

**SCOTTISH
NATURAL
HERITAGE**



**DUALCHAS
NADAIR
na h-ALBA**

**WEYDALE QUARRY
Site of Special Scientific Interest**

SITE MANAGEMENT STATEMENT

Site code: 1623

**Main Street
Golspie
Sutherland
KW10 6TG
Tel. 01408 633602**

Email
north_highland@snh.gov.uk

Purpose



This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this Statement.

This Statement is available in Gaelic on request.

Natural features of Weydale Quarry SSSI	Condition of feature (date monitored)
Silurian-Devonian Chordata (fossil fish)	Favourable, maintained (August 2002)

Description of the site

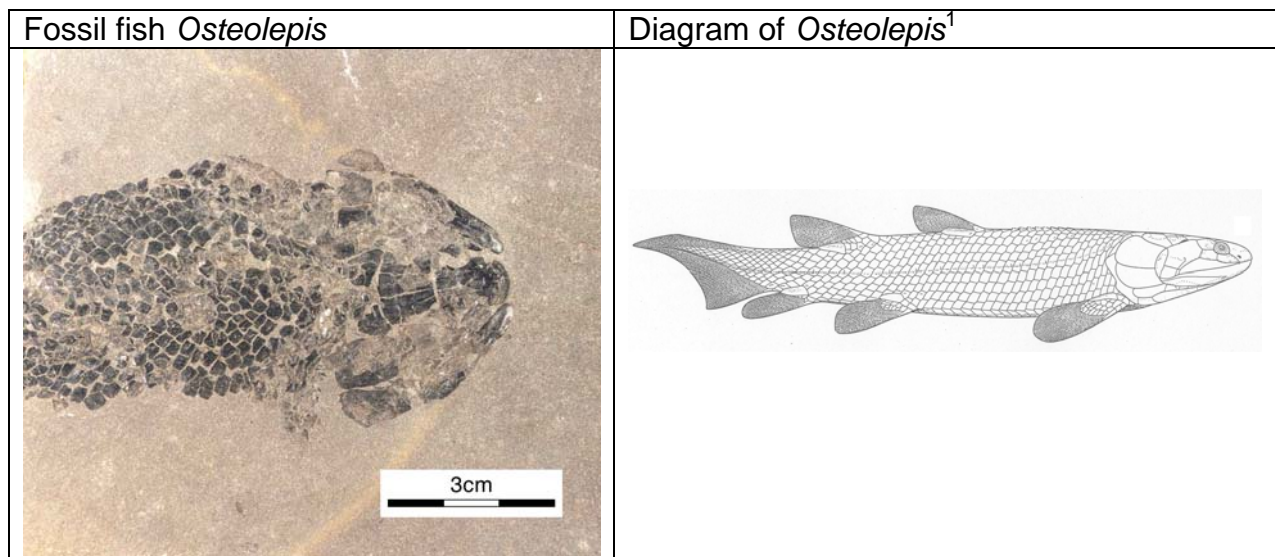
Weydale Quarry SSSI is situated 4km southeast of Thurso, Caithness. The site has been designated as a geological SSSI because of the presence of a layer of rock that contains fossil fish.

The rocks exposed at Weydale Quarry were formed in the Devonian geological time period, approximately 380 million years ago, when conditions were far removed from those of today. During the Devonian, the land that is now Scotland was situated between 20° and 30° south of the equator. The present day Moray coast, Orkney, Shetland and eastern Caithness lay within the Orcadian Basin, a large inland depression receiving inputs of water and sediment from the surrounding highlands. Lake Orcadie formed at the bottom of this basin. Fine sediments were deposited on the lake floor, eventually forming the flagstones for which Caithness is famed.

Lake Orcadie supported many fish during a key period in the evolution of fish diversity. The fish were largely confined to the shallow lake margins, but on death their remains drifted towards the centre and were incorporated into sediment deposits. Periodic mass fish deaths appear to have occurred in the lake, possibly as a result of fluctuating salinity levels. Large numbers of dead fish, few predators, slow rates of decay and the continual input of fine sediments created ideal conditions for the preservation of the fish remains and their transformation into fossils.

The SSSI covers the north end of Weydale quarry where a 1.3m-thick layer of the exposed rock face is rich in fossil fish. The fish bed is bordered by faults and hence the exposure is of limited extent in the quarry rock face. Fossils of four fish species have been found at the site. Well-preserved specimens of *Dipterus valenciennesi* and *Osteolepis panderi* are common, whilst fossils of *Thursius pholidotus* and *Homosteus milleri* are less frequently encountered, but still retain an excellent level of detail. Monitoring conducted in 2002 found the site to be in favourable condition with the fossil beds visible and accessible. A minor amount of fossil collecting appeared to have taken place, but this was not judged to have damaged the feature and abundant fossils were still present on site.

Although the site is only notified for its fossil fish, there are other areas of geological interest on the site. Distorted layers of sandstone above the fish bed provide evidence of earthquakes occurring soon after the rocks were formed. There are also clearly visible ripple marks in some of the rock layers indicating the movement of water over these sediments millions of years ago.



Past and present management

Weydale Quarry is inactive at present. The area is currently used to graze cattle and sheep. In the past, part of the quarry was used as a council dump, but this activity did not encroach upon the SSSI and has not hindered access to the fossil-bearing exposures. Dumping has now ceased on the site and the area has been topped off with soil and has revegetated. There are no specific facilities for tourists and few people visit the site at present.

¹ From Dineley and Metcalfe (1999) Fossil Fishes of Great Britain. JNCC.

Objectives for Management (and key factors influencing the condition of natural features)

We wish to work with the owner to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims to carry out site survey, monitoring and research as appropriate to increase our knowledge and understanding of the site and its natural features. A list of Operations Requiring Consent forms part of the formal notification documents of the SSSI. These, and the discussions on land management involved in the issuing of formal consents, are intended to minimise the threat of any damage to the natural features.

1. The quarry should be protected from inappropriate reinstatement, vegetation regeneration and unauthorised dumping, in order to maintain visibility and access to the fossil-bearing rocks.

2. Spoil should not be removed from the site on a large scale as it contains numerous fossil specimens. The removal of small amounts of spoil that has become grassed over would not significantly damage the site and would allow access to spoil material presently covered by vegetation.

3. Promotion of the 'Scottish Fossil Code' will encourage the sustainable study and enjoyment of the fossils found on the site and discourage irresponsible or large scale commercial fossil collecting. The Fossil Code will be available from the SNH web site (www.snh.org.uk) from summer 2008.

Date last reviewed: 14 January 2008