

# Glenburn Volcaniclastic Member

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## Glenburn Volcaniclastic Member (**GBV**), Beith-Barrhead Hills, Carboniferous, Midland Valley of Scotland

The Glenburn Volcaniclastic Member is part of the [Clyde Plateau Volcanic Formation](#).

### Name

Named from Glen Park, Paisley. The Glenburn Volcaniclastic Member, which appears on current printed BGS publications, including the Glasgow district memoir and bedrock geology map, was defined and recorded as the now obsolete Glenburn Volcanic Detrital Member by IGS (1981)<sup>[1]</sup>. It also replaces the now obsolete Glen Park Volcanic Detrital Member. See Hall et al. (1998)<sup>[2]</sup>.

### Lithology

The Glenburn Volcaniclastic Member comprises interbedded purplish red medium-grained sandstone, with subordinate reddish purple silty mudstone and reddish purple muddy siltstone. Some of the sandstone grains are described as volcaniclastic. In the Glenburn Borehole (BGS Registration Number NS46SE/164) (NS 4783 6065) volcaniclastic sedimentary rocks and agglomerates are interbedded with several (thin) lava flows.

### Stratotype

The type section is the Glenburn Borehole (see above) from 17.35 to 43.54 m depth, where volcaniclastic sedimentary rocks and agglomerates are interbedded with several (thin) lava flows. A partial type section occurs in the bed of the Craigie Linn (NS 4743 6047 to NS 4744 6053) within Glen Park, Paisley.

## Lower and upper boundaries

The lower boundary of the member is seen in the Glenburn Borehole (see above) at 43.54 m depth (IGS, 1981)<sup>[1]</sup>. It is sharp, faulted and marked by a lithological change from the red-brown sedimentary rocks of the [Kinnesswood Formation \(Inverclyde Group\)](#) to basalt lavas ('Markle' and mugearite types).

The upper boundary is exposed and clearly seen at Craigie Linn waterfall (NS 475 605) in Glen Park, Paisley. The top of the member is sharp and marked by a lithological change from well-bedded purple tuffs and volcanoclastic sedimentary rocks to grey plagioclase-microphyric basalt lava ('Jedburgh' type) of the overlying [Gleniffer Lava Member \(Clyde Plateau Volcanic Formation\)](#). Elsewhere the unit is overlain by the distinctive olivine-bearing plagioclase-macrophyric basalts ('Markle' type) that are most characteristic of this overlying member. The top of the member is also seen in the Glenburn Borehole (see above) at 17.59 m depth (IGS, 1981)<sup>[1]</sup> where white to grey sandstone with slump structures is overlain by agglomerate of the [Gleniffer Lava Member \(Clyde Plateau Volcanic Formation\)](#) that comprises subangular clasts of yellowish sandstone and basalt in a fine-grained purplish grey matrix.

## Thickness

The thickness is variable from over 26 m in the Glenburn Borehole, to more than 30 m at outcrop in Glen Park (see above).

## Distribution and regional correlation

The Glenburn Volcanoclastic Member is exposed at intervals along the base of the lava scarp from Craigie Linn (NS 475 605) to Harelaw Burn (NS 49 60) including the Glen Park, Paisley.

## Age

Mid Visean (Arundian to Asbian).

## References

- <sup>[1]</sup> Institute of Geological Sciences. 1981. Institute of Geological Sciences boreholes 1980. *Report of the Institute of Geological Sciences*, No. 81/11.
- <sup>[2]</sup> Hall, I H S, Browne, M A E, and Forsyth, I H. 1998. Geology of the Glasgow district. *Memoir of the British Geological Survey*, Sheet 30E (Scotland)

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