

## GALWAY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Tynagh Mine</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH15 Economic Geology, IGH6 Mineralogy</b>
<b>TOWNLAND(S)</b>	<b>Derryfrench, Garraunnameetagah</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Tynagh</b>
<b>SIX INCH MAP NUMBER</b>	<b>106, 107, 116, 117</b>
<b>ITM CO-ORDINATES</b>	<b>574900E 713000N</b>
<b>1:50,000 O.S. SHEET No. 53</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 15</b>

### Outline Site Description

Large abandoned modern mine site partly occupied by a recently-constructed power plant.

### Geological System/Age and Primary Rock Type

Mississippian (Lower Carboniferous) sequence of Waulsortian Limestone and Lucan Formation (Calp) in fault contact with an Old Red Sandstone inlier.

### Main Geological or Geomorphological Interest

Tynagh mine is located 1.5 km north of Tynagh village near Loughrea. It is 2 km west of the “Old Tynagh Mine” that was referred to initially in the Annals of the Four Masters (1632) and subsequently in the 19<sup>th</sup> century memoir of the Geological Survey of Ireland. Lead, zinc and barite were mined between 1965 and 1980 following discovery by Irish Base Metals of a soil anomaly in 1960. The mineralization at Tynagh was mainly hosted by the Waulsortian Limestone in two primary orebodies and one secondary orebody, the latter formed by weathering of the former. Primary ore minerals included silver-bearing galena, sphalerite and barite. The secondary orebody occurred in a karstic sinkhole; secondary minerals included cerussite, smithsonite, azurite, malachite, hemimorphite and dundasite.

The 115 ha site is surrounded by rolling farmland that is mainly used as cattle pasture. It comprises several distinct areas: the open pit, the processing site, tailings pond (TMF) and the former Milchem barite processing plant. A gas-fired power station was constructed in 2004–2006 and a galvanizing company occupies part of the area of the former processing plant. Most of the site has not undergone significant remediation: the open pit is flooded, the tailings pond and spoil heaps are partially vegetated but largely barren and the Milchem site is operated as an equestrian centre. Most of the processing site has been cleared, with only the remains of a thickener still present within the galvanizer site. The old offices and lab buildings nearby are unused and apparently derelict.

### Site Importance – County Geological Site

Tynagh was the first of the large Lower Carboniferous-hosted “Irish-type” Zn-Pb mines to be discovered and developed in the 20<sup>th</sup> century following commencement of modern exploration in the late 1950s. As such it occupies an important place in Ireland’s modern mining history and led the way to the country becoming a major producer of zinc and lead.

### Management/promotion issues

The site is in private hands and access requires permission of the owner. The main area of geological interest is the large waste heap on the southwest corner of the site where samples of mineralization may be found. Promotion is not required as the site is likely to be of interest mainly to research scientists.



View west across tailings pond toward power station. Large waste heap at southwest end of site visible on left.



Former mine laboratory.



Brecciated limestone with sphalerite cement, in large waste heap at southwest end of site. Camera case on right for scale.



View north towards former mine offices (foreground) and beyond to site of former processing plant, now partly occupied by galvanizing company.



