DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT CAMLOUGH QUARRY, COUNTY ARMAGH. 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 its 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 'Camlough Quarry Area of Special Scientific Interest'.

The area is of special scientific interest because of its geology, which is seen in outcrop at a disused quarry on the west side of Camlough Mountain.

The Slieve Gullion volcanic complex, of which Camlough Quarry is a part, is the finest example of a Palaeogene igneous centre in Ireland and is among the best topographic expressions of a ring-dyke system in the British Isles. The rocks found here are of international geological importance, having played an important role in a number of theories related to the development of and interaction between igneous rocks.

The Slieve Gullion complex developed in an area of crustal weakness, previously exploited by the much older Newry granite, around 400 million years ago. In Palaeogene times, some 56 - 58 million years ago, it was the site of a major volcano of which there is now little evidence. Subsidence of this central unit was related to a ring fault, some 20 km in diameter, the latter providing a natural weakness exploited by intrusive igneous rocks. This produced the ring-dyke complex which has been exposed, through erosion of the softer surrounding rocks, to reveal the near-circular system known as the Ring of Gullion.

The final phase saw activity return to the central area with apparently layered igneous rocks, both acid and basic in nature. Past debate on the formation of the central complex has been largely resolved. The layered structure apparent today appears to have developed as a series of igneous units intruded or injected into pre-existing rocks, rather than building up as a succession of extruded rock bodies.

The Slieve Gullion complex is historically important as it has featured in a number of major geological debates on the nature of igneous rocks and the processes by which they can be formed.

Camlough Quarry exposes the older country rocks which are the turbidites of Silurian age (here melted and fused by the intrusion of the Newry granodiorite and altered into a hornfels) and the late Caledonian age Newry granodiorite itself. The site contains evidence of the complex relationships between highly deformed (sheared) contact metamorphosed Silurian rocks and the Newry Igneous Complex.

The quarry face also exposes the inner wall of the younger Palaeogene age ring dyke (here consisting of a porphyritic granophyre). The intrusion is partially fault controlled, thereby providing evidence in support of the theory that the Slieve Gullion Ring Dyke was emplaced in a ring fracture generated during Palaeogene deformation. A late phase of movement along the fault has produced both crush-banded rocks known as mylonites and shattered angular rocks known as the Camlough Breccias. This location provides a fuller understanding of the geological history of the Slieve Gullion Ring complex.

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 ploughing, rotovating, harrowing, reclamation and extraction of minerals, including sand, gravel and peat.

2. The storage or dumping, spreading or discharge of any material.

3. Changes in tree or 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 faces.

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 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.