

CORK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Broadstrand
Other names used for site	Broadstrand Bay, Seven Heads Bay, Courtmacsherry Raised Beach
IGH THEME	IGH8 Lower Carboniferous, IGH9 Upper Carboniferous, IGH10 Devonian, IGH7 Quaternary
TOWNLAND(S)	Courtmacsherry, Meelmane, Ballincurragh, Lisleecourt, Lackarour
NEAREST TOWN/VILLAGE	Courtmacsherry
SIX INCH MAP NUMBER	136, 145
ITM CO-ORDINATES	551550E 541200N (Broadstrand)
1:50,000 O.S. SHEET NUMBER	87, 89 GSI BEDROCK 1:100,000 SHEET NO. 25
GIS CODE	CK025

Outline Site Description

Peninsula with sandy beaches, cliffs, and abundant coastal outcrops.

Geological System/Age and Primary Rock Type

Bedrock comprises a conformable stratigraphical sequence from Upper Devonian Old Red Sandstone rocks through Lower Carboniferous (Mississippian) rocks into Namurian (middle Carboniferous) rocks. Quaternary glacial and interglacial sediments occur on a raised beach platform.

Main Geological or Geomorphological Interest

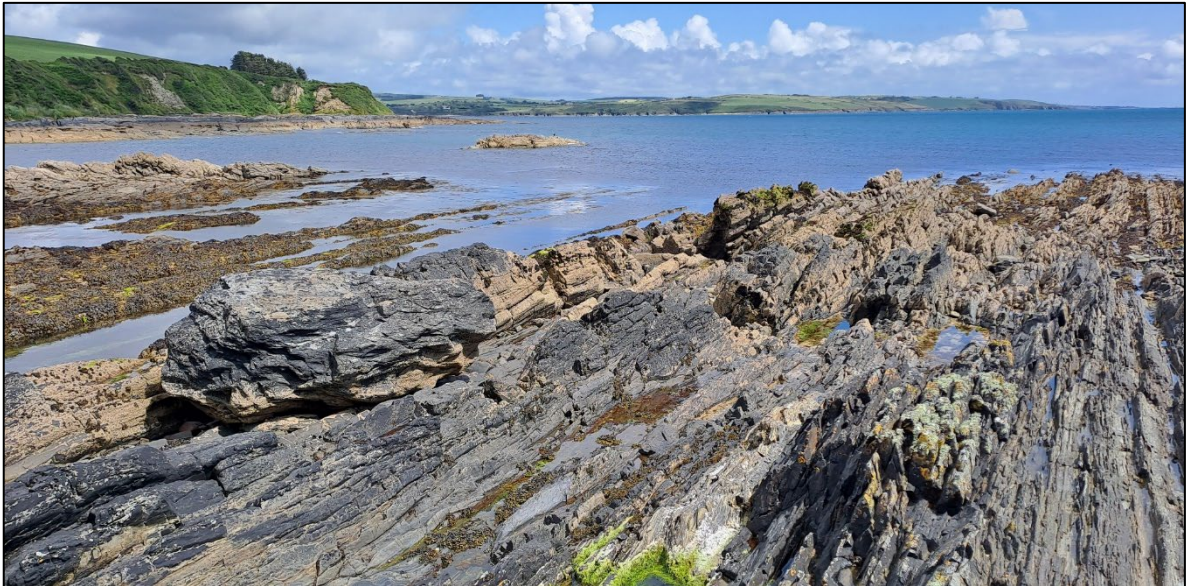
The Broadstrand Syncline is a major WSW-ENE syncline (U-shaped fold) that traverses the Seven Heads peninsula from Clonakilty Bay (west) to Broadstrand Bay (east). The core of the fold is occupied by the youngest rocks on Seven Heads (White Strand Formation), which are best seen at Broadstrand Bay. The limbs of the fold comprise Lower Carboniferous Courtmacsherry Formation and Kinsale Formation rocks, which can be seen at Barry's Point and the coast northeast of Broadstrand Bay. The underlying Upper Devonian Old Head Sandstone Formation beds are best seen exposed at Coosnaluinga in Seven Heads Bay. Fold deformation of the bedrock units occurred at the end of the Carboniferous with the onset of Variscan compression and is evident in both the dipping (sloping) beds and in the mirroring of the bedrock formations on each side of the Broadstrand Syncline axis. In addition to the Devonian-Carboniferous stratigraphical sequence and the inclined structure of the beds on the fold limbs, the site hosts Quaternary glacial and interglacial sediments which can be seen in the cove between Broadstrand (Meelmane) and Fox's Cove, and at Coosnaluinga. These sediments are part of a raised beach, which can be found intermittently around the southern coast of Ireland at numerous localities. In Irish glacial literature this feature is called the 'Courtmacsherry Raised Beach', and the sand and gravel units along this stretch of coast form one of the type-localities for the raised beach.

Site Importance – County Geological Site; recommended for Geological NHA

This is an important County Geological Site owing to the stratigraphical sequence that records the transition from terrestrial Old Red Sandstone red-beds to tidal and marine sediments. The sequence plays a key role in understanding (1) the depositional environments in the South Munster Basin during Upper Devonian and Lower Carboniferous times and (2) the effects of Variscan deformation on the region at the end of the Carboniferous. The site is also very important in relation to the history of Quaternary studies in Ireland.

Management/promotion issues

The site hosts a continuous section of coastal exposure around the peninsula. However, accessible locations (beaches, covers, piers) are best visited to see the local geology. The coastal exposures can be accessed in calm weather conditions. Parking is available at the main beaches. The site is of value as a geological field site and the geological heritage is suitable for public promotion because features of interest can be accessed and observed up close.



White Strand Formation sandstone and mudstone beds at headland northeast of Broadstrand Bay.
View towards Coolmain Bay.



Small-scale folds in White Strand Formation exposures at Foxes Cove, northeast of Broadstrand Bay.



Quaternary Interglacial Courtmacsherry Raised Beach deposits at Foxes Cove, northeast of Broadstrand Bay.



Courtmacsherry Formation beds and quaternary sediments in cliffs at Foxes Cove, northeast of Broadstrand Bay.

