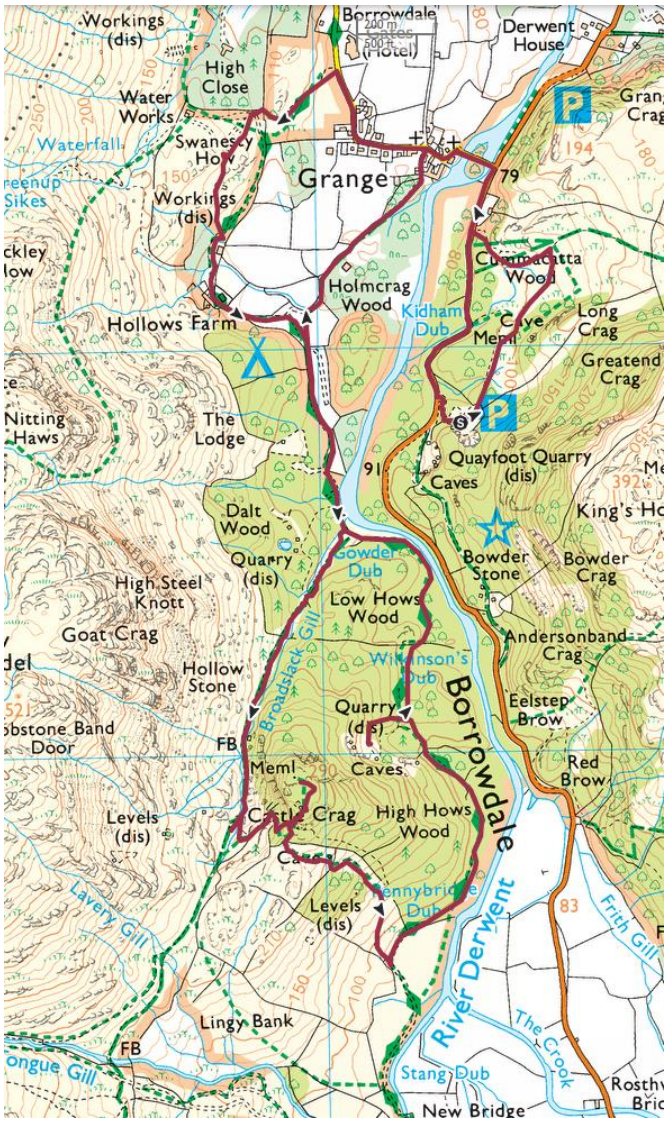
Jaws of Borrowdale Field Trip. 20 May 2023. Briefing note by Phil Davies

Start: 0930h. Expected duration: about 5 hours.

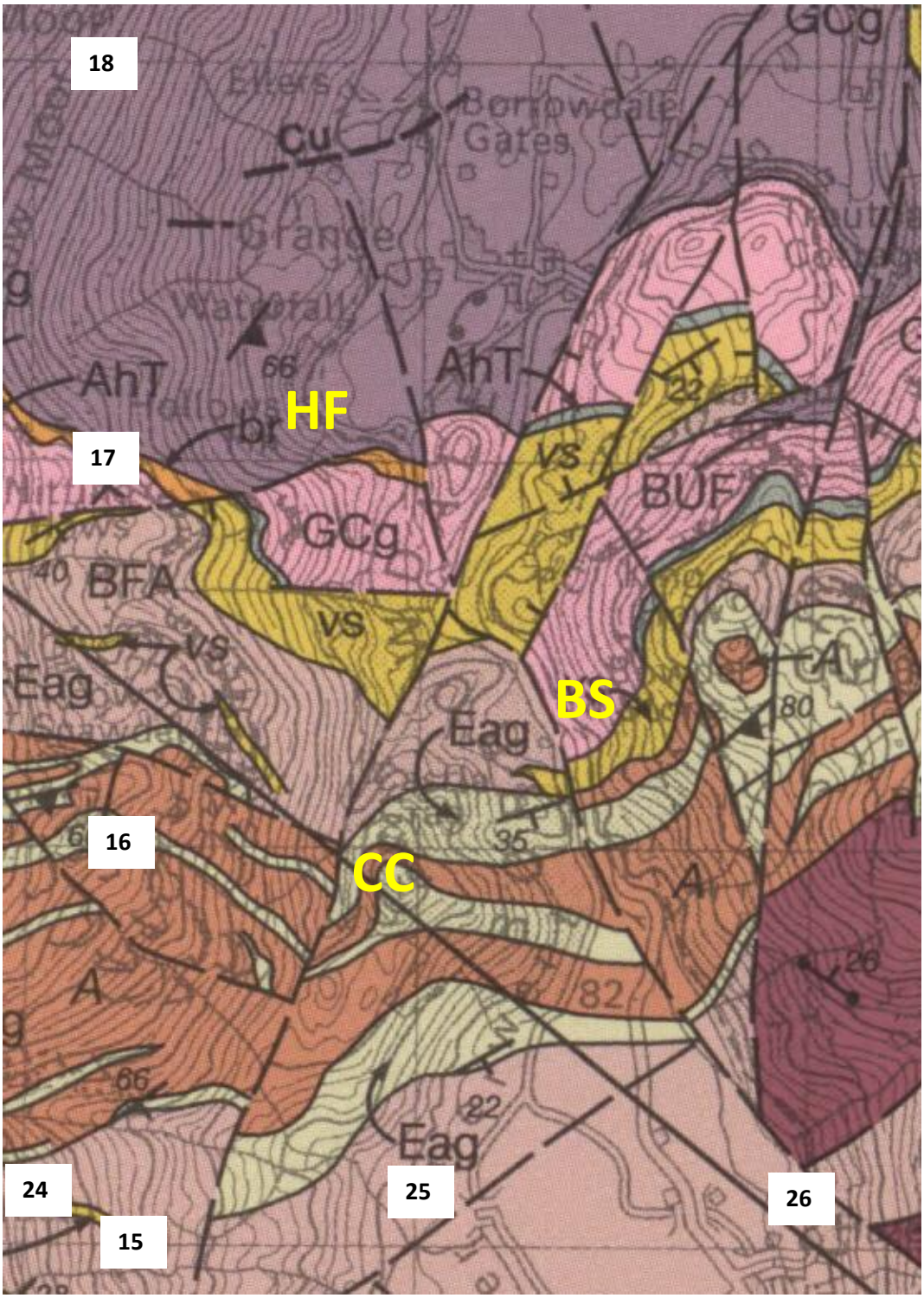
Start point and parking: Signposted National Trust Bowder Stone car park near Grange. NY253168

Introduction

A 6.5 mile Lakeland hike in a classically scenic area with geological interest at points along the way. The route traverses Borrowdale Volcanics terrain as well as Skiddaw Group (Buttermere Formation) around Grange. A geological map is attached; also a Lidar image. The itinerary is based on, but not identical to the Borger Dalr* geology walk suggested by the National Trust[1]. Attendees will have the option to visit the top of Castle Crag (weather permitting). This entails a relatively steep section and some scrambly areas requiring particular care. After returning to the start point by walking beside the Borrowdale road (with due caution), attendees might wish to visit the famous Bowder Stone independently.



[1] *Old Norse: Valley of the fort. https://www.nationaltrust.org.uk/visit/lake-district/borrowdale-and-derwent-water/borger-dalr-geology-walk

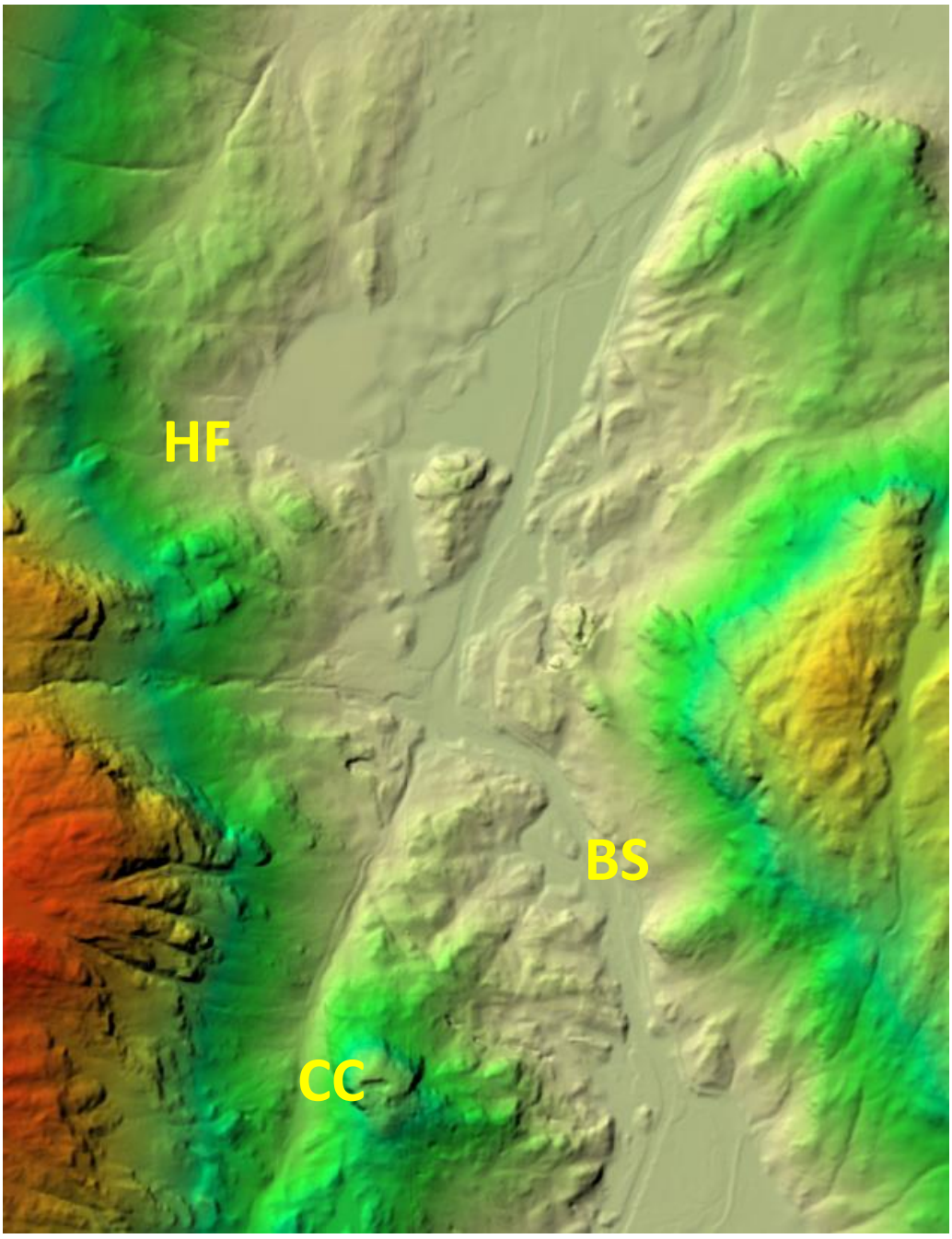


Extract from BGS 1:50,000 scale Keswick Sheet (solid). Enlarged, with km grid lines annotated.

Reference locations in yellow: BS = Bowder Stone; HF = Hollows Farm; CC = Castle Crag

BVG units: GCg = Grange Crags Member (aphyric andesite); BFA =Birker Fell Formation (lavas and sills); VS = Volcaniclastic sandstone; Eag = Eagle Crag member (siltstone, sandstone, tuff); A = Andesite sills.

(The upper (northern) part of this map indicates Skiddaw Group, Buttermere Formation)



Lidar image[2]

Reference locations in yellow: BS = Bowder Stone; HF = Hollows Farm; CC = Castle Crag (roughly positioned)

2 https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fenvironment.data.gov.uk%2Fimage%2Frest%2Fservices%2FSURVEY%2FLIDAR_Composite_1m_DTM_2020_TSR%2FImageServer&source=sd

Some points along the way

Grange. Bridge on a roche moutonée. Slate fence unusual.

Peace How. Given to the National Trust in 1917 so that anyone whose life had been damaged by the conflict could come and experience peace and tranquillity. Copperplate mine lies about 1/2 km to the N. 16th century? See Historical footnotes.

Hollows Farm. Well-known reference location for the vexatious unconformity between the underlying Buttermere Formation in the Skiddaw Group and the overlying Borrowdale Volcanic Group (BVG). All Ordovician in age.

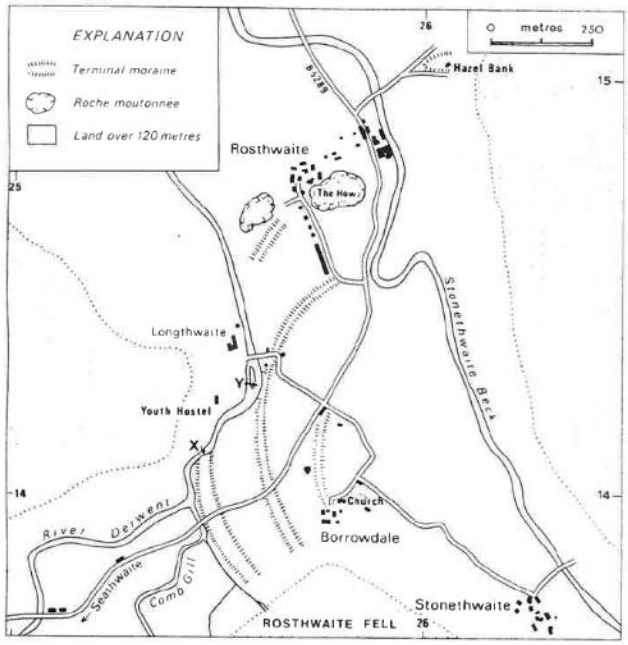
Holmwood Crag. A roche moutonée.

Dalt Quarry. Photogenic disused slate quarry with many artificial climbing routes.

Broadslack Gill. Aling the line of Derwent Water Fault. Strike-slip / downthrow to the E according to BGS.

Castle Crag. In the Jaws of Borrowdale. Summit the site of an ancient hill fort (truncated by quarrying). Roofing slate. Alfred Wainwright: "so magnificently independent, so ruggedly individual, so aggressively unashamed of its lack of inches". In the Eagle Crag Member (siltstone, etc). Great War memorial.

Rosthwaite area. We are in Alfred Wainwright's "finest square mile in Lakeland". Glacial landscape. Moraines at Rosthwaite. The How is a roche moutonée. Flat land north of Rosthwaite – a moraine dammed lake, dammed at 'The Jaws'.



(from a CGS paper by Peter Wilson)

High Hows Quarry. The summer home of Millican Dalton, Professor of Adventure, 1920s to 1947.

Independent optional extra for attendees, walking south from the car park: Bowder Stone. Huge andesite lava block. From a post-glacial rockfall. Roughly 2,000 tonnes. Robert Southey: "like a ship upon its keel".

Some historical footnotes

1. Castle Crag

STATION IV. From the top of Caſtle-crag in Borrowdale, there is a moſt aſtoniſhing view of the lake and vale of Keſwick, ſpread out to the north in the moſt picturesque manner. Every bend of the river is diſtinctly ſeen, from the paſs of Borrowdale, till it joins the lake; the lake itſelf ſpotted with iſlands; the moſt extraordinary line of ſhore, varied with all the ſurpriſing accompaniments of rock and wood; the village of Grange at the foot of the crag, and the white houſes of Keſwick, with Croſthwaite church at the lower end of the lake; behind theſe, much cultivation, with a beautiful mixture of villages, houſes, cots, and farms, ſtanding round the ſkirts of Skiddaw, which riſes in the grandeſt manner, from a verdant baſe, and cloſes this proſpect in the nobleſt ſtile of nature's true ſublime. From the ſummit of this rock, the views are ſo ſingularly great and pleaſing, that they ought never to be omitted. The aſcent is by one of the narrow paths, cut in the ſide of the mountain, for carrying down the ſlate that is quarried on its top.

The view to the north, or the vale of Keſwick, is already deſcribed; that to the ſouth lies in Borrowdale. The river is ſeen winding upward from the lake, through the rugged paſs, to where it divides, and embraces a triangular vale, completely cut into incloſures of meadow, enamelled with the ſofteſt verdure, and fields waving with fruitful crops. This truly ſecreted ſpot, is completely ſurrounded by the moſt horrid, romantic mountains that are in this region of wonders; and whoever omits this *coup d' oeil*, hath probably ſeen nothing equal to it.

The views here, taken in the glaſs, when the ſun ſhines, are amazingly fine.

A Guide to the Lakes in Cumberland, Westmorland, and Lancashire (1812 edition)
By Thomas West

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2. Copper Plate Mine(s) NY246178



The Copper Plate Vein has been wrought extensively up the side of the mountain, at its base, and for some little distance across the valley. This mine was opened and named by the Germans under Hechstetter, in 1566; and judging from the extent of their excavations, a considerable quantity of ore must have been raised.

…this mine, in 1871, a number of antiquated tools were found, which had no doubt belonged to the German miners.

…This mine was also wrought about sixty years ago, and some ore was raised.

Extracts from: Mines and Mining in the English Lake District, by John Postlethwaite, Keswick, published by W H Moss and Sons, Whitehaven, Cumberland now Cumbria, 1877; published 1877-1913

https://www.lakesguides.co.uk/html/topics/minef.htm