

Site Name: The Moat Quarry Grid Reference: SO 04949045

RIGS Category: Educational & Scientific

Earth Science Category: Igneous and Silurian (Wenlock) Stratigraphy

Geology 1:50,000: BGS 164, Llanidloes

RIGS Statement of Interest:

Within the Welsh Basin, volcanic activity of Silurian age associated with nearby volcanoes was extremely rare. However, the tuff layers exposed in the Moat Quarry, composed of altered glass shards and crystal fragments, are examples. The only other examples are the tuffs exposed in The Bank Road Cutting nearly 30 km to the NNE (RIGS 25; CWPIgn 3), which are probably slightly older, and the sedimentary rocks containing volcanic debris seen in and around Waun Quarry (RIGS 28; CWPIgn 4), 15 km to the south. Other, much thinner volcanic ash layers (bentonite) are also present in The Moat Quarry but they were probably erupted from volcanoes well beyond the Welsh Basin. The quarry also exhibits rare examples of faults that were active during accumulation of the volcanic deposits. The tuffs contain unusual dish and pillar structures produced by expulsion of pore water during compaction and burial.

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