

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Bealtra
Other names used for site	
IGH THEME	IGH10 Devonian, IGH11 Igneous Intrusions
TOWNLAND(S)	Ballycarbery West, Killelan East
NEAREST TOWN/VILLAGE	Caherciveen
SIX INCH MAP NUMBER	79
ITM CO-ORDINATES	443440E 580100N (middle of beach)
1:50,000 O.S. SHEET NUMBER	83
GSi BEDROCK 1:100,000 SHEET NO.	20
GIS CODE	KY020

Outline Site Description

Foreshore outcrops at either side of a small cove with a sandy beach.

Geological System/Age and Primary Rock Type

The bedrock comprises sandstone and slate of the mid-Devonian Valentia Slate Formation (c. 385 million years old) intruded by dolerite and gabbro of the Valentia Harbour Igneous Complex, of similar age. Volcaniclastic rocks (agglomerates) occur at the contact between the intrusions and the Valentia Slate Formation.

Main Geological or Geomorphological Interest

Dolerite and gabbro of the Beginish Island intrusion (see Beginish Island County Geological Site report) crops out on the east side of Valentia Harbour, at Laght Point (see Laght Point County Geological Site report) and Bealtra. At Bealtra, the intrusion underlies the headland on the south side of the cove, with smaller occurrences on the north side of the cove. The contact zone between the intrusion and the Valentia Slate Formation is notable for the occurrence of *agglomerate*. The *agglomerate* is a *phreatomagmatic* rock, formed when the hot magma of the intrusion came into contact with wet sediment above it, causing the water to turn to steam and generating an explosive reaction. This disrupted both the magma and the sediment, resulting in a rock that comprises fragments of mafic igneous and sedimentary rocks of varying sizes and shapes.

On the south side of the cove, the outcrops at the beach comprise green slates of the Valentia Slate Formation but further west they pass southwards into agglomerate. The agglomerate here has a dark green colour, reflecting a matrix dominated by mafic minerals and rock fragments, and larger clasts of dolerite, pyroclastic material and other mafic rocks. The agglomerate is pockmarked by vesicles, which are small holes formed in the magma by gas bubbles. The outcrops on the north side of the cove are somewhat more accessible. Those closest to the beach have been scoured by the tide, revealing spectacular examples of agglomerate, with clasts showing curved shapes consistent with plastic deformation while still wet. Clasts display a strong alignment conformable with the fabric of the host Valentia Slate Formation. Dolerite is also well exposed in the low cliff above the beach.

Site Importance – County Geological Site

Bealtra contains striking outcrops of agglomerate in contact with dolerite and sediments of the Valentia Slate Formation. Along with Laght Point County Geological Site it is a very accessible location in which to study outcrops of the Valentia Harbour Igneous Complex.

Management/promotion issues

There are no obvious threats to the site other than ongoing coastal erosion. As the outcrops are mainly on the foreshore, the site is best visited at low tide. Bealtra is 500 m north of the car park at Whitestrand Beach, which provides access to Laght Point County Geological Site and views across the sound to Beginish Island. Consideration should be given to a signboard in the car park outlining the geology of Valentia Harbour, including Bealtra, Laght Point and Beginish Island. Most of the Bealtra site is within the Valentia Harbour/Portmagee Channel SAC (site code 002262) and partially within the Iveragh Peninsula SPA (site code 004154).



Volcaniclastic sediment (agglomerate) on the south side of Bealtra, displaying irregularly-shaped and -sized clasts of volcanic material, dolerite and sedimentary rocks.



Close-up of clast-rich part of volcaniclastic sediment (agglomerate) on the south side of Bealtra, displaying similarly-sized clasts.



Purple sandstone and slate of the Valentia Slate Formation on the north side of Bealtra.



Aligned and flattened clasts in agglomerate in contact with siltstone of the Valentia Slate Formation (top) on the north side of Bealtra.



Close-up of large irregularly-shaped clasts in agglomerate on the north side of Bealtra. Lithologies represented by the clasts include purple siltstone and dark green, vesicular lava.



Close-up outcrop (photo, left) of clast of purple siltstone or slate in agglomerate displaying flowing shape caused by explosive disruption of wet sediment in contact with dolerite intrusion.

