

## DEPARTMENT OF THE ENVIRONMENT

### DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT TARDREE QUARRY, 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 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 'Tardree Quarry Area of Special Scientific Interest'.

Tardree Quarry is the best exposure of rhyolite in the north of Ireland. The rocks found at Tardree Quarry belong to the Tardree Rhyolite Complex and are of Palaeogene age, some 60 million years old. The available evidence indicates the Complex is contemporaneous with the Interbasaltic Formation, which represents a period of relative volcanic quiescence, elsewhere in Antrim, between the Lower and Upper Basalt Formations of the Antrim Lava Group. The timing of the Complex's formation during the Interbasaltic period and its chemistry indicate the lavas were formed by the fractionation of a basaltic melt. However Strontium (Sr) isotope data from the rocks does show that crustal contamination also occurred as the magma moved toward the Earth's surface.

The outcrop at Tardree Quarry exposes columnar jointed rhyolite that hosts drusy cavities ('vugs') throughout which contain distinct crystals of the mineral tridymite, some 1 – 2 mm in length. Tridymite is a high temperature (870-1470°C) form of silica that is characteristic of acid volcanic rocks. The crystals are small (1-2mm) and are significant as elsewhere in Northern Ireland tridymite only occurs as an indistinct, very fine grained constituent within the rocks.

### 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 and peat.
2. The storage or dumping, spreading or discharge of any material.
3. Changes in tree or woodland management, including afforestation.



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.

#### **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.