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Ms Suzanne Wylie
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Our Ref: ASSI406

24 July 2015

Dear Ms Wylie

CONFIRMATION OF BELVOIR AREA OF SPECIAL SCIENTIFIC INTEREST ARTICLE 28(6) OF THE ENVIRONMENT (NORTHERN IRELAND) ORDER 2002

Date of declaration:	11 February 2015
Council Area:	Belfast City Council
County:	Co. Down
Irish Grid Reference:	J342 696

The Department of the Environment has now considered any objections or representations which it received regarding the above declaration and hereby gives notice that it has confirmed the declaration of Belvoir Area of Special Scientific Interest (ASSI), as previously notified to you.

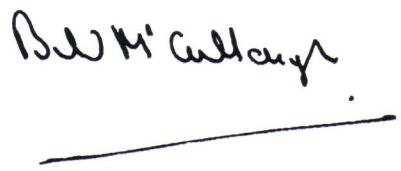
An amendment has been made to the wording in footnote (a) to the Schedule to reflect changes to planning legislation following the transfer of planning functions to local councils on 1 April 2015. The reference to the Planning (Northern Ireland) Order 1991 has been replaced with reference to the Planning Act (Northern Ireland) 2011.

As you will be aware from the citation documents received at the time of declaration, the above Area of Special Scientific Interest (ASSI) has been afforded legal protection against specified operations or activities that may damage its scientific features.

I refer you to the attached Schedule that lists those operations and activities which the Department considers may cause damage to the features of this ASSI and would remind you of the requirement to apply for written consent/assent from the Department **before** carrying any of them out.

Northern Ireland Environment Agency (NIEA) has a statutory responsibility to manage and protect ASSIs and it wishes to work in a cooperative way with landowners and occupiers to secure the scientific features of those areas. Given this responsibility NIEA is also obliged to consider any damage to an ASSI as a serious matter and it is a criminal offence under Article 46 of The Environment (Northern Ireland) Order 2002 to cause damage to these lands.

Yours sincerely



B W McCULLOUGH
Authorised Officer

DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT BELVOIR, COUNTY DOWN. 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 'Belvoir Area of Special Scientific Interest'.

The area is of special scientific interest for its parkland and wood pasture habitat and associated species. It is situated within the outskirts of South Belfast predominantly along the eastern bank of the River Lagan with Moreland's Meadow lying to the west of the river within a large meander loop. With the exception of Moreland's Meadow, the ASSI lies within the former Belvoir Estate which was founded in the 18th century, the lands bounded by the river to the west and a wall 5km in length surrounding the rest of the grounds. These walled grounds were known as the Belvoir Demesne and remained wooded during the 18th and 19th centuries when most of the trees throughout Ireland were felled. Belvoir ASSI largely lies within the area of the original Belvoir Estate and is now owned and managed by Forest Service as a commercial forest and recreational park, and by Belvoir Park Golf Club as a golf course. Belfast City Council own and manage Moreland's Meadow as part of the Lagan Valley Regional Park.

The underlying geology of Belvoir consists of ancient Ordovician sandstone and shale (marine sediments formed some 450 million years ago) and younger Permian sandstones (formed in a predominantly desert setting some 270 million years ago). The former are present in the south-eastern half of the site, typically associated with the higher ground while the latter occur in the north-western half, marking the change to lower ground adjacent to the River Lagan. There is little actual outcrop of the solid geology within the site. The valley floor and lower ground are dominated by river deposited alluvium, linked to the past and present position and flooding history of the River Lagan while the rest of the site is dominated by glacial deposits. The development of the river's floodplain, although now highly modified, is reflected in a number of abandoned meander loops with many former sections of river channel now in-filled by peat dominated soils and isolated from the present river course.

Historic parklands and wood pastures are generally characterised by old, open-grown trees with significant amounts of standing and fallen deadwood. Such trees, where they display attributes associated with late maturity such as large trunk girth and trunk hollowing, are referred to as veteran trees. Where these trees are especially old, generally greater than 200 years and begin to die back naturally, a condition known as retrenchment, they are referred to as ancient trees. Therefore, the term 'ancient' refers specifically to the age of a tree, describing the stage of development in the ageing process beyond full maturity. Scientific interest relates to specialist biological

communities which are associated with these characteristic trees and deadwood habitats. These include invertebrates, fungi and lichens.

The open-grown trees at Belvoir display a variety of features characteristic of veteran and ancient trees, including standing and fallen deadwood, torn branches, exposed and decaying heartwood, hollowing trunks and bracket fungi. The site supports one of the largest concentrations of ancient and veteran trees in Northern Ireland and is of particular note because it contains the oldest known trees in Ireland. There is also scientific evidence that some of the trees at Belvoir pre-date the formation of the Demesne in the early 18th century. Many of these trees have been dated using dendrochronological techniques. Dendrochronology is the scientific method of estimating tree age based on the analysis of patterns of tree rings by relating them to past events. The dendrochronological sequence in Ireland is well documented and is particularly important for dating Oak *Quercus* spp. trees.

The open-grown trees are found within a variety of situations in Belvoir including grassland, golf course, coniferous woodland, deciduous woodland and wood pasture. A variety of tree species are present. Oak *Quercus* spp. is the dominant species, with Beech *Fagus sylvatica*, Lime *Tilia* sp., Ash *Fraxinus excelsior*, Horse-chestnut *Aesculus hippocastanum*, Sycamore *Acer pseudoplatanus,* Hawthorn *Crataegus monogyna* and occasional Sweet Chestnut *Castanea sativa.* Of particular note is a large-girthed ancient Oak *Quercus* sp. tree which is in an advanced state of retrenchment and completely hollow. With a girth of approximately 8m, this ancient tree is one of the largest-girthed Oak *Quercus* spp. trees in Ireland. There are also a number of large-girthed tree stumps scattered throughout the area which were felled several decades ago. The number of trees at Belvoir which are classified as veteran and ancient, combined with evidence from dendrochronological studies and historical documents, indicates that the site has been wooded for several centuries.

Wood pasture describes an historical management system in which open woodland provided shelter and forage for grazing animals as well as woodland products such as timber for construction, fuel, fencing and tools. In Belvoir, a classic example of wood pasture is found at Moreland's Meadow where trees occur at different densities within unimproved grassland. Low intensity grazing by cattle is maintaining the unimproved grassland and preventing natural succession to closed canopy woodland. This is balanced by low levels of natural regeneration of trees such as Oak *Quercus* spp. which is occurring where Bramble *Rubus fruticosus* agg. has developed around fallen deadwood. This thorny plant protects the tree seedlings from grazing and ensures that new generations of trees are established to replace senescent and dying trees.

Dendrochronological studies on Oak *Quercus* spp. stumps at Belvoir have revealed that some of the trees which were felled in the 20th century were many centuries old. One of the stumps in Corbie Wood has been dated to AD 1642 with an estimated felling date range of AD1972 ± 9 years. This makes it the earliest date recorded in Ireland for an Oak *Quercus* sp. tree that was still alive in the 20th century. Similar studies on a sample of living trees at Belvoir have revealed that most dated back to the 19th century. However, one Oak *Quercus* sp. at Belvoir Park Golf Club was dated to AD1780 and another in Corbie Wood, which has re-sprouted after being felled, was dated back to AD1686.

Additional evidence that wood pasture has been present in the area for several centuries is provided by the presence of a woodland ground flora including species indicative of ancient woodland. Plants such as Lords-and-Ladies *Arum maculatum*, Wood Anemone *Anemone nemorosa,* Bluebell *Hyacinthoides non-scripta,* Wood-sorrel *Oxalis acetosella*, Herb Robert *Geranium robertianum* and the notable Thin-spiked Wood-sedge *Carex strigosa* are all typical of long-established woods. Where the soils are damper, Lesser Celandine *Ficaria verna* and Opposite-leaved Golden-saxifrage *Chrysosplenium oppositifolium* are frequent. Toothwort *Lathraea squamaria*, a parasitic plant of tree roots, is also found at Belvoir. It appears above ground in early spring as a spike of two-lipped dull purple flowers and is especially associated with Hazel *Corylus avellana* and Alder *Alnus glutinosa*.

The longevity of woodland cover at Belvoir is further evidenced in the diverse invertebrate fauna, which includes several species which have not been recorded elsewhere in Ireland. Important molluscs associated with Belvoir include the Plaited Snail *Spermodea lamellata* which is confined to old growth woods and is listed as Endangered in the Irish Red List and the English Chrysalis Snail *Leiostyla anglica* which is listed as Vulnerable. Occasional areas of bare ground within the grassland at Morelands Meadow provides ideal habitat for solitary bees including common species such as the Ashy Mining-bee *Andrena cineraria* and the less common Gooden's Nomad Bee *Nomada goodeniana* which parasitises several mining bees *Andrena* species. Belvoir is particularly important for saproxylic invertebrates, i.e. those species that are dependent on dead or decaying wood. Among the saproxylic Coleoptera (beetles of wood pasture and deadwood) are a spider beetle *Ptinus subpilosus* for which this is the only Irish site and a minute fungus beetle *Gyrophaena pulchella* which is a proposed Red Data Book species in Britain. Other saproxylic Coleoptera include a minute hairy ladybird *Scymnus auritus* which has only one other known Irish site, two false darkling beetles *Orchesia undulata*, which breeds in the specialist fungi and the rarer *Abdera flexuosa* which is associated with Alder *Alnus glutinosa* and a silken fungus beetle *Cryptophagus ruficornis* which is virtually confined to the Lagan Valley in Ireland.

A wide range of fungi have been recorded at Belvoir, again reflecting the long-established wooded nature of the area. Fungi with a range of different life strategies and ecological niches are represented on the site. These include saprotrophic fungi; species that live on dead or decaying organic matter such as wood, twigs and leaves and are responsible for the decay of the many very old trunks and stumps across the site. Ectomycorrhizal fungi, on the other hand, are associated directly with living trees forming a symbiotic relationship with the tree roots. This symbiosis enhances tree growth by facilitating water and nutrient uptake.

Bracket fungi are a particular group of saprotrophic fungi which produce a non-stalked fruiting body directly attached to the tree trunk or branch. Examples include Southern Bracket *Ganoderma australe* and Beefsteak Fungus *Fistulina hepatica* which are both common across Belvoir and produce white and brown rots respectively. The resulting decayed wood provides a micro-habitat for other fungi and specialised invertebrate species. Bracket fungi of particular note recorded at Belvoir include Oak Polypore *Piptoporus quercinus*, which has not been recorded in Ireland before, Anise Mazegill *Gloeophyllum odoratum*, which is listed as Vulnerable in the British Red List and Oak Mazegill *Daedalea quercina*, which grows on an old Oak *Quercus* sp. stump. This is one of the very few locations for this species in Northern Ireland. Other bracket fungi associated with already partially decomposed fallen and standing deadwood include

Turkeytail *Trametes versicolor*, Blushing Bracket *Daedaleopsis confragosa* and Hairy Curtain Crust *Stereum hirsutum* which is particularly common on Oak *Quercus* spp. across the site. Many of the large fallen Oak *Quercus* spp. trunks also support other saprotrophic fungi species such as Burgundydrop Bonnet *Mycena haematopus*, Common Bonnet *M. galericulata* and Clustered Bonnet *M. inclinata*.

Belvoir also supports a variety of ectomycorrhizal fungi which are generally associated with the roots of living Oak *Quercus* spp. and Beech *Fagus sylvatica* trees. Species recorded include Panthercap *Amanita pantherina*, Scarletina Bolete *Boletus luridiformis,* Purple Brittlegill *Russula atropurpurea,* Oakbug Milkcap *Lactarius quietus*, the Webcap *Cortinarius balteatocumatilis* and the notable Deceiving Bolete *Boletus queletii*. Two rare species of cup fungi have also been recorded. The first, *Hypocrea tremelloides*, is associated with Oak *Quercus* spp. and is only known from one other site in Britain and Ireland. The second, *Cheilymenia fraudans*, was recently discovered on cattle dung in Moreland's Meadow illustrating the importance of traditional grazing management in this part of the site. There are currently no other records for this species in Britain and Ireland.

Lichen interest across the site is largely restricted to those species growing on older trees in open conditions where humidity is relatively high. Fairly common epiphytic species occur on the Oaks *Quercus* spp. at Morelands Meadow including *Evernia prunastri*, known as Oak Moss, *Usnea subfloridana*, *Parmotrema perlatum*, *Ramalina farinacea* and Common Orange Lichen *Xanthoria parietina*. More notable species in the same area include *Tuckermannopsis chlorophylla* and *Chaenotheca ferruginea* which have restricted distributions in Ireland and several specimens of the distinctive old parkland indicator *Cresponea premnea* found on the trunk of a large Lime *Tilia* sp.. In addition this species is found on a large Oak *Quercus* sp. near the Motte. Lichens are very sensitive to atmospheric pollution and their presence in such close proximity to Belfast is notable.

The effects of past and present management have resulted in the presence of the current semi-natural habitats at Belvoir. As such, they are important for a wide range of plants and animals, including birds and mammals, such as bats. 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 grassland.

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 or non-native invasive species, such as Cherry Laurel or Rhododendron.

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 or non-native invasive species such as Cherry Laurel or Rhododendron;

   (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.

11. Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations, except routine maintenance and use of roads for normal forestry or golf course management.

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 (as amended).

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 council or the Department under Part 3 of the Planning Act (Northern Ireland) 2011. Operations or activities covered by planning permission are not normally covered in the list of Notifiable Operations.

(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.

BELVOIR

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

A statement of the Department's views about the management of Belvoir 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 4, 5 and 6 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

Parklands, wood pasture 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. Wood pasture is a type of woodland which has a very open structure due to historic grazing practices. It typically consists of a mosaic of trees and shrubs growing in a variety of densities; from open grown trees to more closely spaced trees. Depending on the density of canopy cover, other semi-natural habitats such as grassland may occur in a mosaic with a modified woodland ground flora. The open grown trees and shrubs in parklands and wood pasture provide habitat for rare and uncommon lichens, fungi and invertebrates.

Parklands and wood pastures contain ancient and veteran trees. Ancient trees usually have large girths, hollow trunks, large amounts of deadwood 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 deadwood that are usually associated with them. This deadwood 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 and wood pasture 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. When grazing is excluded from an area of parkland or wood pasture, the open grown veteran and ancient trees can be rapidly surrounded by naturally regenerating trees. These young trees can quickly out-compete veteran and ancient trees, shading them out and eventually leading to their death. A similar situation can occur when trees are planted close to veteran and ancient trees.

Specific objectives for parkland, wood pasture and associated species include:

Encourage the retention of large dead branches, fallen deadwood 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 and where appropriate, gradually removing surroundings trees which are shading out veteran and ancient trees.

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 and wood pasture trees and shrubs.

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 and wood pasture, 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

Helen Anderson

HELEN ANDERSON
Senior Officer of the
Department of the Environment
Dated the 24th of July 2015