Site Name: Rhiwarth Slate Mines **Grid Reference**: SJ 057267

RIGS Category: Historical & Scientific
Earth Science Category: Ordovician (Caradoc) Igneous and Stratigraphy
Geology 1:50,000: BGS Sheet 136 Bala

RIGS Statement of Interest:

The RIGS comprises a steep hillside that makes the middle part of the southeastern flank of Craig Rhiwarth: entrances to disused slate mines and their spoil tips are found mainly on the upper slopes. The rocks comprise two sequences of tuff, products of mid to late Ordovician violent volcanic activity, alternating with fine-grained marine sedimentary deposits. The sedimentary rocks were converted to slates during the late Caledonian (Acadian) deformation associated with tectonic plate closure in the early Devonian. In the 19th and early 20th Century, the slates were extensively worked more or less at the same time as lead ore was being extracted from the Llangynog and other mines in the district. The slates have therefore made a major contribution to the economic prosperity of Llangynog and to its mining heritage.

The tuffs were erupted from an emergent volcano and accumulated in the surrounding sea. Still hot and plastic, the volcanic fragments at the base of the layers were flattened and welded together whilst those higher up retained their original shape and remained unwelded. Parts of the volcanic layers are tuffite, volcanic ash that was worked and re-deposited as sediment. These volcanic rocks closely resemble those of Snowdonia to the NW, are of similar age and products of the same plate-tectonic processes. They provide important information about the extension of the Snowdonia province into NE Wales.

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