

DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT
CLOGHFIN PORT, 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 'Cloghfin Port Area of Special Scientific Interest'.

Rock exposures on the foreshore at Cloghfin Port provide access to a succession of sedimentary rocks of the Mesozoic Era. During this era, which lasted approximately 183 million years, what is now Northern Ireland was inundated by a range of marine environments as it migrated between tropical latitudes 25° and 35° north. The rocks at the site range in age from the mid Triassic (approximately 220 Ma) to the late Cretaceous (approximately 80 Ma) and contain abundant invertebrate fossils. Stratigraphically, the rock succession ranges from the Mercia Mudstone Group (Triassic) through to the Glenarm Chalk Member of the Ulster White Limestone Formation (Cretaceous). The stratigraphic series, while not complete, is nonetheless remarkable. The site is of national importance due to the range of Mesozoic strata exposed, providing one of the most complete sequences in the Larne-Lough Neagh Basin and demonstrates the facies and palaeogeographic variations between this and adjacent areas. Its importance is enhanced by recent studies on the Upper Triassic rocks here, part of ongoing research into rocks of this age in the Islandmagee – Larne area.

Rocks of Triassic age are represented by the Mercia Mudstone and Penarth Groups. The former consist of red to green-grey mudstones. The latter consists of the Lilstock and Westbury Formations which are composed of silt, calcareous, silty and shaley mudstones with some sedimentary structures (cross bedding and slump) and some sandstone often richly fossiliferous. The Westbury Formation is the top of the Triassic sediments at the site.

Cretaceous rocks follow the Triassic strata. The Cretaceous is divided into the Hibernian Greensands Formation and the Ulster Whiter Limestone Formation (chalk).

At Cloghfin Port, the Hibernian Greensands Formation is comprised of the Belfast Marls, Island Magee Siltstones and Kilcoan Sands Members. The Belfast Marls Member is glauconitic (containing the mineral 'glauconite', formed in shallow marine environments) marls with shell beds and is only intermittently exposed at low tide. The presence of the fossil ammonite (a type of shell fish) *Acanthoceras* and the fossil belemnite (a squid like organism) *Actinocamax primus* in the upper part of the member have helped place the sediments within the Cenomanian stage of the Cretaceous.

The Island Magee Siltstones Member is exposed as reefs on the foreshore. It is composed of grey siltstones and marls and contains numerous fossils. These include small corals, serpulid worms, shellfish and sea urchins. The overlying Kilcoan Sands Member is a glauconitic sandstone, again rich in fossils including bivalves, sea urchins and brachiopods.

The Ulster White Limestone Formation (chalk) is well exposed at Cloghfin Port, and ranges from the Cloghfin Sponge Beds to the Glenarm Chalk Member. The thickness of the Formation at Cloghfin Port is less than within the Rathlin Basin, but the pre Larry Bane Chalk members are particularly well represented.

Cloghfin Port is the type locality for the Cloghfin Sponge Bed Member which is rich in the phosphatised remains of hexactinellid sponges, giving the Member its name. The presence of glauconitised chalk pebbles indicates that an erosive surface separates the Cloghfin Sponge Beds from the next member of the sequence, the Galboly Chalk Member. The sequence continues through the Cloghastucan, Creggan, Boheeshane, Larry Bane, Ballintoy and Glenarm Chalk Members which collectively enhance this remarkable series through the Mesozoic. The sequence is truncated by Palaeogene (approximately 58 million years old) erosion.

Recent research on the Upper Triassic (formerly Rhaetic) rocks have shown that they may provide important new insights into the worldwide T-J boundary extinction event through the assessment of the terrestrially derived arthropod cuticle material found here. The rocks also appear to host porpitiid hydrozoans which, if confirmed, would be the only known examples of Triassic porpitiids, and would also be a very rare example of ediacaran-type preservation within the Phanerozoic. To date these rocks have yielded the richest vertebrate and ichnofossil faunas of this age seen in Northern Ireland while the series contributes significantly to the proposal of Waterloo ASSI as a candidate Global Stratotype Section and Point (GSSP) for the base of the Jurassic System.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the geological interest 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 and gravel.
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. The following activities undertaken in a manner likely to damage the interest of the area:
 - i) educational activities;
 - ii) research activities;
 - iii) recreational activities;
6. 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.
7. 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.

CLOGHFIN PORT

Views About Management

The Environment (Northern Ireland) Order 2002 Article 28(2)

A statement of the Department's views about the management of Cloghfin Port 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. The Department 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 pages 2 and 3 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 Cloghfin Port is expressed as foreshore exposures of an extended section of Mesozoic strata. The Department would encourage the maintenance of the ASSI and its earth science interest.

The geological series

Provided no damaging activities, as set out in the Schedule (pages 1 and 2) are undertaken without consent, the needs of owners, occupiers and the Department can be met. Earth science features such as those at Cloghfin port may require occasional management intervention in order to maintain access to, and exposure of, the geology. This could include selectively removing vegetation or any major build up of loose rock.

Specific objectives include:

Maintain the geological series in an undamaged state.

Maintain access to the geological series.

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

G. R. Seymour.

G R SEYMOUR

Senior Officer of the
Department of the Environment

Dated the 10th of FEBRUARY 2009

