

DEPARTMENT OF THE ENVIRONMENT

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT TORR HEAD, 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 'Torr Head Area of Special Scientific Interest'.

The outcrop at Torr Head includes the best exposures of metamorphosed limestones in Northern Ireland of Dalradian age. Torr Head is also the type locality for the Torr Head (Limestone) Formation. The site is of international importance because it is crucial to understanding the correlation with sequences elsewhere in Northern Ireland and in Scotland.

Some 600 million years ago, sediment accumulating within an ancient ocean basin formed rocks which were incorporated into an enormous mountain chain. The residual core of this range forms the uplands of north-east Antrim, as well as the Sperrin Mountains. The burial and deformation of these rocks altered, or metamorphosed, them through the action of temperature and pressure. In the case of the sequence at Torr Head, both limestone, sandstone and volcanic rocks, the latter formed from cooling magma injected from depth, were metamorphosed and literally turned upside down.

Given an absence of fossils in these ancient and deformed rocks, the existence of distinctive units, such as the Torr Head Limestones, permits relationships between associated rocks found here to be compared with those elsewhere.

The rock succession is best seen on the southern side of Torr Head. A series of altered sandstones, the Altmore Formation, contain important evidence that the succession has been overturned. The base of this sequence is marked by a 1m thick coarse grit bed. This series is overlain by a 2m thick transitional zone of altered sedimentary rocks with thin limestone beds also present. These pass upwards into 6m of grey to black parallel-bedded limestones of the Torr Head Formation. Where the limestone lies close to the capping igneous mass of epidiorite, it has been further altered to a highly distinctive, coarse-grained, black graphitic limestone. At the top of section the limestone is overlain by a massive metabasite which extends at least 50m to the top of Torr Head.

This succession records the development of comparatively shallow nearshore marine sedimentary environments (Torr Head Formation) along the margin of Laurentia around 600 million years ago. Volcanic activity around that time resulted in the association of limestone and basaltic rocks recorded at Torr Head. Rifting along the continental margin continued into Upper Dalradian times, when basins developed and were infilled with sediments derived from the nearby continental landmass. This process is recorded in the sudden occurrence of coarse-grained rocks seen at the base of the Altmore Formation.

The Dalradian rocks in north-east Antrim were subsequently deformed, folded and subjected to low grade regional metamorphism during the Caledonian Orogeny, a period of mountain building. Structurally, Torr Head and the Torr Head Formation lie on the downwards facing limb of the Altmore Anticline. This north-east to south-west trending recumbent anticline is interpreted as the south-westerly continuation into Northern Ireland of the Scottish Cowal Anticline.

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 other than in the course of agricultural operations.
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 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.

TORR HEAD

Views About Management

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

A statement of Environment and Heritage Service's views about the management of the Torr Head Area of Special Scientific Interest ("the ASSI")

This statement represents the views of Environment and Heritage Service 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. Environment and Heritage Service 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 Environment and Heritage Service 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). Environment and Heritage Service 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 Torr Head occurs within the coastal cliffs. Environment and Heritage Service would like to encourage the maintenance of the ASSI and its earth science interest.

1. The geological series

Environment and Heritage Service would encourage the continued use of the site for agricultural and recreational activities. Provided no damaging activities are undertaken without consent, as set out in the Schedule (pages 2 and 3), the needs of owners, occupiers, users and the Department can be met. Specific objectives include:

Retain the potential to access the buried geological series.

Retain the existing coastal dynamics.

Sealed with the Official Seal of the
Department of the Environment
hereunto affixed is authenticated
by



Dr J S Faulkner
Senior Officer of the
Department of the Environment

Dated the 17th of *October* 2003

TORR HEAD - A SPECIAL PLACE

Sites of geological and biological importance have been surveyed by the Environment and Heritage Service to assess their scientific interest. The best sites are now being declared as Areas of Special Scientific Interest (ASSIs). In doing so, we aim to safeguard these important sites for the use and enjoyment of future generations.



Torr Head Limestones

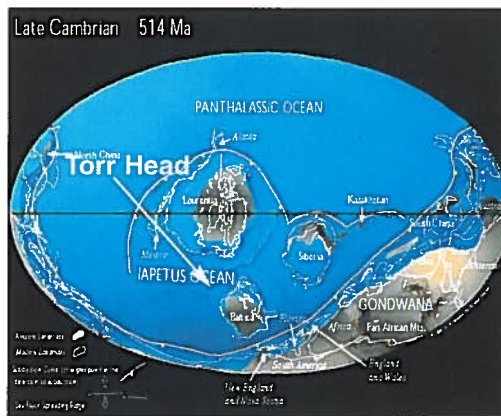
Torr Head is special because it is the best exposure of metamorphosed limestones in Northern Ireland of Dalradian age. Torr Head is also the type locality for the Torr Head (Limestone) Formation. The site is of international importance because it is crucial in aiding the understanding of the relationship between rock sequences elsewhere in Northern Ireland and in Scotland.

Some 600 million years ago, sediment accumulating within an ancient ocean basin formed rocks which were later incorporated into an enormous mountain chain. The residual core of this range forms the uplands of north-east Antrim, as well as the Sperrin Mountains. Burial of these rocks changed them through the action of temperature and pressure. In the case of the sequence at Torr Head, limestone, sandstone and volcanic rocks, were all altered and literally turned upside down.

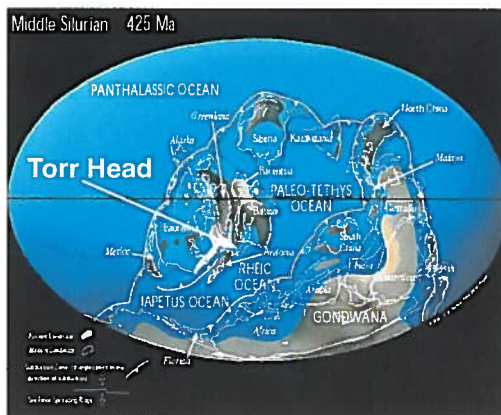
Due to the absence of fossils in these ancient and deformed rocks, the existence of distinctive units, such as the Torr Head Limestones, permits relationships between associated rocks found here, to be compared with those elsewhere.

The rock succession is best seen on the southern side of Torr Head. Here can be seen a series of altered sandstones, the Altmore Formation, overlain by the parallel limestone layers of the Torr Head formation.

of Laurentia (a former continent, roughly equivalent to North America today), around 600 million years ago. Volcanic activity at that time has resulted in this association of limestone and basaltic rocks which can be seen at Torr Head today.

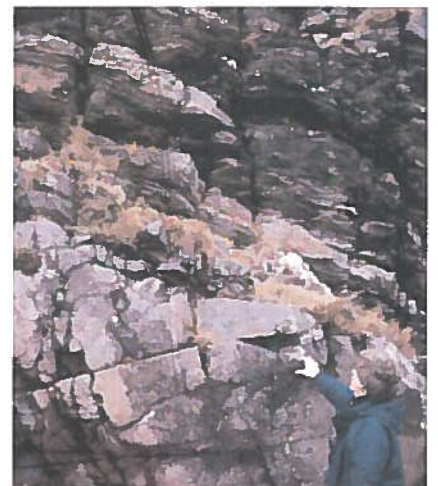


Open water to the Southeast of Laurentia with accumulated sediments



The continents collide, Oceans disappear and sediments are incorporated into new mountain chains

At the top of the limestone section a massive metabasite extends at least 50 metres to the top of Torr head. This sequence of rocks records the development of a shallow sea, along the margin



Main Limestone Outcrop - with the Altmore rocks below.

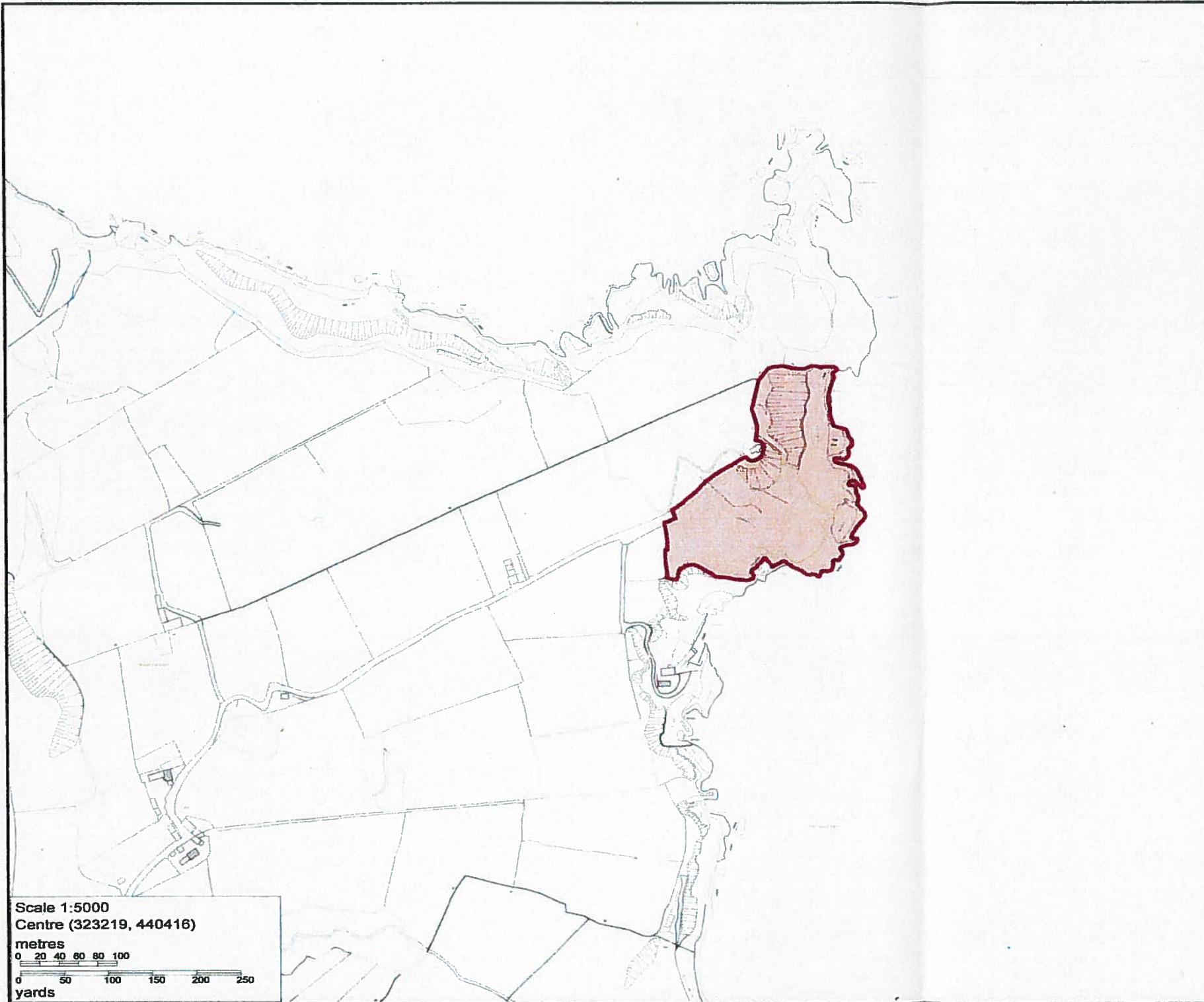
Therefore, it is very important to conserve for the future the best features that remain. The Environment and Heritage Service aims to work with landowners and occupiers to ensure that special landscape features from our past, like those at Torr Head, are protected for the future through ASSI designation.



TORR HEAD ASSI



An Agency within the Department of the
Environment
www.doeni.gov.uk



DEPARTMENT OF THE ENVIRONMENT

TORR HEAD AREA OF SPECIAL SCIENTIFIC INTEREST

Map referred to in the Declaration dated: 17 October 2003

SITE BOUNDARY: The Area of Special Scientific Interest (ASSI) includes all the lands highlighted within the solid coloured line.

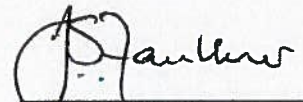
AREA OF SITE: 2.81 hectares

OS MAPS 1:50,000: Sheet No. 5
1:10,000: Sheet No. 10

IRISH GRID REFERENCE: D 233 404

COUNCIL AREA: MOYLE DISTRICT COUNCIL

COUNTY: ANTRIM


DR J S FAULKNER
SENIOR OFFICER OF THE
DEPARTMENT OF THE ENVIRONMENT

