

## CORK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Lady's Well Mine</b>		
Other names used for site	Duneen Bay Mines, Duneen Mines, Mukruss Head Mines, Muckross Head		
<b>IGH THEME</b>	<b>IGH15 Economic Geology</b>		
<b>TOWNLAND(S)</b>	<b>Dunmore</b>		
<b>NEAREST TOWN/VILLAGE</b>	<b>Clonakilty</b>		
<b>SIX INCH MAP NUMBER</b>	<b>135</b>		
<b>ITM CO-ORDINATES</b>	<b>539530E 537150N (centre of site)</b>		
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>89</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO.</b>	<b>25</b>
<b>GIS CODE</b>	<b>CK060</b>		

### Outline Site Description

Lady's Well Mine is a disused mine site along the northern side of Duneen Bay, just over 4 km south-southeast of Clonakilty.

### Geological System/Age and Primary Rock Type

The bedrock at Lady's Well comprises sandstone and minor siltstone of the Devonian-age (419 to 359 million years ago) Old Head Sandstone Formation. The Upper barite mineralization formed later and is hosted by a fault that probably formed during the Variscan orogeny at the end of the Carboniferous period (approximately 290 million years ago).

### Main Geological or Geomorphological Interest

The richest barite mining district in Ireland is in West Cork, and barite was mined at Lady's Well Mine. The barite lode there is fault-hosted and cuts the strike of the host rocks at an angle of 15° to 45°. The vein hosting the barite is split into north and south branches, and varies in width from 1 to 3 m.

The existence of barite at the Lady's Well Mine site was noted as far back as 1822, and opencast mining began in 1852. The most successful mining period followed reopening of the mine as an underground operation in 1870 by the Duneen Bay Mineral Company. Records suggest that between 1876 and 1887 an average of 5,000 tonnes of barite was raised per annum. Between 1908 and 1918, the Liverpool Barytes Company extracted 39,000 tonnes and extended the mine into the adjacent townland at Mountain Common. The mine closed when the pumps were destroyed by corrosive mine water and the mine became flooded. The mine then reopened under the ownership of the Cookson Barytes Company, which raised approximately 13,128 tonnes by 1923. The mine was again abandoned owing to failing pumps and the falling price of barite. Re-appraisal by Milchem in the 1970s led to a resumption of production between 1979 and 1985.

According to Cole in 1922, specks of iron and copper pyrites were present in the vein at Lady's Well Mine, along with some galena. The sandstones are extensively bleached, veined and iron-stained up to 25 m away from the main vein.

Most of the original features on the site have now been lost, and the main open pit on the western side of the road forms the bulk of what remains of the site. Although the pit is largely backfilled, the original northern pit wall is still visible. The open pit on the seaward side of the road is also backfilled, and the area of the old ore stockpile became the site of serious subsidence in the mid-1980s and was backfilled with low-grade waste. Some concrete buildings remain on site, apparently dating from the last period of mining in the 1980s. The main, eastern shaft has been capped with concrete, and the western shaft is also backfilled and not visible.

### Site Importance – County Geological Site

Though the open pit is largely obscured, it is the most substantial trace of mining at this site. Mine waste used as back-fill is known to contain significant amounts of barite. Lady's Well is significant as probably the most significant barite mine in the West Cork Cu-Ba district and as such merits designations as a County Geological Site.

### Management/promotion issues

The site is located on private land and is likely to be of interest mainly to professional and academic geologists and does not warrant further promotion. Permission should be sought for access.



The open pit at Lady's Well mine, viewed from the west.



Some of the mine buildings on the pit floor.



Part of the original pit wall, still visible.



Alteration of the country rock in mineralized zone within the abandoned pit area.



