



An Agency within the Department of the

Environment

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DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT CONAGHER, COUNTY FERMANAGH. 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 delineated and described on the attached map (the area) is of special scientific interest by reason of the geological 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 'Conagher Area of Special Scientific Interest'.

Conagher is one of only three sites, of any age, in Northern Ireland which has yielded well-preserved and articulated fish remains and one of only a handful of such sites in Ireland as a whole. First discovered in 1963, the fish fauna so far recovered is of one species only. However the abundance of material and the presence of terrestrial plant remains suggest the site will reward further investigation.

The locality is exposed along the banks of the Sillees River and one of its tributaries. The host rocks are a series of rather soft, sometimes blocky, grey mudstones alternating with harder, dark-grey, laminated limestones.

The succession lies within the lower part of the Meenymore Formation, part of the Carboniferous Leitrim Group and dates from some 340 million years ago. Strata some 6 metres below the fish-bearing beds have yielded specimens of the goniatite *Beyrichoceras micronotum*, indicating a B2 Zone age and a position in the late Asbian.

All fish material recovered to date can be assigned to the palaeoniscid fish *Elonichthys serratu*. The environmental conditions at the time of deposition appear to have been a marginal marine setting with evaporitic periods and occasional marine incursions. The presence of goniatites only six metres below the fish-bearing horizons indicates that fully marine conditions prevailed across the area only shortly before deposition of the fish-bearing material. An unequivocally marine fauna is however absent, the fauna is instead very limited in terms of species diversity. The only fossils recovered other than the numerous fish remains are limited to possible fern and small plant stem remains. This suggests proximity to some landmass, while the monospecific fish fauna suggests quasi-marine, probably brackish, conditions. The well-laminated nature of the rock indicates a virtual absence of benthic infauna or epifauna, resulting in an absence of bioturbation, which, together with their slightly bituminous nature, suggests benthic anoxia on at least a local scale. This anoxia and the lack of benthos arising from it has been a major factor contributing to the exceptional preservation of the fish at this site.

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SCHEDULE

The following operations and activities appear to the Department to be likely to damage the geological 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 reclamation and extraction of minerals, including rock, sand, gravel, clay and peat.
2. The storage or dumping, spreading or discharge of any material.
3. Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations.
4. Alteration of natural or man-made features, the clearance of boulders or stones and grading of rock faces.
5. Operations or activities which would affect rivers or streams, e.g.
 - i) change in the methods or frequency of routine maintenance;
 - ii) modification to the structure of any watercourse.
6. The following activities undertaken in a manner likely to damage the 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 geological features 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.