

CORK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Castlehaven		
Other names used for site	Castletownshend - Castlehaven		
IGH THEME	IGH10 Devonian		
TOWNLAND(S)	Drishane, Farrandau, Farrandeligeen, Castlehaven, Glasheenaulin		
NEAREST TOWN/VILLAGE	Castletownshend		
SIX INCH MAP NUMBER	142, 151		
ITM CO-ORDINATES	517475E 530130N (Glenbarahane Church)		
1:50,000 O.S. SHEET NUMBER	89	GSI BEDROCK 1:100,000 SHEET NO.	24
GIS CODE	CK031		

Outline Site Description

This site comprises the bedrock outcrop forming the high and low coastal cliffs between Castletownshend and Sandy Cove, as well as their adjacent inland outcrops, approximately 6 km southeast of Skibbereen.

Geological System/Age and Primary Rock Type

The bedrock here comprises purple mudstone and siltstone of the Castlehaven Formation, and its' Ballylinchy Tower Member, which are of Devonian (419 to 359 million years ago) age.

Main Geological or Geomorphological Interest

The Castlehaven Formation stratigraphically overlies the Sherkin Formation in the Upper Devonian succession of West Cork. Its type locality occurs along the coast between Castletownshend and Sandy Cove, where it is characterized by intensely coloured purple and minor green mudstone and siltstone, with interbedded, fine-grained sandstone. The purple mudstone and siltstone form more than 90% of the succession here.

The sandstone units are less than 3 m thick and are flat-bedded, showing small-scale cross-lamination. Several of the mudstone beds in the upper part of the succession have trace fossils in the form of well-developed burrowing trails. In-filled mud cracks occur in places, as do nodules of calcareous material. Thin, sheet-like beds of mud-clast breccias are common. All lithologies are well cleaved and kink bands, which are tabular fold zones resulting from shearing of the rock bed, are locally ubiquitous.

A distinctive rippled sandstone and coarse siltstone unit, the Ballylinchy Tower Member, has been identified within the Castlehaven Formation. This unit is up to 220 m thick, while the Castlehaven Formation itself may be up to 930 m in thickness.

Site Importance – County Geological Site

This stretch of coastline is the type locality for the Castlehaven Formation and is an important County Geological Site. The formation is key to understanding the palaeoenvironmental conditions in the South Munster Basin during Upper Devonian times.

Management/promotion issues

The type-section forms many steep and dangerous cliffs, which are not publicly accessible. Access to outcrops adjacent to Castlehaven Old Church and Graveyard allow inspection of good, clean sections of the rock when the sea conditions allow. The site is not suitable for public promotion as a field location but its geological heritage (setting, fossils, and structural elements) does warrant inclusion on information panels in the locality.



Purple mudrocks of the Castlehaven Formation exposed along the northern arc of Sandy Cove.



The high cliffs southeast of Castlehaven exposing the bedrock sequence within the Castlehaven Formation.



Cross-bedded and flat-bedded sandstones in close vertical succession at Glenbarahane Graveyard.



Sandstone bed exposed along the northeastern side of Sandy Cove, at the narrow roadside beach at Tracarta.



Hennessy et al., 2023. Geological Survey Ireland.