TIPPERARY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE		Gortdrum	
Other names used for site			
IGH THEME		IGH15 Economic Geology, IGH6 Mineralogy	
TOWNLAND(S)		Gortdrum, Kyleagarry, Ballyryan East	
NEAREST TOWN/VILLAGE		Limerick Junction	
SIX INCH MAP NUMBER		58, 59	
ITM CO-ORDINATES		587090E 641070N	
1:50,000 O.S. SHEET NUMBER	66	GSI BEDROCK 1:100,000 SHEET NO. 18	

Outline Site Description

Very large (150 ha) abandoned modern mine site surrounded by relatively flat pasture land.

Geological System/Age and Primary Rock Type

The copper-mercury-silver mineralization at Gortdrum comprised mercury-bearing copper oxides and sulphides disseminated in basal Carboniferous (Mississippian) limestones and shales.

Main Geological or Geomorphological Interest

Gortdrum operated between 1968 and 1975, one of the earliest of the large modern metal mines in Carboniferous rocks to be developed in Ireland. Unlike the other modern mines, in which zinc and lead predominate, Gortdrum was a copper mine, producing over 3 million tonnes of copper ore, as well as small amounts of silver and mercury, at an average grade of 1.2 % Cu. The main ore minerals were tennanite (CuO), chalcopyrite (CuFeS₂), chalcocite (CuS) and bornite (Cu₅FeS₄). The ore was mined exclusively by opencast methods. The site essentially comprises the open pit, several very large waste heaps, a tailings pond and the former processing area. Since closure, the open pit has flooded, forming a 90 m-deep lake used for fish farming. The tailings pond has been successfully revegetated and is used for grazing cattle. Most mine buildings, including all processing plant, have been removed. The waste heaps are being processed for use as aggregate.

Gortdrum is a very significant mine in the context of the Irish Carboniferous orefield, specifically in terms of its unusual mineralization, which has been well described in the literature. As the open pit is flooded, waste heaps are the main source of possible samples of ore and mineral specimens. The successful tailings pond rehabilitation is of interest in the context of remediation of abandoned mine sites.

Site Importance – County Geological Site

This is a significant modern mine site, with large-scale features typical of mines developed in the latter half of the 20th century.

Management/promotion issues

Gortdrum is privately owned and several businesses operate on the site. The aggregate production is regulated by Tipperary County Council under Section 261 of the Planning and Development Act 2000. Access to the site is by arrangement with the owners who live in the former mine offices at the entrance. The site is likely to be of interest mainly to professional geoscientists and those interested in modern mine heritage. It does not require further promotion.



View northwards from tailings pond towards area of waste heaps; open pit lake on right.



Surface of successfully revegetated tailings pond.



Waste heap on northern part of site, source of material for aggregate.



View northeastwards from tailings pond over open pit lake



Gallagher et al. 2019. Geological Survey Ireland.