

## CORK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Whiddy Island</b>		
Other names used for site	Whiddy Island (NW Coast)		
<b>IGH THEME</b>	<b>IGH9 Upper Carboniferous, IGH7 Quaternary</b>		
<b>TOWNLAND(S)</b>	<b>Reenavany, Crowkingle, Trawnahaha, Gurraghy, Close, Kilmore, Reenaknock</b>		
<b>NEAREST TOWN/VILLAGE</b>	<b>Bantry</b>		
<b>SIX INCH MAP NUMBER</b>	<b>105, 177, 118</b>		
<b>ITM CO-ORDINATES</b>	<b>497180E 549875N (Small pier opposite Hog Island)</b>		
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>85</b>	<b>GSI BEDROCK 1:100,000 SHEET NO.</b>	<b>24</b>
<b>GIS CODE</b>	<b>CK086</b>		

### Outline Site Description

Coastal outcrops and overlying tills on an island at the head of Bantry Bay.

### Geological System/Age and Primary Rock Type

Bedrock comprises middle Carboniferous (Namurian) East Point Formation, Middle Battery Formation and Kilmore Formation deep water sedimentary rocks. The tills are Quaternary features, deposited in drumlins during the final stages of the last glaciation, around 14,000 years ago.

### Main Geological or Geomorphological Interest

In southwest Ireland, rocks of Namurian age are geographically limited to Whiddy Island, Seven Heads, Old Head, and along the axis of the Cloyne Syncline (U-shaped fold) running westward from Carrigaline for c. 20 km. Whiddy Island hosts a sequence of more than 500 m of Namurian rocks that are situated in the core of the Bantry Syncline. The Whiddy Island Namurian rocks comprise three conformable formations that show a general upward increase in the amount of sandstone. The change from fine to coarse sediments indicates slowing rates of sedimentation in deep water conditions in the South Munster Basin during Namurian times (c. 330 – 320 million years ago). The best rock exposures occur along the north coast and can be seen in sections on headlands and isolated coastal outcrops. The oldest East Point Formation consists of black, finely cleaved, pyritic, carbonaceous mudrock. The Middle Battery Formation comprises dark-grey slates and blocky mudstones with siliceous siltstones and sandstones. The youngest and topmost Kilmore Formation consists of fine-grained cleaved sandstone and siltstone beds separated by thinner beds of dark-grey mudrocks. The three formations represent the marine sedimentation in the guise of encroachment of a turbidite fan into a basin-plain setting. Microfloras identified in the rocks have been used to assign a Namurian age to the rocks. Carboniferous (Dinantian) limestone erratics occurring in the Quaternary tills on Whiddy Island and the mainland shore have been identified as originating from a local stratigraphic sequence (not transported from a distant source) and are similar to shallow carbonate shelf limestones identified from a borehole (GSI 99/4) drilled at the Bantry Aerodrome near Relane Point, to the south of Whiddy Island.

### Site Importance – County Geological Site; recommended for Geological NHA

This is an important County Geological Site because of it hosts the youngest rocks in West Cork. The understanding of their origin and formation provides important insights into the geological history of this part of southwest Ireland.

### Management/promotion issues

The Whiddy Island Loop, part of the Sheep's Head Way, is a popular recreational route in West Cork. Information on the geological history and glacial landscape of Bantry Bay would be a suitable addition to existing heritage information panels on the island. The west end of Whiddy Island is the site of the Whiddy Island Bantry oil terminal. The oil storage facility has the capacity to store 1.4 million m<sup>3</sup> of crude oil, gasoline, diesel and kerosene, and is the largest such terminal in Ireland.



Whiddy Island viewed from Boulteenagh, Sheep's Head. Knockboy (704 m) in background.



Middle Battery Formation in foreground. East Point Formation coastal exposures in background.  
Coast at Reenavanny.



Flute casts on mudstone boulder on eastern side of island.



Middle Battery Formation beds at small pier, Reenavanny, opposite Hog Island on eastern side of island.



