

## Ballengeich. A Story of Landscape Change

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‘As old as the hills’, we say. But the landscapes around us are not unchanging. In reality, landscapes (yes, even the hills) are in constant flux. I would like to take you on a short walk through a small area of landscape with fascinating evidence of geological, biological and historical change covering millions of years – and continuing today. Evidence, that’s the word!

The focus will be on the Ballengeich Pass, the narrow valley on the east side of Stirling Castle. The ground falls steeply from the castle walls to the Ballengeich Road, which runs northward through the valley. Much of the eastern side of the road is flanked by Ballengeich Cemetery, opened in 1888 [Figure 1] when it was carved from rough ground known as the Gowane Hills (<https://www.stirling-lhs.org/ballengeich-cemetery.html>).



Figure 1 Castle from Ballengeich Cemetery (Photo JGH).

James V, king of Scotland from 1513-1542 was known as the Gudman of Ballengeich from his association with the castle and its environs. Peter McNiven suggests that the name (sometimes given as Balnageich and other variants) might be *bealach* + *an* + *ScG gaoth*, ‘Pass of the bog, tidal stream?’ (McNiven, pers.com). Clearly, no tidal streams here but we can easily imagine a bog in this long, narrow, level valley with heavy, impervious clay soils.

The road comes from Castle Wynd, in the Top of the Town area, just below the castle [Figure 2]. North of the cemetery the road makes a couple of minor wiggles and then descends to a very sharp turn to the west. This turn (it’s almost a hairpin) is unavoidable as, further north, there is a precipitous cliff.



Figure 2 The Balleengeich Road; sharp bend arrowed (National Library of Scotland)

The road has existed for centuries. For example, in 1611 a watch was to be set at ‘Balnageich’, to prevent people coming into the town secretly at night (Renwick, 1887, p. 127 11 Feb 1611). It can be seen in John Slezer’s late seventeenth century view of the castle (<https://tinyurl.com/55zydyr2>) and on various of the military plans of the eighteenth century (see, eg RCAHMS, 1963, Plate 56). The sharp bend, on a steep slope, must have been a challenge for long, horse-drawn vehicles such as those in the Slezer view; even today signs warn that the road is unsuitable for coaches.

To ease those problems and as part of a wider re-organisation of the roads in the vicinity of the castle, in 1808 the road surface towards the northern end of the valley was cut into a deep trench around 4 metres deeper than the old road. Before this work could be undertaken, the council had to persuade the army authorities to move the ‘necessary’ (toilets) in the castle which, till that time, had discharged all their mess down the slope towards the road (Harrison, 2007, p. 21-2; SCA Stirling Council Minutes, 5 Oct 1805, 28 Jan 1808, 25 April 1808, 8 Oct 1808). The road work had other effects.

The ground rises steeply from the road to the castle walls, particularly in its northern section. Several projections break the line of the wall. [Figure 3]. One of these has a built-up doorway at ground level marked Old Sally Port [Figure 4]. Claims that this was an early, major or alternative entry to the castle are clearly nonsense. I got to it in 2009, pulled and pushed by my friend Stephen Digney. I don’t expect to struggle up there again any time soon! It’s not only inaccessible but the doorway is hardly large enough for a donkey, much less a

horse carrying a king! And since the door is several metres below the ground level inside the castle anyone going in would first find themselves in a deep pit and have to climb a stair to access the Castle itself.



*Figure 3 The steep slope rising to the Nether Bailey wall and Sally Port (Photo JGH).*



*Figure 4 The Sally Port (Photo JGH).*

It is, in truth, just what is says, a Sally Port from which, during a siege, a small, select party of the most trusted men could discretely emerge to spy on the enemy or spike their guns or to bring in some special supplies (Harrison, 2007, p. 18-20). On their return these valuable men would give the password, be admitted through the door to a small chamber where they could be checked for infiltrating enemies, and then allowed up the steps into the castle proper. There is another Sally Port on the other side of the castle but that is so inaccessible that I have never dared to approach it.

Once Stephen and I had struggled up we could see that there was a track, from the Sally Port, down towards the road below. However, nowadays, it does not get to the road. Instead, just behind the point where I took the photo [Figure 5] the slope becomes near vertical. The track had been cut by the work of 1808. The walls (and so the Sally Ports) date from the



sixteenth century though they might be on an older line and the track is, presumably, contemporary.



*Figure 5 Track leading from Sally Port (Photo JGH)*

Further north, the cutting down of the road exposed something else, this time on the other side of the road. Beyond the northern limit of the Ballengeich Cemetery, is a cliff of crumbly volcanic rock, constantly shedding a rain of coarse sand which is now retained by a stone wall on that side of the road. The road was cut down here, too, exposing lower levels of the cliff [Figure 6].



*Figure 6 The unconformity is behind the wall at the base of the cliff (photo JGH).*

In 1808 the findings of James Hutton, the Scots geologist, were new (indeed, still controversial) (Oxford DNB, 2004, James Hutton 1726-1797). Hutton realised that the

surface of the earth was being constantly eroded and, equally constantly, recreated. There was 'no vestige of a beginning, no prospect of an end'. Rejecting the idea that the earth was a few thousand years old, he introduced the idea of 'deep time', of an earth which was millions (we would now say billions) of years old.

One of the cornerstones of his argument was examples, scattered across Scotland, of Hutton's Unconformities, such as at Siccar Point in Berwickshire or at Lochranza on Arran where different rocks, with different orientations, lay one upon another. In 1814 MacCulloch described another, splendid example where a layer of sandstone underlies the volcanic rock of the cliff; he provides excellent illustrations and notes that it had been recently revealed (MacCulloch, 1814) [Figure 7; Figure 8]. Thomas Garnett a geologist with a particular interest in the volcanic rocks, who was familiar with Hutton's work, had visited Stirling in 1798 and would have commented on the unconformity had it been visible then (Garnett, 1811), The conclusion must be that it was revealed by the work of 1808.



Figure 7 Site of Unconformity by MacCulloch

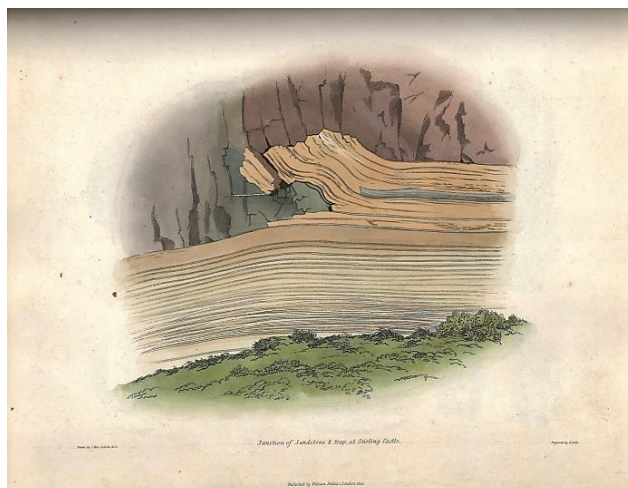


Figure 8 Detail of Unconformity by MacCulloch.

Comparison of the outline of the cliffs with MacCulloch's illustration shows that the sandstone was revealed beneath the crest of the cliff. It is now lost – or, rather, it has been

hidden by trickling sand accumulating behind the wall since 1808. But a little excavation behind the wall would, once again reveal it.

The existence of sandstone here is no surprise. Indeed, Ballengeich sandstone was one of the most important freestones in medieval Stirling (Ronald, 1889, 11); there are suggestions of its being used so far away as Doune Castle but these lack precise, geological confirmation (Harrison, 2018, p. 12). A payment is recorded in late 1497 when work was underway on the structure now known as the King's Old Building, in the castle. The entry appears in the published Treasurer's Accounts as 'to the tuo quareouris of Bannogeith 8s'. However, checking of the manuscript shows this should read

to the tuo quareouris of Balnageich 18s (NRS E21/4 f. 56v). [Figure 9]

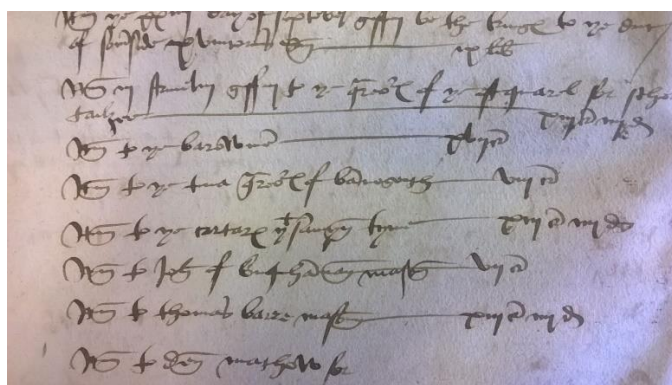


Figure 9 Detail from building accounts with first record of Balnogeich (NRS).

Slightly less certainly, it is probably also the quarry involved a few months later when 3s was given as 'drink silver' [a tip] to the workers at the quarry 'undir the wall of strivuelin' [under the wall of Stirling Castle] (TA I 377). There are numerous sites round the castle where volcanic whinstone has been worked but the exact site or sites for the sandstone are unclear; Stephen Digney thinks the accessible sandstone may have been worked out by the early sixteenth century.

So, we see geological change taking place over millions of years and human changes over a few centuries. There is also biological change occurring almost before our eyes, certainly over a scale of just a few years. So recently as the 1990s a colony of Viper's Bugloss flourished on the unstable, sandy surface at the base of the cliff of the unconformity [Figure 10]. Since that time, shrubs and trees have become established in the narrow gap (a few metres wide) between cliff-face and wall; the Viper's Bugloss – a plant of open ground – has gone.





*Figure 10 Vipers Bugloss at the foot of the cliff in the 1990s (Photo JGH)*

More extensively, for centuries the slopes below the castle, too steep for arable, were rented out for pasture. The grazing animals prevented tree growth, encouraging a close-cropped, species-rich pasture. They also kept the views open, securing the sight-lines essential for defence of the castle. But the pasture must always have been poor and the

available area is small so, since about the end of World War II (earlier on the southern and western side of the castle) grazing has stopped. Trees and shrubs have moved in, the former sight-lines are increasingly obscured and, in the shade, the ground flora changes for example greatly reducing the wallflowers which used to crowd the rocky cliffs. Now, even where trees do not grow, there are often brambles or long, coarse grass (Sexton, 2020). Even more recently, the invasion of trees is being curtailed as the many self-seeded ash trees fall victim to Chalara Ash Die-back. Already, in 2021, many were almost leafless. This might be a temporary reprieve for the surviving wallflowers. But, without a doubt, something else will come along to replace the ash trees (Harrison, 2020).

If you want to visit the area and see the evidence for yourself, it's easy enough and it will take only a few minutes to walk from (say) the top of Barn Road to the sharp bend – though it's difficult to see the Sally Port path from below and the unconformity was revealed only transiently by the events of the early nineteenth century. I have seen proposals for sillier projects than endeavouring to reveal it again?

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[SCA] Stirling Council Archives, SB1/1/- Stirling Burgh Council Minutes (new series)