

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Doagh Isle
Other names used for site	Lagacurry
IGH THEME	IGH5 Precambrian
TOWNLAND(S)	Lagacurry, Carrickabraghy
NEAREST TOWN/VILLAGE	Ballyliffin
SIX INCH MAP NUMBER	Donegal 3, 4
ITM CO-ORDINATES	641546E 952195N (NW end of Lagacurry beach)
1:50,000 O.S. SHEET NUMBER 3	GS1 BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND002	

Outline Site Description

A coastal section comprising a rocky wave-cut platform, cliffs, jutting headlands and sandy coves on the south side of 'outer' Trawbreaga Bay.

Geological System/Age and Primary Rock Type

Bedrock comprises Dalradian Supergroup (Argyll Group) rocks along the entire section. The very western section of the site (near site of Carrickabraghy Castle) comprises Slieve Tooey Formation Quartzite rocks. The remainder of the site comprises Termon Formation schist. Separating these two rock formations is a major ductile thrust fault known as the Swilly Slide.

Main Geological or Geomorphological Interest

The Swilly Slide is a major ductile fault that extends a distance of c. 140km, from the northeast coast of the Inishowen Peninsula as far as the central Slieve League Peninsula. The slide represents a major (regional-scale) zone of extension (stretching) in the Earth's crust and records an episode of crustal extension during, or shortly after, the climax of regional metamorphism in the Dalradian Supergroup rocks of Donegal.

The contact zone between the two formations exhibits strongly deformed metamorphic (greenschist facies) rocks. The coastal exposures on the foreshore at Lagacurry beach, and extending for 2km west, provide a superb section (and strain profile) through a mid-crustal extensional shear zone (the Swilly Slide) of regional extent.

Overall, the exposures of Argyll Group Dalradian rocks along the north coast of Doagh Isle exhibit exceptional preservation of tectonic features in the metamorphic rocks.

Site Importance – County Geological Site; recommended for Geological NHA

This County Geological Site is regarded as having the best exposed section through an extensional detachment in Ireland, and because of its importance in terms of understanding the structural geology of this region of north Donegal, it merits consideration as an NHA.

Management/promotion issues

This is an important teaching site for geologists. Access to this exposed coastal site, when sea and weather conditions are favourable, is easily afforded from Lagacurry beach parking area, less than 1km distance away. Whilst the folding exhibited in the strata is photogenic, the site is not deemed of suitable interest to the public, as the features are of interest mainly in a regional tectonostratigraphic context.



Doagh Isle coastal section from Bincrew cliff-top, looking east to mouth of Trawbreaga Bay.



View northwest over shingle beach at Lagacurry towards Doagh Isle site cliffs and shoreline. Five Finger Strand and Soldiers Hill to the north across Trawbreaga Bay.



Folding in thick quartzite beds. Five Finger Strand visible across mouth of Trawbreaga Bay.



Sea cave at Doagh Isle coastal site.

