

DEPARTMENT OF THE ENVIRONMENT FOR NORTHERN IRELAND

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT CULNAFAY,
COUNTY ANTRIM. ARTICLE 24 OF THE NATURE CONSERVATION AND
AMENITY LANDS (NORTHERN IRELAND) ORDER 1985.

The Department of the Environment for Northern Ireland (the Department), having consulted the Council for Nature Conservation and the Countryside and being satisfied that the area delineated and described on the attached map (the area) is of special scientific interest by reason of the geological, physiographical and other 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 'Culnafay area of special scientific interest'.

The area is of special scientific interest because of its deposits of diatomite. Diatomite consists of accumulated diatom frustules with differing amounts of clay, silt, sand and peat. Diatoms are microscopic aquatic plants, surrounded by a silica box, or frustule, of various shapes, depending on the species.

The diatomite (also known as Kieselguhr or Bann clay) deposits in Northern Ireland were one of the most extensive freshwater diatomite sequences of post-glacial age in the world. The deposits were mainly formed between 7500 and 5000 before present (BP), and are found in low lying land around the northern shore of Lough Neagh and in the Lower Bann valley. Although diatomite was formed in water and represents the extent of a former, larger Lough Neagh, the presence in the deposits of archaeological remains shows that these marginal areas were only seasonally inundated.

At Culnafay, as in much of the Bann valley, the diatomite was probably deposited in an elongated lake, as indicated by its essentially linear form. The dominance of benthic (bottom dwelling) species of diatom in the lowest records marks the former presence of a shallow water body, but this was probably isolated from the main lough. The change to deeper water conditions is reflected by the increased presence of planktonic (free floating) species at higher levels. Basal deposits are of early Atlantic age (post 7500 years BP), but the upper sequence has been truncated by erosion.

The diatomite record also contains Mesolithic occupation sites and it is one of the key locations for the Irish Mesolithic - Middle Stone Age - chronology. It also shows the lateral transition from diatomite to glacial till, marking the former shoreline. This is the last large deposit of good quality diatomite remaining in this area. Its natural topography indicates how the landscape might have appeared during the time of formation.

The diatomite is of international importance for biological, geological, hydrological and climatological reasons. Its archaeological significance is also considerable, given its contemporaneous links with sites of early human settlement. This assemblage gives a record of past water levels in the Lough Neagh basin, and of climatic change since the last period of Irish ice. These remaining sites are amongst the most important deposits of freshwater diatomite in the world, and are unique when considered with the associated materials.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the geological, physiographical and other features of the area:

1. The disturbance or modification of the land surface, sub-surface, water levels or water courses, whether by engineering works, drainage works, the application, spreading or storage of any material whatsoever, on or to the vegetation or land surface, or by any other means.
2. Changes in the grazing regime, including a significant decrease in livestock population, or cessation of grazing.
3. Field drainage or field boundary drainage.
4. Any hedge or scrub removal.
5. The alteration of water levels or water table, or utilization of water (including irrigation, storage or abstraction).
6. Recreational, educational or research activities likely to damage the scientific interest.
7. Use of vehicles or machinery likely to damage or disturb the scientific interest.
8. Extraction of soil, silt, clay or peat or any substance forming the surface or sub-surface.
9. Afforestation or tree planting.

Sealed with the Official Seal of the
Department of the Environment for
Northern Ireland on 28 March, 1994


R W ROGERS
Assistant Secretary

FOOTNOTES

- (a) Please note the consent by the Department to any of the above operations or activities 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 (NI) 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 above 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 give consent, particularly if there is a long history of the operation being undertaken in that precise location.

H. Cunningham
CIVIL SERVANT OF
CLARENCE COURT, BELFAST