AGHABRACK

A SPECIAL PLACE..

Meltwater channel and raised bog at Aghabrack

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.

Aghabrack is a special place because of its earth science interest. It is important in understanding the recent glacial history of Northern Ireland.

The features of interest at Aghabrack formed by the action of water and ice toward the end of the last Ice Age, between 17,000 and 13,000 years ago. At this time the earth's climate was warming after the prolonged cold period that had allowed the ice to form.

Sand and gravel were laid down in front of the ice as it was retreating south toward the main Sperrin Mountains. In Aghabrack, a hummocky ridge of this material, called moraine, was deposited when the ice briefly stopped it's retreat.

The flat outwash surface at Aghabrack

The site also contains part of an esker ridge. An esker forms when a water channel under the ice becomes blocked up by sand and gravel as the flow of water declines. It is these ice channels that feed sediment from under the glacier to it's front. The water was actually flowing up hill because of the pressure from the ice to the south.

The majority of the site is composed of a very flat surface. This is an outwash plain that formed as meltwater deposited and smoothed out sand and gravel transported from the glacier.

Since the end of the ice age, peat has built up on the outwash deposits to form a raised bog. This habitat supports unique raised bog plant communities with vegetation such as bog mosses, heather and bog cotton.

Hummocky moraine

It is the build up of bog mosses that eventually form peat over thousands of years.

Correct management is essential for special places like Aghabrack. The processes that created the deglacial landform features are no longer in operation, so if the features were damaged it would be impossible to restore them. The raised bog habitat at Aghabrack has taken many years to develop due to the complex vegetation communities present. The site displays the classic association between glacial landscape features and the post glacial accumulation of peat. Northern Ireland Environment Agency is keen to work closely with landowners to maintain and enhance Aghabrack ASSI.

An Agency within the Department of the Environment
www.doeni.gov.uk

INVESTOR IN PEOPLE

NIEA Northern Ireland Environment Agency
www.ni-environment.gov.uk

DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT AGHABRACK, COUNTY TYRONE. 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 physiographical features and accordingly needs to be specially protected, hereby declares the area to be an area of special scientific interest to be known as the 'Aghabrack Area of Special Scientific Interest'.

The Aghabrack area is of importance in understanding the recent glacial history of Northern Ireland. The landscape of this area has been defined by events that occurred towards the end of the last Ice Age, between 17,000 and 13,000 years ago, a period of gradual climatic warming. The landforms found at Aghabrack are fossil and once damaged or destroyed cannot be replaced since the processes that formed them are no longer active.

A strikingly flat outwash plain surface to the west of the Burn Dennet lies behind, and is separated from, a hummocky moraine ridge by the meltwater-eroded trench of the river valley. Together with an esker ridge alongside a minor tributary of the Burn Dennet these features are an excellent example of a deglacial landform assemblage.

An intermittent, sinuous ridge, interpreted as an esker that was deposited along the course of a subglacial stream, extends northeastwards along the eastern side of the Camus Burn. The esker ridge increases in altitude towards the northeast and therefore records upslope meltwater flow along the subglacial surface and is evidence of high hydraulic pressure beneath the ice mass. The esker terminates near the ice distal slope of a hummocky moraine ridge that occupies the lower slopes of a bedrock high to the east of the main Burn Dennet channel.

The moraine marks an ice front standstill position during overall retreat southwards towards the Sperrins. The Burn Dennet meltwater channel separates the moraine from an extensive flat surface, a pristine example of an outwash plain, lying at around 170m OD. The course of the meltwater flow has clearly been directed by the position of the moraine. The main area of the outwash plain is defined by the meltwater channels in which the underfit Inver Burn and Burn Dennet currently flow. Outwash plains indicate a pro-glacial environment and are formed by the transport and deposition of sediments by normal water flow from beneath the glacier. Subsequent meltwater erosion has cut through a part of the outwash feature producing the precipitous slopes down to the Burn Dennett.

This landform assemblage shows clearly the temporal and spatial relationships between the landforms associated with the three distinct, sequential episodes of esker, moraine and outwash plain emplacement.

The development of raised bog within the distinct hydrological unit of the outwash plain at Aghabrack displays the classic association between glacial landscape features and the post glacial accumulation of peat in Northern Ireland. Since the end of the last ice-age, the climate has gradually become warmer and wetter allowing peat forming vegetation to grow on the saturated soils. Consequently, peat layers have built up over thousands of years resulting in the development of an intermediate raised bog. Although the periphery the bog has been cut for turf in the past, much of its central core remains intact. These deep peats support a highly specialised range of plants and associated animals.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the physiographical features 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 land reclamation and extraction of minerals, including rock, sand, gravel and peat except for normal agricultural purposes.

2. The storage or dumping, spreading or discharge of any material other than for normal agricultural purposes.

3. Changes in woodland management, including afforestation, planting, clearing, selective felling and coppicing.

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

5. Alteration of natural or man-made features, the clearance of boulders or stones and grading of rock, sand or gravel faces.

6. The following activities undertaken in a manner likely to damage the scientific interest of the area:

   i) educational activities;

   ii) research activities;

   iii) recreational activities.

7. Sampling of rocks, minerals, fossils or any other material forming a part of the site, undertaken in a manner likely to damage the scientific interest.

8. Use of vehicles or craft likely to damage the scientific interest 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. 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.

AGHABRACK

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

A statement of the Department's views about the management of Aghabrack 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. Northern Ireland Environment Agency 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 page 2 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

The earth science interest at Aghabrack is expressed in the fluvioglacial landform assemblage. The Department would encourage the maintenance of the ASSI and its earth science interest.

The physiographical series

The Department would encourage the continued use of the site for current activities. Provided no damaging activities, as set out in the Schedule (page 2), are undertaken without consent, the needs of owners, occupiers and the Department can be met. Earth science features such as those at Aghabrack may require occasional management intervention in order to maintain access to, and exposure of, the geology. This could include selectively removing vegetation.

Specific objectives include:

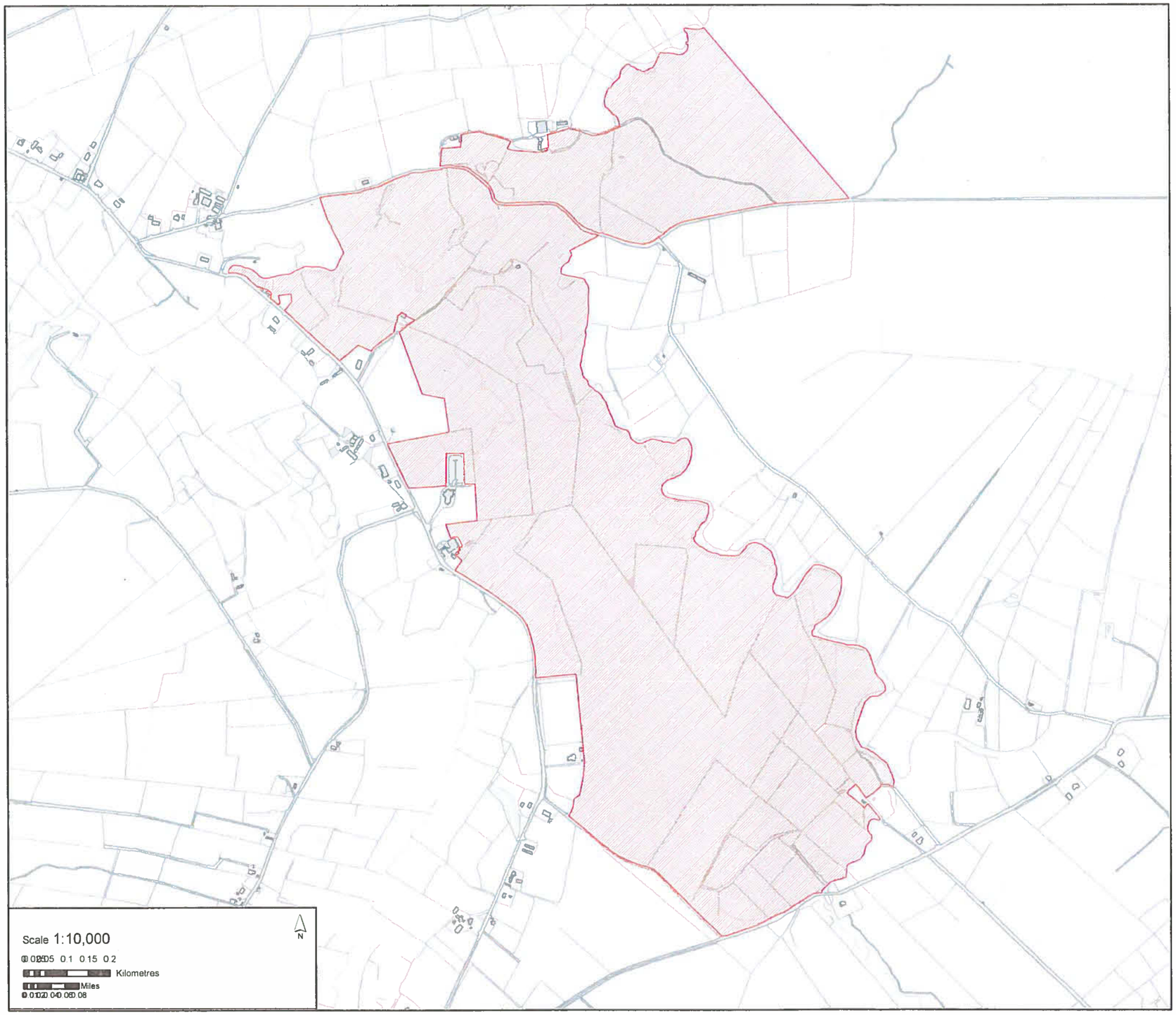
- Maintain the physiographical series in an undamaged state.
- Maintain access to the physiographical series.

The Official Seal of the
Department of the Environment
hereunto affixed is authenticated
by

R J Ramsay
Senior Officer of the
Department of the Environment

Dated the 31st of March 2009

AGHABRACK ASSI



AGHABRACK
AREA OF SPECIAL SCIENTIFIC INTEREST

Map referred to in the Confirmation dated: 30th October 2009

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

AREA OF SITE: 122.74 ha

OS MAPS 1:50,000: Sheet No. 13
1:10,000: Sheet Nos. 61, 74

IRISH GRID REFERENCE: H498 980

COUNCIL AREA: STRABANE DISTRICT COUNCIL

COUNTY: TYRONE

G.R.Seymour.

G R SEYMOUR
SENIOR OFFICER OF THE
DEPARTMENT OF THE ENVIRONMENT

An Agency within the Department of the Environment

NIEA Northern Ireland Environment Agency