

CORK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Mount Gabriel		
Other names used for site	Mount Gabriel [Cu, Ba]		
IGH THEME	IGH15 Economic Geology		
TOWNLAND(S)	Mountgabriel, Rathcool, Skeagh, Ardmanagh, Glan Schull		
NEAREST TOWN/VILLAGE	Schull		
SIX INCH MAP NUMBER	139		
ITM CO-ORDINATES	493090E 534920N		
1:50,000 O.S. SHEET NUMBER	88	GSI BEDROCK 1:100,000 SHEET NO.	24
GIS CODE	CK066		

Outline Site Description

Mount Gabriel is a prominent mountain on the Mizen Peninsula and the site of Early to Middle Bronze Age and more recent copper and barite mining activity.

Geological System/Age and Primary Rock Type

Bedrock comprises Upper Devonian sandstone and siltstone of the Castlehaven Formation, wherein beds of green sandstone host low-grade disseminations of oxidised copper (Cu) minerals. Copper mineralisation is predominantly within the uppermost Castlehaven Formation beds. Barite (Ba) veins occur in units above and below the copper-bearing units, also within the Castlehaven Formation.

Main Geological or Geomorphological Interest

A prominent feature of the West Cork landscape, Mount Gabriel is the highest mountain (407 m OD) in the Mizen Peninsula-Sheep's Head Peninsula area. The mountain is a very important site of Early to Middle Bronze Age mining activity, which is among the earliest examples of copper mining in northwest Europe. Over 30 shallow open adits have been identified, mostly on the Barnacleeve Gap side of the mountain, where mining activity was carried out on surface outcrops of sedimentary rocks hosting copper mineralisation (copper-beds) using fire-setting and stone, bone, and wooden tools. Bronze Age metal production on Mount Gabriel is estimated at between 1.5 and 30 tonnes, enough to produce 40–50 bronze axeheads a year. In more recent times, copper was mined around 1860 at Letter, situated northeast of the mountain. On the western and northern sides of the mountain, barite was mined between 1890 and 1910, and later in the 1930s. An output of 1,500 tonnes of barite was reported in 1896. Barite was worked from adits driven along the lodes at different levels. Adits can be seen on the west side of the mountain, such as by the road leading to the summit. Barite veins follow a strong east-west trending orientation. In 1972, five boreholes were drilled along the Skeagh Barytes vein fault, on the southwest side of the mountain. GSI Mineral Localities (MinLocs) data records copper (4210), barite (4526), chalcocopyrite and malachite (4209), and iron (4206) on the mountain slopes.

Site Importance – County Geological Site; recommended for Geological NHA

This is an exceptionally important site and is of immense significance as one of the earliest sites of copper mining activity in northwest Europe.

Management/promotion issues

Mount Gabriel is a listed National Monument (CO139-026001; Prehistoric Sites). Access to the mountain is via a road owned by the Irish Aviation Authority (IAA). Open adits can be seen alongside the road to the summit. Two IAA radar domes occupy the summit, as well as other aerial mast installations. As with all mine sites, care should be exercised in the vicinity of flooded workings or open adits. The significant archaeological and geological heritage of the site is ideal for promotion to both the visitors and the local community.



North side of Mount Gabriel viewed from Laharan townland. Barnacleeve Gap visible on left.



Flooded Bronze Age copper mine working on southeastern mountain slopes.



Barite mine adit on western side of Mount Gabriel, beside the road to the summit.



Bronze Age copper mine working on eastern slopes. Schull and Roaringwater Bay are visible to the south.

