

ROBERT OWEN COMMEMORATION LECTURE 2018

GOODNESS GRACIOUS, GREAT FALLS OF CLYDE

Graham U'ren

Graham delivered a fascinating and informative lecture on the Falls and surrounding landscapes of the Clyde Valley. The following is a summary of the presentation but a much more detailed article can be found in the book 'Historical Clydesdale'.



Graham set the scene of the formation of the gorge and falls which form one of the largest sets of waterfalls (Lynns) by volume in Britain and are set in the most spectacular gorge in the south of Scotland. They have been an iconic landscape feature in Scotland's romantic image for about 300 years. The process of their formation is as dramatic as their scenic presence today and they have not only greatly influenced the human geography and history of the mid Clyde Valley but have provided lessons to the world on geology, landscape aesthetics, the development of human character and the use of waterpower.

The Falls of Clyde and the gorge in which they occur, owe their origin to one of the later episodes of the Ice Age, some 13,000 years ago. Unlike the other well-known waterfall in the south of Scotland, the Grey Mare's Tail, these falls were not the result of glacial erosion but of the enormous force of meltwater.

There have been 5 Ice Ages in the course of the 4.5 billion year history of the earth and the most recent started with the first cooling of the atmosphere around 2.5 million years ago. The ice maximum, then, was reached after many fluctuations of climate brought various advances and retreats in a massive build-up of ice as the local ice caps over the mountain blocks of Britain and Scandinavia, exposed to the Atlantic winds bearing ever accumulating snow, agglomerated and moved outwards, denying the replenishment of the oceans, drying out the North Sea and gaining a thickness of up to 2 miles, not dissimilar to the Antarctic or Greenland ice sheets today. The story of the late Ice Age is therefore dominated not by ice erosion and deposition but by meltwater erosion and deposition, the evidence of which abounds just to the east of Lanark.

Graham continued to describe the changing course of the River Clyde around the area of Bonnington estate and that during the excavations for the power station this course was found as a result of identifying the infill deposits from the earlier glacier movement.

The evidence of the line of the gorge, with straight sections as well as sharp angles following the jointing of the underlying sandstone bedrock, confirms that the outlet was found in the confined spaces below the ice and not over the open land surface. The falls of Bonnington, Corra, Dundaff and Stonebyres were created where beds of softer shales between the layers of sandstone were exploited to step down the profile of the torrent by almost 100 metres or so overall.

Several millions of tonnes of rock would have been removed from the 7 km length of the gorge in a short space of time. The spectacular, straight section between Bonnington and Corra Linns, described by Thomas Pennant in 1771 as "*a stupendous natural masonry*", is 1 km long and resulted from the removal of around 4 million tonnes of rock. This was pulverised and deposited on the river terraces lower down the valley. The flow over the Falls since then, even at its highest winter flow, has been insufficient to cause any significant further erosion.

Significance of the Landforms

The story of the creation of the gorge and Falls of Clyde may be spectacular but it is all the more significant as the landforms remain today to tell the complete story. By now, it will be clear that this story cannot be interpreted only from the main focus of our attention in the magnificent Falls of Clyde themselves, within the confines of the gorge, but requires the full cross section of depositional features extending from the racecourse, through the Bonnington area and across the river to Linnhead to comprehend it.

This contrasting group of landforms involving the violently created gorge and the more gently deposited 'humps and bumps' of the fluvio-glacial landscape through which it burst provides key influences in the human history of the surrounding area.

Unique and spectacular though this scenario may be, the Falls of Clyde, their associated landforms and their effect on human history is a common theme for many, if not all, of our important heritage sites. You only have

to think also of the other 5 World Heritage Sites in Scotland (Edinburgh Old Town, Neolithic Orkney, St Kilda, Antonine Wall and Forth Bridge).

Sites for Fortifications.

Graham went on to explain that like Craignethan, Cadzow and Bothwell Castles on other parts of the lower Clyde valley and its tributaries, Corra Castle was built on a rocky promontory, in this case above Corra Linn, with natural defences afforded by the natural gorge on three sides with a ditch on the fourth enclosing an irregular barmakin type courtyard. It was built by the descendants of William Bannatyne who had acquired the property of Corehouse and Corrocks at the start of the fifteenth century. By the reign of James III great rivalry had broken out among the nobility in their challenges to the king's power. The Bannatyne family were known supporters of Mary Queen of Scots and were active on behalf of both sides at different stages of the Civil War. A secure stronghold was therefore a necessity. Perched in this spectacular position, it was abandoned in the late eighteenth century and remains a picturesque ruin and a home to rare bats today.

By contrast, the timber palisaded edifice that was the Norman style Lanark castle has long disappeared, while the rump of its earthen mound remains. Nevertheless, it held a position equally dependent as Corra on the deep incision of the landscape. It was the control of the crossing points of the Clyde adjacent to the gorge which gave Lanark's hilltop position such strategic importance in early mediaeval times, well before the first stone bridges were built.

River Crossings – fords and ferries.

When the Roman army invaded southwest Scotland in AD82 they built an extension of Watling Street initially to connect with the fort at Castledykes near Lanark and found just how difficult the Clyde was to cross, the road staying generally on the right bank. However, the road built to link Castledykes to the fort at Loudon Hill in Ayrshire used the only quiet, accessible stretch of water in the length of Clyde gorge at Clydesholm (Kirkfieldbank) to make a crossing. This was to remain a key fording and ferry point right through mediaeval times, and a bridging point thereafter. There is no record of a ferry, however, until 1491 when James IV granted a charter sanctioning its use and conferring the right to appoint the boatmen to the chaplain of St Catherine's Altar, an official of the parish church in Lanark. The importance of the ferries to the town of Lanark itself was emphasised by 1552, when the patronage appears to have passed to the baillies of the Royal Burgh. Burgh minutes indicate that by this time the town was responsible for maintaining the ferries and appointing the ferrymen at both Clydesholm and Crook Boat.

Bridges and turnpikes.

It was in 1696 that the first stone bridge was built over the Upper Clyde at Clydesholm. Despite this relatively benign section of the river in the gorge, there had been a number of tragedies with ferry boats swept downstream and over Clydes Lin (Stonebyres Fall). However, the completion of the bridge did not come for almost 50 years after the Scottish Parliament was successfully petitioned for funds to add to the commitments

of the burgh and key landowners, as a result of delays during the unsettled times of the 17th century civil war and religious persecutions.

Upstream, Hyndford Bridge was not built until 1773 as part of the new turnpike road scheme from Edinburgh to Ayr. This gave Lanark easy road access in all directions. Indeed, in the new spirit of the time when prosperous landowners were keen to contribute to road building to support development - and to divert intrusion away from their own country house pleasure grounds - the turnpike from Lanark, via Clydesholm bridge, to Hamilton through the villages along the Clydeside left bank was improved to the great advantage of the extensive cotton cart traffic to New Lanark.

The Scottish Enlightenment and the 18th century landscape movement.

Dr Thomas Garnett wrote in 1811 a description of the falls of the Clyde in which he said "the powers of recollection are almost suspended, and it is some time before the spectator is enabled to contemplate with any tolerable complacency the sublime horrors of this scene". The enlightened approach from early in the eighteenth century was to hold these 'sublime' features in awe but to create safe ways to gain pleasure from them. This made the estates bordering such natural wonders especially desirable. In 1768 Gilpin published his "Essay on Prints" where he defined the picturesque as "that kind of beauty which is agreeable in a picture".

Lord Kames, or Henry Home, was a central figure of the Scottish Enlightenment, and a founder member of the Philosophical Society of Edinburgh.

Designed landscapes at the Falls of Clyde.

Four estates, especially, took advantage of the natural drama of the Clyde gorge to enhance their surroundings. Corehouse and Bonnington exploited the Falls of their names and, in a more limited way, Braxfield and Castlebank, with its fine terraced gardens, celebrated the former prominence of Lanark Castle on their neighbouring vantage points overlooking the Clyde. Braxfield was the country seat of Lord Robert McQueen and after his death of Robert Owen and his family.

In the case of Stonebyres, a property belonging to the Weir or de Vere family from at least the 13th century, the last house was a remodelling in 1850 of the mediaeval keep, before it was finally demolished in 1934 after which it became the site of smallholdings.

Corra Castle was inhabited by the Bannatynes until the late eighteenth century when the Edmonstoun family from the Borders bought it and built a new residence beside it. However, after criticism of the way in which this unremarkable house intruded on the ambience of the Falls - by Dorothy Wordsworth among others - this in turn was replaced by the current Edward Blore designed Tudor Revival house in 1827 by George Cranstoun who inherited the estate in 1819.

Bonnington, which had come into the hands of the Carmichael family during the seventeenth century, was to be the subject of a particularly fine transformation to a picturesque design.

Prior to this, however, Bonnington had been a hunting forest, possibly the remnant of the royal forest from the time of the occupation of Lanark castle in the 12th and 13th centuries. The existence of a deer park bounded by a park pale is demonstrated on the Blaeu map of 1654 in accordance with the customary annotation of the time.

As early as 1708, the Bonnington viewing pavilion was built for the young Sir James Carmichael, probably as a hunting lodge in the first instance. However, it undoubtedly was built also to take advantage of the spectacular view over Corra Linn, at the end of its terrace link to the main house.

As far as the wider estate is concerned, the Roy map of 1750 suggests that major planting had taken place by then to create tree lined paths and rides, and hill top roundels around the estate. The expiry of the Carmichael lineage and the inheritance of the estate in 1757 by Admiral Sir John Lockhart Ross through his marriage saw further changes Sir John's son, Sir Charles Ross and especially his wife, Lady Mary Ross, continued to embellish the estate between 1790 and 1830 with many features.

Regrettably, with a century of neglect after the house was gutted by fire in 1913, some of these features have now been lost or degraded but the strength of the natural landscape prevails on which much can be imagined or even recreated. The house was eventually demolished in the 1950s.

Romantic tourism, writers and artists.

The late eighteenth century saw unprecedented interest in the landscape of Britain at a time when the French Revolution and then the Napoleonic Wars had curtailed the Grand Tour of Europe. Early in the century, Defoe had passed by "a very indifferent place of Lanerk" in favour of visiting Douglas castle on his "Tour through the Whole Island of Great Britain (1721-26)". However, by 1769 Thomas Pennant had devised the Petit Tour of Scotland for which the Falls of Clyde, with the hospitable local lairds, were the usual end point. Other travel writers such as Bishop Pococke, Stoddart, Cobbett, Chambers and Garnett followed suit and all demonstrated just how popular waterfalls (the "impetuous torrents" of Edward Cole's fascinating 2011 thesis) were at the time in landscape description. Robert Southey and William Hazlett were also commentators but the most renowned literary visits were by Sir Walter Scott in 1827 and prior to that by William Wordsworth and his sister Dorothy, together with Samuel Taylor Coleridge.

For a fuller account of the experiences of early tourists and writers, Graham referred to the 2015 paper by Ian Donnachie on "The Falls of Clyde: Picturesque, Sublime, Romantic".

The earliest images by artists of the Falls date from the late 18th century and represent a wide range of treatments. Paul Sandby's various drawings of the Falls are typically accurate records of the scene, as befitted his role as illustrator for General Roy's mapping programme, and have proven to be valuable historical references. Jacob More, in his idealised style influenced by the French painter Claude Lorrain, is felt to have produced his best work in painting the Falls. He drew acclamation from Sir Joshua Reynolds and his exhibit of Corra Linn at the Society of Artists in London in 1771 gave national fame to the Falls of Clyde. Alexander Nasmyth painted the Falls in 1791 and Joseph WM Turner recorded Corra Linn for the first time in 1801 in a true romantic style, but in the late 1830s as an unfinished essay in light and colour rather than form. In all, some 35 images by Turner are known, mainly from his sketchbooks of tours in Scotland of 1809 and 1834.

Early water powered mills.

All three of the main Falls of Clyde were seen as opportunities for the development of mills by the adjacent estates, especially as the great expansion of rural industry arose in the eighteenth century. Bonnington, Corehouse and Stonebyres estates all built grain mills on precarious ledges at the respective falls.

A notice appeared in the Edinburgh Gazette on 23 November 1923 under the Private Legislation Procedure (Scotland) Act 1899 intimating the proposed making of an order for the Lanarkshire Hydro Electric Power scheme that December. With the guidance of the Committee, the designs were drawn up by Sir Edward McColl, who was later to become world famous as a hydro scheme designer.

Stonebyres was built to a similar design. The rhythm of the round-headed windows and dividing pilasters are reminiscent of the work by Sir Robert Lorimer in the early 1920s and very likely indicate his hand in the design details.

Waterpower and the Siting of New Lanark.

Graham examined the factors which influenced the development of New Lanark in this unique setting. "There is no place I have ever seen which affords better situations or more ample streams for cotton machinery." It would be easy to conclude from these remarks attributed to Richard Arkwright on his visit with David Dale to the future site of New Lanark in 1783 that what was to become the site of the largest cotton spinning complex in the world by the time Robert Owen took over the mill village in 1800, was only possible from the 70 metre drop of the falls above. Other factors related to the existence of the Falls, besides water power, should not be underestimated in relation to the decision to develop the mills at New Lanark. This was a major inward investment project for its time for which the availability of land, labour, local services and political support were essential and which the Royal Burgh of Lanark and the adjacent landowners, encouraged by the City of Glasgow, could provide. The improved turnpike to Glasgow overcame much of the disadvantage of transporting raw and processed cotton back and forth to the port.

Conclusion

Graham summed up by drawing some conclusions about how we should value the geological interest in such a setting. The same principles apply to the full range of remarkable story lines which inextricably intertwine around the Falls of Clyde. Not only can they be appreciated best by taking an integrated and coherent view of the whole but even individually, the subjects of interest here are of national and international importance, and these are not confined to the Outstanding Universal Value which is defined by UNESCO for the WHS of New Lanark itself.