

Site Name: Tan Y Foel Quarry

Grid Reference: SJ 012014

RIGS Category: Educational & Scientific

Earth Science Category: Silurian (Wenlock) Stratigraphy

Geology 1:50,000: BGS Sheet 164, Llanidloes

RIGS Statement of Interest:

Tan Y Foel Quarry provides the thickest continuously exposed section through the Wenlock sandstone-dominated mid Silurian sedimentary deposits in Wales. Bedding is vertical throughout the quarry and there are no outcrop-scale folds or faults to disturb the section. These rocks, belonging to the Penstrowed Grits Formation, have been the subject of recent investigations by researchers from Cambridge University, are described in a well-known geological field guide, and are visited by supervised groups of university undergraduate and postgraduates under field training. The quarry provides an alternative conservation site to the SSSI Penstrowed Quarry near Newtown. The Penstrowed Grits are the youngest and most easterly sandstones to be deposited in southerly and central parts of the Welsh Basin.

Most of the section comprises beds of sandstone, reaching several metres in thickness, interlayered with thinner bedded siltstone and mudstone. Using current-indicators exposed in the quarry and elsewhere, it has been shown that the sandstones were carried by submarine density currents from southern parts of the Welsh Basin whilst some of the finer sediments were transported in from the basin margin to the east. Statistical data have been obtained from the quarry section to study rates of sedimentation.

Surveyed by: R. Cave & W.R. Fitches