

Developments (through Wenlock and early Ludlow) within basin (Mid Wales – the Montgomery Trough) involved a progressive eastward shift of deep-water sedimentation – eastern margin of Welsh Basin fairly well defined, being located along Church Stretton Lineament. After long period of rising sea level during early Ludlow a prolonged period of regression set in, culminating in the shallow marine and fluviatile red bed facies of the Pridoli. Thick sequences of these rocks which accumulated in east central Wales and Welsh Borders have been related to development of an Arcadian Foreland. This formed as a consequence of Laurentian and Avalonian plate collision, southward nappe emplacement and downloading of the Avalonian crust (King 1994).

Lowermost Ludlow rocks – generally referred to as ‘**Lower Ludlow Graptolitic Shales**’ – include thinly interbedded, ribbon-banded turbidite mudstones and laminated hemipelagic mudstones.

The bulk of the overlying Ludlow succession in the basin is represented by the **Bailey Hill Formation** – variously interpreted as turbiditic, or storm-generated distal shelf deposits. BHF comprises up to 1.3km of thickly bedded, fine grained, shelly sandstones and silty mudstones with subordinate, silty, laminated hemipelagic mudstones. Large parts of formation are slumped – slumped units commonly associated with bentonites.

BHF is gradationally overlain by the **Knucklas Castle Formation** - sequence up to 500m of thinly laminated, bioturbated siltstones and subordinated thin sandstones, in part of early Ludfordian *leintwardinensis* Biozone age – which reflects increased levels of oxicity within the basin at the time.

This passes upwards gradually into the **Cefn Einion Formation** (equivalent to former Wern Quarry Beds and Llan-wen Hill Beds of Knighton area) 200-300m thick comprising thin to thick-bedded, hummocky cross-stratified sandstones and bioturbated silty mudstones, deposited in a distal shelf setting influenced by storm activity.

The overlying **Clun Forest Formation** is a lithologically heterogeneous deposit of interbedded grey, green and reddish brown silty mudstones and massive to laminated micaceous sandstones with variable amounts of carbonaceous material (previously the Platyschisma Beds through to the Red Downton succession). It represents transitional facies from the fully marine sequences of the Cefn Einion Formation to brackish water and alluvial deposits that characterise the Pridoli of the Welsh Borderland.