

CORK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Ballycotton
Other names used for site	
IGH THEME	IGH10 Devonian
TOWNLAND(S)	Ballycotton
NEAREST TOWN/VILLAGE	Ballycotton
SIX INCH MAP NUMBER	89
ITM CO-ORDINATES	599910E 563840N (top of steps at pier)
1:50,000 O.S. SHEET NUMBER	81
GSi BEDROCK 1:100,000 SHEET NO.	25
GIS CODE	CK007

Outline Site Description

This site comprises a foreshore rock platform beside a harbour.

Geological System/Age and Primary Rock Type

Upper Devonian sandstone and mudstone of the Ballyknock Member of the Gyleen Formation.

Main Geological or Geomorphological Interest

The foreshore south of the harbour at the end of Ballycotton village contains excellent exposures of the Ballyknock Member, which forms part of the Gyleen Formation. The Gyleen Formation marks the transition from the terrestrial red bed sediments of the Old Red Sandstone Ballytrasna Formation to a marine environment, that heralded the onset of the marine transgression that would become fully established by latest Devonian to earliest Carboniferous times. The type section for the Ballyknock Member is northwest of Cotters Point (see Ballyknock CGS) but this site provides a readily accessible exposure where the characteristic features of the unit can be observed.

The Ballyknock Member comprises rapidly alternating thin green siltstone and sandstone beds, as well as red mudstone. The red mudstone beds are up to 30 m thick and are separated by thin beds of red sandstone. Small-scale cross lamination is common in the sandstone units. These distinctive beds are well exposed south of the harbour wall.

The strata dip northwards and are on the southern limb of a syncline. The Ballyknock Member is overlain north of the harbour by successively younger rocks that were deposited under marine conditions as the sea moved northwards during late Devonian times. These include sandstone and mudstone of the Old Head Sandstone Formation and the overlying Kinsale Formation Cuskinny Member. North of Ballycotton, bedrock in the core of the syncline is Carboniferous Waulsortian Limestone.

Site Importance – County Geological Site

This site contains an excellent exposure of the Upper Devonian Ballyknock Member, which constitutes the upper part of the Gyleen Formation. Characteristic alternating sandstone and mudstone beds are readily accessible on the foreshore south of the harbour.

Management/promotion issues

The site is on the foreshore and can be reached via steps at the start of the pier. The site merits promotion, possibly as part of a coastal geological heritage trail that includes the Ballytrasna CGS site to the west and the Ballycotton Bay CGS to the north.



Alternating thin green sandstone and siltstone with red and yellow mudstone of the Ballyknock Member of the Gyleen Formation, on the foreshore south of the pier at Ballycotton. See Ballycotton lighthouse in the background.



Close-up of alternating thin green sandstone and siltstone with red and yellow mudstone of the Ballyknock Member of the Gyleen Formation, on the foreshore south of the pier at Ballycotton, showing offsets owing to minor faulting.



Ballyknock Member, red mudstone interbedded with green siltstone and sandstone. View to west from bathing place on south side of headland.

