

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

POWYS

LLANELWEDD ROCKS

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| <u>Date of Notification:</u> | 1954, 1989 |
| <u>National Grid Reference:</u> | SO 052524 |
| <u>O.S. Maps:</u> | 1:50,000 Sheet number: 147 1:25,000 Sheet number: SO 05 |
| <u>Site Area:</u> | 80.2 ha |

Description:

Geological:

Caledonian Structures of Wales: The quarry provides the best exposed section across the structures of the Pontesford Lineament, one of the major fault belts that was active between the Welsh Basin and the Midland Platform of England in Palaeozoic time. It exposed rocks of the Builth Igneous Complex, of Llanvirn (Ordovician) age, at the southern end of the Builth-Llandrindod Inlier. The quarry is important in demonstrating exposure through the fault belt in an area of otherwise poor exposure. It demonstrates the importance of strike-slip faulting during a deformation event of probable Ashgill (late Ordovician) age that might have involved large lateral displacements. The geometry of the fault systems at the locality is also of some general interest in understanding the mechanics of strike-slip tectonics.

Ordovician Igneous: The Builth-Llandrindod Inlier also shows exposures which reveal the character of an Ordovician volcanic suite erupted and emplaced during Llanvirn times. The suite spans the basalt-andesite-rhyolite compositional range and consequently is geochemically different from typical sequences of similar age elsewhere in Wales. The basaltic lavas are present in both massive and pillowed forms and hyaloclastic rocks are also locally present. The rocks of intermediate and acidic composition occur as lava flows, high-level contemporaneous intrusions, and dacitic to rhyolitic ash-flow and air-fall tuffs. The volcanic rocks present in this site are critical to an understanding of volcanic activity in Wales during the lower Palaeozoic era.

Biological:

A nationally uncommon vegetation type is present on natural rock outcrops and old quarry exposures. It has affinities with steppe-heath vegetation types, and in mid-Wales is associated with the presence of one or more of four uncommon species, namely maiden

pink *Dianthus deltoides*, upright chickweed *Moenchia erecta*, bird's foot *Ornithopus perpusillus* and annual knawel *Scleranthus annuus*. At Llanelwedd, good populations of upright chickweed and bird's-foot occur, and maiden pink is also present in one locality. The other species which occur with these rare plants, namely wild thyme *Thymus drucei*, lady's bedstraw *Galium verum*, common whitlowgrass *Erophila verna* and squirrel-tail fescue *Vulpia bromoides*, and locally sticky stork's-bill *Erodium cicutarium* and orpine *Sedum telephium*, are characteristic of a more widespread plant community to be found on thin, well-drained and relatively basic soils. The area is also noted for its diversity of forms of lesser dandelion *Taraxacum laevigatum* (section *Erythrosperma*), with six micro-species having been recorded. The complete successional sequence from grassland to mixed scrub over false brome *Brachypodium sylvaticum*, and the to oak/ash woodland in which the ground layer is often dominated by bracken *Pteridium aquilinum*, is well represented throughout the site.

Many of the lower rock outcrops support a rich lichen and moss flora with a number of locally uncommon species, e.g. *Parmelia brittanica*, *Fuscidea recens* and *F. praeruptorum*. The occurrence of deeper soils, spring flushes or mineral flushes all contributes to a diversity of grassland types, with probably the greatest diversity of flowering plants to be found anywhere in Radnor.

The diversity of habitat at this site is particularly valuable for small birds and insects. There is abundant cover for passerines and Lepidoptera, including silver-washed fritillary *Argynnis paphia*, large skipper *Ochlodes venata* and chimney sweep moth *Odezia atrata*. The grayling *Hipparchia semele*, a butterfly which is very rare in mid-Wales, also occurs. Woodlark has not been present in recent years, but formerly Llanelwedd was the only known Welsh locality for this species.

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