

# WATERFORD - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Copper Coast – Ballydowane Bay</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH4 Cambrian – Silurian, IGH10 Devonian</b>
<b>TOWNLAND(S)</b>	<b>Ballydowane West, Ballydowane East</b>
<b>NEAREST TOWN</b>	<b>Bunmahon</b>
<b>SIX INCH MAP NUMBER</b>	<b>Waterford 24, 32</b>
<b>NATIONAL GRID REFERENCE</b>	<b>240760 97870</b>
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>82                      1/2 inch Sheet No.      22</b>

## **Outline Site Description**

The site comprises cliffs in a coastal embayment.

## **Geological System/Age and Primary Rock Type**

Devonian age conglomerates and sandstones are the main rock types seen in the bay, but they are in unconformable contact with Ordovician andesite volcanic rock towards the eastern end.

## **Main Geological or Geomorphological Interest**

High, vertical cliffs at the back of the beach in Ballydowane Bay are composed of conglomerate and sandstone rocks of Devonian age. These are red in colour and have abundant pebbles of white vein quartz within them.

A feature of particular interest is seen at the eastern end of the beach. The red conglomerates are seen in an unconformable contact with Ordovician volcanic rock. This reflects a time gap of about 80 million years, and the red rocks were deposited by rivers on a weathered land surface of Ordovician volcanic andesite rocks. Lumps of the greenish andesite can be seen in the conglomerates near the unconformity.

At the southwest corner of the bay there is a fault and is now the location of a landslip. Another is found at the eastern end of the beach. In the sea stack towards the eastern end of the beach, there is a ventilation shaft dug to get air into 18<sup>th</sup> century silver mines, which were dug below the seabed. This is now filled with sand.

## **Site Importance**

The site is part of the complex of sites along the Copper Coast, which collectively are of national importance and which are already part of a proposed NHA (Ballyvoyle Head to Tramore No 1693).

## **Management/promotion issues**

The beach is accessible with a public road and a car park to a narrow slipway. However, the cliffs are very high and also have potential for rockfalls and landslips, so general promotion is perhaps not advisable. Well prepared geological parties can negotiate the section but there is perhaps the need for a warning sign at the car park. The Copper Coast Geopark information panel about Ballydowane Bay in the car park by the beach has not stood up well to light exposure and has faded badly.



The unconformity between Devonian red sandstones and the Ordovician andesite.



Vertical beds of red sandstone and conglomerate at Ballydowane Bay.



The red sandstones clearly contrast with the green andesites just right of centre.





