Site Name: Waun Quarry **Grid Reference**: SO 01647741

RIGS Category: Educational & Scientific
Earth Science Category: Igneous and Silurian (Wenlock) Stratigraphy
Geology 1:50,000: BGS Sheet 179, Rhayader

RIGS Statement of Interest:

Evidence of volcanic activity taking place within the Welsh Basin during the Silurian Period in Central and North Wales is extremely sparse. The only known places, apart from this site and nearby minor outcrops, are The Moat Quarry near Caersws, 15 km to the north (RIGS 17; CWPIgn 2), and The Bank Road Cutting, some 45 km to the north-northeast (RIGS 25; CWPIgn 3). The ages, types of volcanic activity and associated sedimentary processes are different at each site, but collectively they enable a picture of volcanic activity in the region to be built up (Cave & Loydell, 1998). At the other two sites, the volcanic rocks are tuffs composed of volcanic fragments thrown from a vent somewhere in the vicinity and deposited on the sea floor.

The Waun Quarry RIGS and smaller satellite outcrops, all situated around the flank of the Domen-ddu spur of high ground near Pant-y-dwr, reveal another rock unit known as the Domen-ddu Tuffaceous Mudstone. This rock, a 1-2 m thick layer interbedded with sandstones and mudstones, consists of decomposed fragments of pumice, volcanic glass, crystal debris and pieces of sedimentary rock all suspended in a mudstone matrix. This mixture was probably transported down the flank of a volcano by a high density submarine current or as a mass-flow deposit. A thin volcanic ash layer (bentonite) is also present in the Waun Quarry but it was probably erupted from a volcano well beyond the Welsh Basin.

Surveyed by: R. Cave