

NORTH WOODBURN RESERVOIR

ASSI A SPECIAL PLACE...

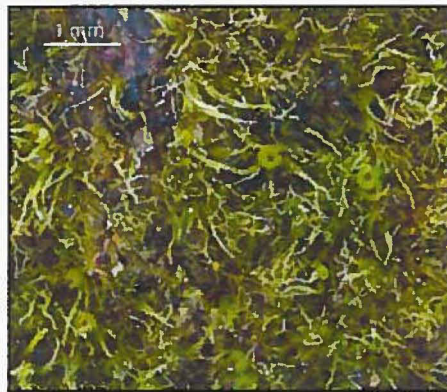


North Woodburn Reservoir

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.

One of these important sites is North Woodburn Reservoir ASSI. Situated in the hills above Carrickfergus, the fluctuating water levels of North Woodburn Reservoir provides habitat for a group of specialist mosses, some of which are rare. These mosses grow on exposed mud in the draw-down zone around the edge of the reservoir. They tend to be short lived, appearing in early winter or spring following a lowering of the water-levels.

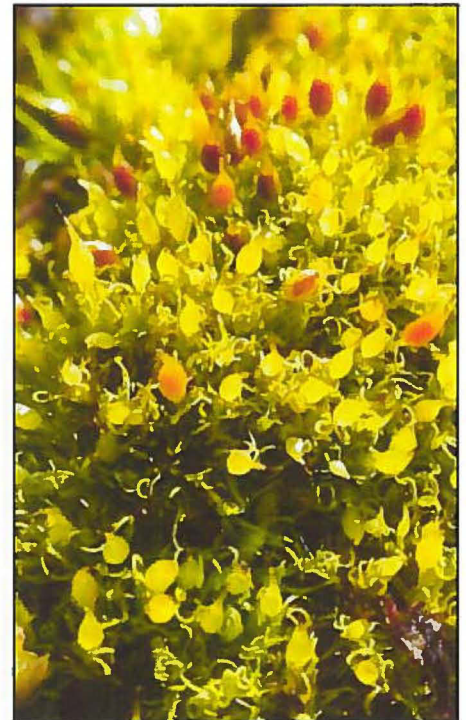
There are three rare mosses found in North Woodburn Reservoir ASSI. The first and most important rare moss is Prickly Earth-moss. North Woodburn Reservoir is the only known UK site for this species and it has only been recorded in a few other localities in Europe. The second rare moss is Beaked Beardless-moss, which has few records in Northern Ireland. The third rare moss is Dwarf Bladder-moss, which is only found on one other reservoir in Co. Antrim and has no other populations in Ireland.



Prickly Earth-moss © Norbert Stappers



Dwarf Bladder-moss © Michael Lueth



Beaked Beardless-moss © David Holyoak

In places, the margins of the reservoir has been colonised by Grey Willow scrub, with species such as Reed Canary-grass, Bottle Sedge, Carnation Sedge, Meadowsweet, Cuckooflower and Water Mint.



Margins of the reservoir colonised by plants



Eyebright

Further diversity is provided through a narrow stretch of species rich grassland which edges the reservoir. It is typically grass-dominated with a wide range of associated herbs. The grasses Yorkshire-fog, Red Fescue, Crested Dog's-tail, and Sweet Vernal-grass are common in the sward. Herbs typical of traditionally managed grasslands are frequent throughout the sward and include Common Knapweed, Eyebright, Yellow-rattle and Lady's-mantle. Heather is present where the soils are more acidic.

The site also provides an important habitat for animals such as Common Blue Damselfly, Blue-tailed Damselfly and Otter.

Correct management is essential for special places like North Woodburn Reservoir to ensure the survival of the area's important range of habitats and species. Fluctuating water levels and good water quality are important to ensure the survival of the mosses. The Northern Ireland Environment Agency is keen to work closely with landowners to maintain and enhance North Woodburn Reservoir.



Blue-tailed Damselfly © Robert Thompson



Yellow-rattle



Otter © Laurie Campbell

DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT NORTH WOODBURN RESERVOIR, 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 'North Woodburn Reservoir Area of Special Scientific Interest'.

The area is of special scientific interest for its bryophyte assemblage. North Woodburn Reservoir is located to the north-west of Carrickfergus at an elevation of 220m.

The area is underlain by Palaeogene age rocks, dominated by the Lower Basalt Formation. Almost exclusively comprising basalt these rocks formed as lava flows associated with fissure type eruptions. The soils at North Woodburn Reservoir are derived from the parent rock, and the resultant soils have poor drainage characteristics and are known as surface water and groundwater gleys.

A bryophyte survey was carried out on North Woodburn Reservoir in 1999, which resulted in the discovery of three rare bryophytes associated with exposed mud in the draw-down zone. Of these, the most notable record is for Prickly Earth-moss *Ephemerum spinulosum*, a tiny moss with sharply-toothed leaves which was found on exposed damp silty mud, close to a small inlet stream. North Woodburn Reservoir is the only known site in the UK for this species and it has only been recorded in a few other localities in Europe. The second rare bryophyte is Beaked Beardless-moss *Weissia rostellata*, which has few records in Northern Ireland and is mainly associated with reservoirs in Co. Antrim. The third rare bryophyte is Dwarf Bladder-moss *Physcomitrium sphaericum*. This species was found on open, humic silty-clay and is associated with vascular plants which are characteristic of the inundation zone, such as Toad Rush *Juncus bufonius*, Marsh Yellow-cress *Rorippa palustris*, Redshank *Persicaria maculosa*, Water-pepper *Persicaria hydropiper* and Marsh Cudweed *Gnaphalium uliginosum*. It is only found on one other reservoir in Co. Antrim and has no other known populations in Ireland. Other bryophytes recorded in the draw-down zone include Crookneck Nodding-moss *Pohlia camptotrachela* and Cavernous Crystalwort *Riccia cavernosa*.

In places, the margins of the reservoir is colonised by Grey Willow *Salix cinerea* scrub, with species such as Reed Canary-grass *Phalaris arundinacea*, Bottle Sedge *Carex rostrata*, Carnation Sedge *Carex panicea*, Meadowsweet *Filipendula ulmaria*, Cuckooflower *Cardamine pratensis* and Water Mint *Mentha aquatica*.

Further diversity is provided through a narrow stretch of species rich grassland which edges the reservoir. It is typically grass-dominated with a wide range of associated herbs. The grasses Yorkshire-fog *Holcus lanatus*, Red Fescue *Festuca rubra*, Crested Dog's-tail *Cynosurus cristatus* and Sweet Vernal-grass *Anthoxanthum odoratum* are



common in the sward. Herbs typical of traditionally managed grasslands are frequent throughout the sward and include Common Knapweed *Centaurea nigra*, Eyebright *Euphrasia officinalis* agg., Yellow-rattle *Rhinanthus minor* and a Lady's-mantle *Alchemilla glabra*. Heather *Calluna vulgaris* is present where the soils are more acidic.

North Woodburn Reservoir provides an important habitat for plants and animals, including birds, mammals and invertebrates. For example, Common Blue Damselfly *Enallagma cyathigerum* and Blue-tailed Damselfly *Ischnura elegans* and Otter *Lutra lutra* have been recorded on the site. 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 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;
 - (iii) change in the current management of water levels;
 - (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.

NORTH WOODBURN RESERVOIR

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

A statement of the Department's views about the management of North Woodburn Reservoir 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 2-4 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

Bryophyte Assemblage

The bryophyte (moss) species associated with the draw-down zone in reservoirs are short-lived, appearing in early winter or spring following a lowering of water-levels which exposes bare mud. The most significant threat to these populations would be altering the current water-level regimes, especially if this resulted in the maintenance of continually high water-levels at all seasons year after year. These bryophyte species require the fluctuating water levels which are characteristic of working reservoirs.

Whilst the development of marginal vegetation and scrub around the margins of the reservoir provides additional diversity to the site, if water is being over-abstracted from the reservoir, Willow and other species can develop on the draw-down zone, which could suppress the growth of the bryophytes.

Another threat is invasive species, such as New Zealand Pigmyweed which can blanket exposed mud, thereby obliterating available habitat which could be utilised by the bryophytes.

Pollutants entering the reservoir are also a threat to the bryophytes, as this could stimulate excessive growth of algal mats which could smother exposed mud.

Management objectives include:

- The bryophytes require the fluctuating water levels which are characteristic of working reservoirs. The Department would encourage the continuation of this practice.

- The Department would encourage the maintenance of water quality through the control of pollution and artificial enrichment.
- The Department would encourage the maintenance of sympathetic management to ensure that disturbance to the bed and shore of the reservoir is minimised.
- Ensure that disturbance to the site and its wildlife is minimised.
- Discourage non-native species, especially those that tend to spread at the expense of native wildlife.
- Maintain the diversity and quality of habitats associated with the reservoir, such as species rich grassland through sensitive management. 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

G. R. Seymour.

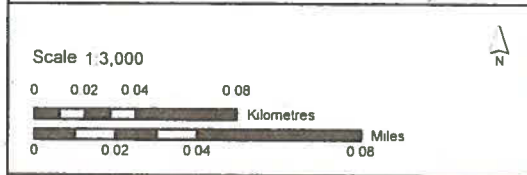
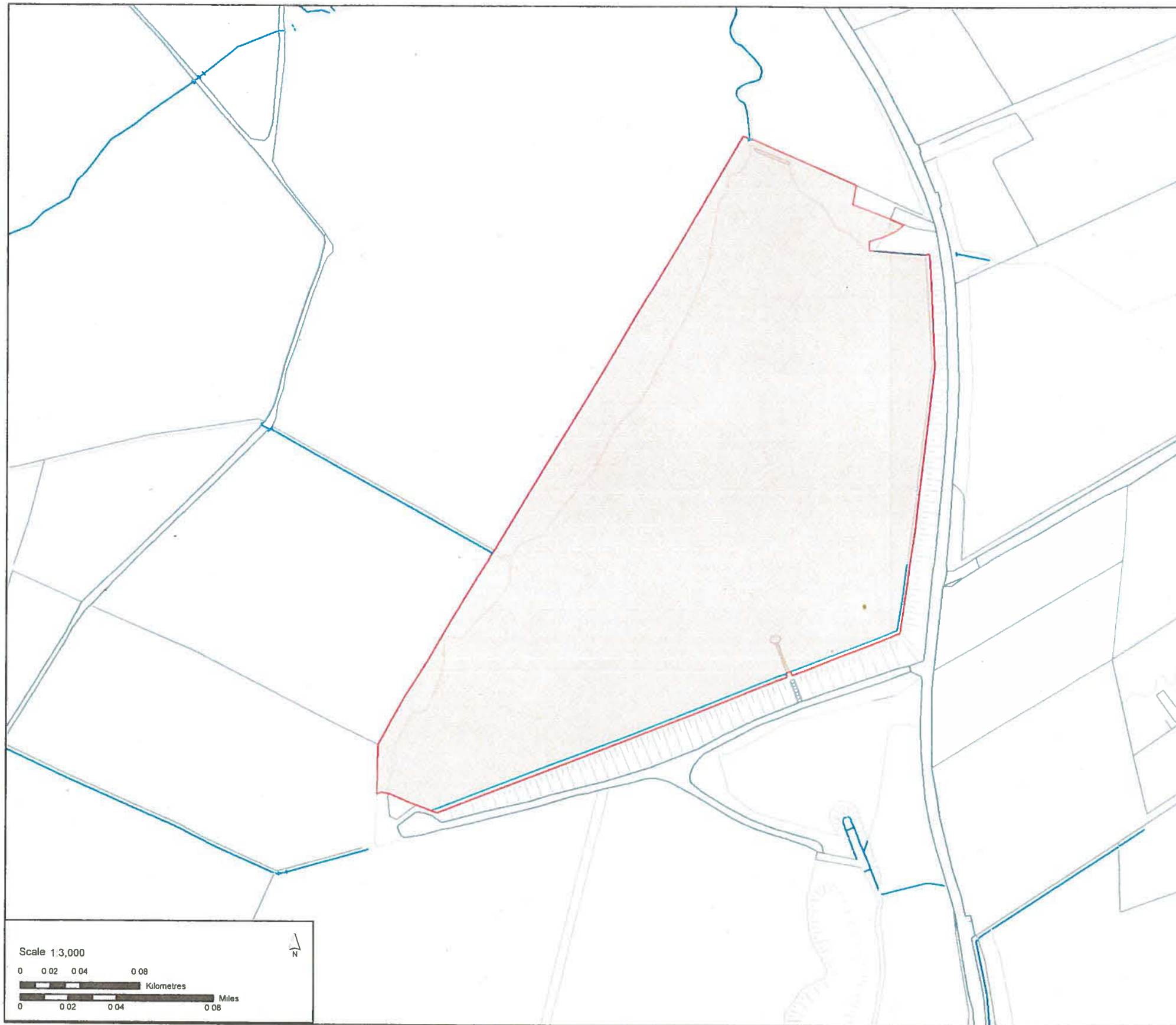
G R SEYMOUR

Senior Officer of the

Department of the Environment

Dated the 30th of MARCH 2010

NORTH WOODBURN RESERVOIR ASSI



NORTH WOODBURN RESERVOIR AREA OF SPECIAL SCIENTIFIC INTEREST

Map referred to in the Declaration dated: **30th MARCH 2010**

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

AREA OF SITE: 9.11 hectares

OS MAPS 1:50,000: Sheet No. 15
1:10,000: Sheet No. 98

IRISH GRID REFERENCE: J370 912

COUNCIL AREA: CARRICKFERGUS BOROUGH COUNCIL

COUNTY: ANTRIM

G. R. Seymour
G R SEYMOUR
SENIOR OFFICER OF THE
DEPARTMENT OF THE ENVIRONMENT

