

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Fahan Pier, Inishowen
Other names used for site	Fahan Slip, Fahan Railway Station
IGH THEME	IGH5 Precambrian
TOWNLAND(S)	Figary
NEAREST TOWN/VILLAGE	Fahan
SIX INCH MAP NUMBER	38
ITM CO-ORDINATES	633850E 926615N (main outcrop)
1:50,000 O.S. SHEET NUMBER 2	GS1 BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND001	

Outline Site Description

A coastal site at Fahan Pier, on the east shore of Lough Swilly (opposite Inch Island), where an outcrop of folded slate strata exhibits some wonderfully photogenic results of rock deformation.

Geological System/Age and Primary Rock Type

The Fahan Slate Formation is part of the Dalradian Supergroup (Southern Highland Group). The formation consists of highly-cleaved, pale-grey coloured laminated slates (pelites) and grits (psammites).

Main Geological or Geomorphological Interest

This site comprises slate outcrops on the shoreline (high-tide mark), approximately 450m southeast of Fahan Pier, on the east shore of Lough Swilly, opposite Inch Island. Fahan is the 'type locality' for the Fahan slates, a unit of rocks found right across the Inishowen peninsula (SW-NE) from Fahan to Dunmore Head.

Pelites (slates) and psammites (grits) of relatively low metamorphic grade display well developed and well exposed, open to tight, upright folds with a slaty cleavage, of text-book quality and characteristics, parallel to their axial surfaces. The slaty cleavage is deformed by two non-penetrative crenulation cleavages. In an open fold near the southern limit of the outcrop, the slaty cleavage is refracted and refolded in spectacular, photogenic, fashion, particularly on the southern limb of the fold.

The site comprises one main slate outcrop (open fold) at the high-tide mark, of <10m length, around which lie the shattered fragments of dislodged cleaved slates.

Site Importance – County Geological Site

As a field teaching site, this County Geological Site is one of Co. Donegal's best sites in terms of structural geology. Best visited at low tide from Fahan Pier, the slate outcrop serves as an ideal field location to demonstrate techniques for establishing a deformation history in polydeformed low grade metasediments.

Management/promotion issues

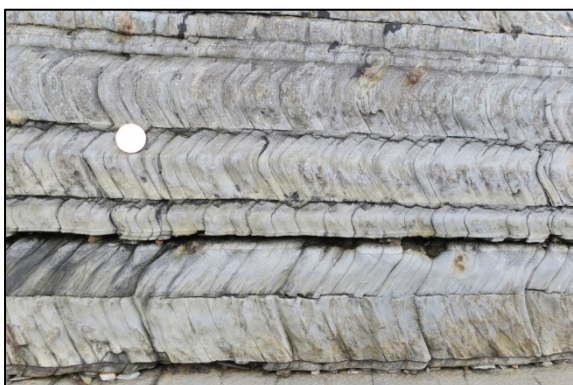
Coastal protection measures have been put in place along the shoreline extending about 150m southeast from Fahan Pier beside a small caravan site. The construction of apartments circa 2000 (150–250m southeast of pier) also saw the erection of coastal protection measures over and obscuring the pre-existing shoreline. Any development in the vicinity of the important shoreline outcrops should be discouraged, or should at least consider the preservation and maintenance of access to the slate outcrops.



Outcrop of Fahan Slate Formation, 450m southeast of Fahan Pier (visible in distance on left) looking northwest.



View of Lough Swilly shore looking southeast from Fahan Pier. Outcrop of Fahan Slates to right of white apartment block, on shoreline.



Crenulation cleavage in slates at main outcrop southeast of Fahan Pier.



Results of coastal erosion of brittle slate beds at site.



Crenulation cleavage in slate beds at main outcrop southeast of Fahan Pier.



Southeast limb of anticline at main outcrop southeast of Fahan Pier.

