

    (iii) lowering of the water table, permanently or temporarily;

    (iv) change in the management of bank-side vegetation.

14. The disturbance, killing or taking of any wild animal except where such killing or taking is treated as an exception in Articles 5, 6, 11, 17, 20, 21 and 22 of the Wildlife (Northern Ireland) Order 1985.

15. The following activities undertaken in a manner likely to damage or disturb the wildlife of the area:

    (i) educational activities;

    (ii) research activities;

    (iii) recreational activities;

    (iv) exercising of animals.

16. Changes in game, waterfowl or fisheries management or fishing or hunting practices.

17. Use of vehicles or craft likely to damage or disturb the wildlife of the area.

FOOTNOTES

(a) Please note that consent by the Department to any of the operations or activities listed in the Schedule does not constitute planning permission. Where required, planning permission must be applied for in the usual manner to the Department under Part IV of the Planning (Northern Ireland) Order 1991.

(b) Also note that many of the operations and activities listed in the Schedule are capable of being carried out either on a large scale or in a very small way. While it is impossible to define exactly what is large and what is small, the Department

would intend to approach each case in a common sense and practical way. It is very unlikely that small scale operations would give rise for concern and if this was the case the Department would normally give consent, particularly if there is a long history of the operation being undertaken in that precise location.

SHANES CASTLE

Views About Management
The Environment (Northern Ireland) Order 2002 Article 28(2)

A statement of the Department's views about the management of Shanes Castle Area of Special Scientific Interest ("the ASSI")

This statement represents the views of the Department about the management of the ASSI for nature conservation. This statement sets out, in principle, our views on how the area's special conservation interest can be conserved and enhanced. The Department has a duty to notify the owners and occupiers of the ASSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the ASSI and there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest. It is also very important to recognise that management may need to change with time.

The management views set out below do not constitute consent for any operation or activity. The written consent of the Department is still required before carrying out any operation or activity likely to damage the features of special interest (see the Schedule on pages 3, 4 and 5 for a list of these operations and activities). The Department welcomes consultation with owners, occupiers and users of the ASSI to ensure that the management of this area maintains and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

MANAGEMENT PRINCIPLES

Parkland and associated species

Parklands are typically composed of a mosaic of scattered open-grown trees and shrubs in a relatively extensive area of grassland. They usually contain a mixture of native and non-native trees and are part of the designed landscapes which were created within historic estates. The open grown trees and shrubs in parklands provide habitat for rare and uncommon lichens, fungi and invertebrates.

Parklands often contain ancient and veteran trees. Ancient trees usually have large girths, hollow trunks, large amounts of dead wood and often have a characteristic "stag headed" appearance due to their upper canopy dying back. Veteran trees are younger trees which have some of the characteristics of ancient trees. In general, more species are associated with ancient and veteran trees, mainly due to the large amounts of standing and fallen dead wood that are usually associated with them. This dead wood provides a specialist habitat for many species of fungi and invertebrates. It is therefore important to retain veteran and ancient trees, whilst ensuring that new generations are established at a slow and steady rate to replace them when they eventually die.

Trees have relatively shallow root systems which can extend a considerable distance beyond their canopy. Particular types of fungi are associated with tree roots and help the tree take up minerals and water. These fungi can be harmed by the application of nutrients such as artificial fertiliser, manure and slurry, or chemicals such as lime and fungicides. Harming these fungi can make trees more vulnerable to drought or other

stressful events. Tree roots are also very vulnerable to physical damage from compaction by vehicles and poaching by livestock.

Grazing is important to maintain the open parkland habitat, but it should be at a low enough intensity to prevent bark stripping or poaching damage to tree roots. If grazing is not possible, the grassland can also be maintained by cutting, but care should be taken to avoid damaging tree roots by compaction from vehicles.

The lichens associated with the trees in the parkland are very sensitive to air pollutants, such as those which might originate from livestock units or applications of fertiliser and slurry.

Specific objectives for parkland include:

Encourage the retention of large dead branches, fallen dead wood and the remains of old trees *in situ*, as they often contain important populations of fungi, lichens and invertebrates.

Ensure that the trees are maintained in relatively open conditions by grazing or cutting the surrounding grassland.

Encourage establishment of a steady supply of new generations of trees either through planting of appropriate species, or periodic reduction in grazing levels.

Ensure that there is no application of fungicides, lime, artificial fertiliser, manure or slurry in the vicinity of the parkland trees and shrubs.

Maintain good air quality.

Bat assemblage

Shanes Castle ASSI is also of importance for bats. Bats require specific conditions at different times of the year; summer maternity roosts need to be dark and warm, while winter hibernation sites need to be dark, cool and humid, with stable temperatures.

Bats are sensitive to disturbance. It is particularly important to avoid disruption to bat roosts during the winter when they are hibernating and during the summer when they are in maternity colonies. Entrances to roost sites should therefore be secure to prevent uncontrolled or unauthorised access, but should also remain sufficiently unobstructed to be accessible to bats.

The maintenance of some woodland and scrub cover in the vicinity of the roost sites will provide sheltered and secured access to flight corridors, as well as valuable feeding habitat for the bats.

Bats depend upon the surrounding countryside for feeding. It is important that sensitive habitat management is maintained to provide flight corridors and foraging areas to support the bat population.

Specific objectives for the bats and their roosts include:

The Department would encourage the buildings used for roosting to be maintained in an adequate and weatherproof condition, with the interior of the building maintained to provide a range of internal temperatures and low light levels.

Human access to the roost should be limited to that which is necessary to maintain the buildings and monitor the conservation status of the bats. Access to the roost area by predators, such as domestic cats, should be prevented, as far as possible.

The Department would encourage the maintenance of roost emergence points and flight lines to be kept unobstructed and free from artificial light. Trees and shrubs near to the emergence points should be maintained to provide sheltered and secure access to flight corridors.

Where bat roosts occur, the Department would encourage the maintenance and conservation of the surrounding woodland, parkland, wetland and grassland. These habitats provide flight corridors and foraging areas for the bat population.

Management objectives applicable to all habitats throughout the site

Discourage non-native species, especially those that tend to spread at the expense of native wildlife.

Ensure that disturbance to the site and its wildlife is minimised.

Maintain the diversity and quality of habitats associated with the parkland, such as river and woodland. These adjoining habitats can often be very important for wildlife.

Sealed with the Official Seal of the
Department of the Environment
hereunto affixed is authenticated
by

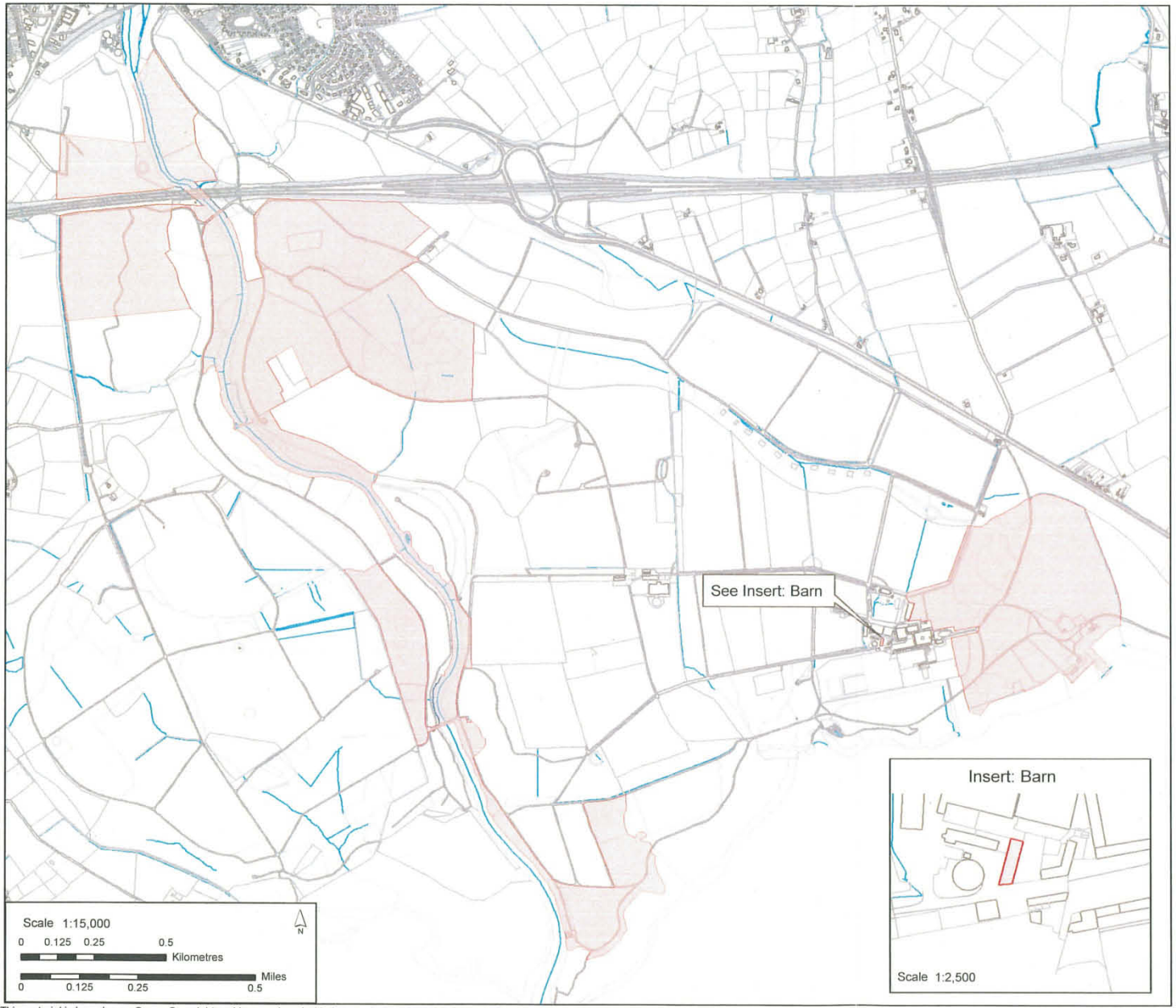
[Signed by]

_____

G R SEYMOUR
Senior Officer of the
Department of the Environment

Dated the 27 of March 2012

SHANES CASTLE ASSI



SHANES CASTLE
AREA OF SPECIAL SCIENTIFIC INTEREST

Map referred to in the Declaration dated: 27th MARCH 2012

SITE BOUNDARY: The Area of Special Scientific Interest (ASSI) includes all the lands highlighted within the solid coloured lines.

AREA OF SITE: 143.33 hectares

OS MAPS 1:50,000: Sheet No. 14
1:10,000: Sheet No. 95

IRISH GRID REFERENCES: J090887 and J113882

COUNCIL AREA: ANTRIM BOROUGH COUNCIL

COUNTY: ANTRIM

G R SEYMOUR
SENIOR OFFICER OF THE
DEPARTMENT OF THE ENVIRONMENT

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