

## CORK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Ballydonegan Strand</b>		
Other names used for site	Ballydonegan Beach, <i>Trá na mBan</i>		
<b>IGH THEME</b>	<b>IGH13 Coastal Geomorphology, IGH15 Economic Geology</b>		
<b>TOWNLAND(S)</b>	<b>Allihies</b>		
<b>NEAREST TOWN/VILLAGE</b>	<b>Allihies</b>		
<b>SIX INCH MAP NUMBER</b>	<b>127</b>		
<b>ITM CO-ORDINATES</b>	<b>457550E 544250N (centre of strand)</b>		
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>84</b>	<b>GSI BEDROCK 1:100,000 SHEET NO.</b>	<b>24</b>
<b>GIS CODE</b>	<b>CK012</b>		

### **Outline Site Description**

Beach deposit in small cove along rocky shoreline.

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

The bedrock comprises Upper Devonian red and green sandstone and siltstone of the Cahah Mountain Formation. The beach is a modern deposit, formed within the last two centuries.

### **Main Geological or Geomorphological Interest**

Ballydonegan Strand is a sandy beach, unusual in this part of the Beara peninsula where the shoreline typically comprises bedrock. Beaches, where they do occur, are typically narrow and stony. Ballydonegan Strand stands at the mouth of the Ballydonegan River, the main drainage course in the Allihies area. After the commencement of mining, waste rock was continually washed down from the mines, via constructed drainage conduits or small tributaries of the Ballydonegan River, and gradually accumulated at the mouth of the river to form the beach. Examination of the beach material shows it is comprised mainly of quartz grains and fragments of local bedrock, with limited rounding of clasts, consistent with relatively short transport distances.

The beach is approximately 300 m in length and up to 250 m wide. It has a layered structure, attesting to progressive build-up of material. Viewed along its axis parallel to the coast, its shape is slightly domed. Immediately north and south of the beach, the coastline is more typical of the region – low rocky cliffs fronted by a narrow stony beach.

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

Ballydonegan Strand is an unusual, essentially man-made beach that formed as a direct consequence of copper mining, mainly in the 19<sup>th</sup> century. It is an important recreation site in the Allihies area, providing a counterpoint to the commonly held view of mining as having a negative impact on the environment.

### **Management/promotion issues**

The site is part of the Allihies Copper Mine trail as described on the Copper Mine Museum map and website. As a popular recreational area it does not require further promotion.



Ballydonegan Strand viewed from Castletown road. The village of Allihies and the Mountain Mine can be seen in the distance (right).



Close-up of beach material, a mixture of quartz and sandstone and siltstone. The larger lithic clasts have been rounded by tidal action but the finer clasts are predominantly unrounded and commonly angular in shape.



View northwards along river channel showing layering of strand (left) and marsh area to right. The strand is characterized by clasts that vary in size and shape, with abundant large angular cobbles consistent with limited transport from source.



View northwards from southern end of strand. The raised nature of the beach deposit is apparent, resembling a delta-like shape reflecting progressive build-up of material outwards from the mouth of the river over time. The seaward slope is presumably exaggerated by tidal erosion.



Coastal section immediately west of northern end of strand. The stony beach is typical of beaches found in the wider area around Allihies.



