

Potts Beck Limestone Formation

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Potts Beck Limestone Formation (**PBK**), Carboniferous, Midland Valley of Scotland

Potts Beck Limestone Formation is part of the [Great Scar Limestone Group](#)

Name

The name is derived from Potts Beck near Ravenstonedale, Cumbria (see George et al., 1976^[1]).

Lithology

See Mitchell (1978)^[2]; Dunham and Wilson (1985)^[3]; Millward et al., (2003)^[4]. The Potts Beck Limestone Formation is composed largely of pale grey, thick-bedded, strongly jointed, sparry packstone. Rubbly weathered calcrete horizons are present, as are subordinate sandstones and mudstones.

Genetic interpretation

Marine.

Stratotype

The type section is at Great Kinmond (NY 6728 0892 to 6728 0927) where some 39 m of mostly fossiliferous limestone is exposed. The type area is at Little Asby Scar (NY 6988 0827) on the north side of Potts Valley, near Newbiggin-on-Lune, Cumbria where the base of the formation is exposed.

Lower and upper boundaries

The base of the formation is conformable, and taken at the change from dark grey, cross-bedded, coarse-grained, crinoidal grainstone with mudstone interbeds (the 'Bryozoa Band' of Garwood, 1913)

at the top of the underlying Ashfell Limestone Formation (Figure 9, Column 16), to grey, coralline packstone.

The upper boundary of the formation is overlain by the grey, scar-forming, rhythmically bedded, limestone (mainly wackestone and packstone) of the Knipe Scar Limestone Formation.

Thickness

The formation is up to 45 m thick in the Stainmore Trough, but thins rapidly towards the surrounding block areas. It is, for example, absent north of Shap village.

Distribution and regional correlation

Stainmore Trough.

Age and biostratigraphical characterisation

Latest Holkerian to early Asbian. Fossils, which can be abundant, include the corals *Axophyllum* sp., *Dibunophyllum bourtonense*, *Palaeosmia murchisoni*, *Siphonodendron junceum* and *S. martini*, and the brachiopods *Daviesiella llangollensis* and *Gigantoproductus* sp. The Stainmore Trough includes the basal Asbian Stratotype at Little Asby Scar (NY 6988 0827) (George et al., 1976^[1]). Faunal analysis of this section places the Holkerian/Asbian boundary above the base of the formation (Ramsbottom, 1981^[5]).

References

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