

# Upper Lecket Hill Lava Member

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## Upper Lecket Hill Lava Member (**ULHLA**), Campsie Block, Carboniferous, Midland Valley of Scotland

Upper Lecket Hill Lava Member is part of the [Clyde Plateau Volcanic Formation](#).

### Name

Previously named the Upper Lecket Hill Lavas (Forsyth et al., 1996)<sup>[1]</sup>.

### Lithology

The Upper Lecket Hill Lava Member consists generally of relatively felsic lavas, including trachybasalt (hawaiite), basaltic trachyandesite (mugearite), trachyte and rare plagioclase-microphyric basalt transitional to trachybasalt (of 'Jedburgh' type). The member is generally poorly exposed, but a reasonable section is present in the Back Burn (NS 640 803), where at least seven platy-jointed and rather 'slaggy' lavas are present. In Goat Burn (NS 637 794) two lavas (or 'flow units' of Craig, 1980<sup>[2]</sup>) of basaltic-trachyandesite (mugearite) are overlain by a lava, 6 m thick, of trachybasalt (hawaiite), above which is a compound 15 m thick lava of very fine-grained 'slaggy' trachybasalt (hawaiite) or basaltic-trachyandesite (mugearite) with scattered small feldspar phenocrysts, and a pale-weathered, platy-jointed basaltic-trachyandesite (mugearite), 5 m thick. The top of the section is obscured by peat. North-east of the summit of Lecket Hill (NS 6445 8121), lapilli-tuffs and agglomerates locally predominate over lavas, which include trachyte.

### Stratotype

The type area is the eastern Campsie Fells, and westernmost Kilsyth Hills, north of Glasgow (NS 6192 8005 to NS 6696 8094) (Forsyth et al., 1996)<sup>[1]</sup>. A reference section through the member is seen at Back Burn (NS 6371 8021 to NS 6489 8033) (Craig, 1980<sup>[2]</sup>), and an incomplete section is present along the southern escarpment of the Campsie Fells, north of the Campsie Fault at Goat

Burn (NS 637 794).

## Lower and upper boundaries

The basal basaltic-trachyandesite (mugearite) lava of the member is conformable or disconformable on the underlying plagioclase-macrophyric trachybasalt (hawaiite) lava of the [Boyd's Burn Lava Member](#).

The Upper Lecket Hill Lava Member is overlain apparently conformably or disconformably by the [Kilsyth Hills Lava Member](#), which has a similar geographical distribution. The lithological change is to plagioclase-macrophyric transitional to plagioclase-microphyric basalt and trachybasalt (hawaiite) lavas (of 'Markle' type transitional to 'Jedburgh' type).

## Thickness

Some 65 m.

## Distribution and regional correlation

The member is restricted to the Campsie Block (Forsyth et al., 1996)<sup>[1]</sup> and has a limited geographical extent, (reflecting the proximal character of the lava flows) in the eastern Campsie Fells and westernmost Kilsyth Hills, north of Glasgow. These rocks mostly crop out immediately above the escarpment north of the Campsie Fault, to the south-west of Lairs (NS 6424 7994), and on the southern, eastern and northern flanks of Cort-ma Law (NS 6515 7995), and on the upper flanks, but not the summit area, of Lecket Hill (NS 6445 8121). They also crop out in a very small outlier on the summit of Little Bin (NS 6725 8285). Craig (1980)<sup>[2]</sup> inferred that the source of the member was the nearby Waterhead Centre ('Waterhead Central Volcanic Complex').

## Age

Mid Visean (Arundian to Asbian).

## References

- <sup>[1]</sup> Forsyth, I H, Hall, I H S, and McMillan, A A. 1996. Geology of the Airdrie district. *Memoir of the British Geological Survey, Sheet 31W (Scotland)*
- <sup>[2]</sup> Craig, P M. 1980. The volcanic geology of the Campsie Fells area, Stirlingshire. Unpublished PhD Thesis, University of Lancaster

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