

## **4. A Loch in Sheep's Grazing? Early Drainage of Castle Semple Loch**

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If the Renfrewshire landscape had a turning point, it lay somewhere within the 18<sup>th</sup> century. This was when those living on the land moved from a subsistence existence to more active management of their surroundings. The physical sign of this was enclosure of fields, although other less obvious changes were important, particularly organisation and transfer to payment in cash (rather than in 'kind'). In the improving mood, many houses and prominent buildings were rebuilt, demolished or lost. Castles have always generated the greatest interest, but the loss of the dwellings of the vast majority of the population was on a much greater scale, and even the castles which have survived have been stripped of their surrounding lesser buildings. Precisely when the main changes to the landscape actually occurred varied from place to place, but enclosure in Scotland is generally acknowledged to have been concentrated in the third quarter of the eighteenth century. New evidence is showing that in various parts of Renfrewshire it occurred earlier, particularly close to the seats of the main landowners.

To date, mapped evidence for improvements in the first half of the eighteenth century has been scant, mainly relying on occasional estate plans and the relatively small-scale military surveys of the 1750's. It is rare for new source material to appear on a larger scale, but this has been the case for Renfrewshire. John Moore's article in the last Forum Journal introduced the surveys of John Watt, uncle of Greenock inventor James Watt. Since then, the surveys have been located on the ground and their true extent, quality and accuracy revealed. Here we look at Watt's work on one estate from the late 1720's.

### **Castle Semple**

John Watt was commissioned by William McDowall to carry out a variety of survey work at Castle Semple. This was directly after the purchase of the estate from the Semples in 1727, and eight years before the demolition of the old castle of Semple (1). The largest and most visible improvement to the estate landscape in the eighteenth century was the draining of Castle Semple Loch. The land in the bed of the very shallow loch had accumulated nutrients for thousands of years, and was extremely fertile.

Draining the loch depended upon deepening the Black Cart water downstream of its exit from the narrows of Castle Semple loch, and the river is the main focus of this article. Previous studies have pushed back the date of the initial drainage of the loch to the 1730's (5), but Watt's surveys and papers now demonstrate that they commenced even earlier. In the decades before McDowall purchased the estate, substantial works had already been carried out. The loch was already drained by 1730, with a wide canal constructed down its centre. The southern section of the channel, termed the 'Garnock Loch Canal' led in a straight line from the far end of Barr Loch to opposite the Peel Tower (2). The channel then took a dog-leg to the south, and headed directly for the start of the Black Cart, at the northern outlet of Castle Semple Loch.

This puts the foresight to drain the loch with the traditional owners, not the later incoming merchant class. Subsequent survey and drainage works did not extend the length of Black Cart which was changed, but simply deepened and straightened the sections already altered. By the time John Watt was hired, the Black Cart had already been deepened three kilometres downstream from its exit from the loch, to beyond Howwood (3). This had been carried out by the final Semple heir, Lord Glassford, brother in law of Lord Semple, who acquired the estate in 1691 (4).

If the loch could be drained completely by the 1720's (5), why did expensive drainage schemes persist for another century? By deepening the Black Cart to a level below the very lowest point of the bed of the loch, all the water in the loch would *eventually* drain away. However water was constantly flowing into the loch from the various burns around the perimeter, particularly the Calder Water at Lochwinnoch. In effect, it was not simply a case of deepening the Black Cart, but a balancing act between the inflow and outflow from the loch. The full canal system had to be steep and wide enough to remove the water as quickly as it flowed into the loch.

This was the crux of the problem which caused the continuing battle with drainage schemes. The whole area, from Barr Loch through Castle Semple Loch, and down the Black Cart was very flat. If heavy rains caused the various burns, including the Calder Water, to flood the loch when the crops in the loch bed were ready for harvest, the loch would flood. It would then take several days to empty, and a year's farming labour would be lost (6). Even after the improvement scheme of 1773-74 it was admitted that the canal was still too narrow to cope with frequent floods (7). Maintenance was another issue. As the canal was so flat, it quickly silted up from material washed down by the burns, plus the growth of vegetation. Enthusiasm for drainage waxed and waned, and it is likely that a large part of the work in subsequent schemes involved returning to the state achieved by earlier improvements.

Watt wrestled with the problem of how much to deepen the Black Cart to drain the loch properly, and his survey notes and levels survive. The farthest down the Cart which had been deepened by 1730 was described as 400 ells lower than Beltrees Yard (Thirdpart) 'which is the farthest down Glassford wrought' (8). He concluded that the work would not need to extend any further downriver, but simply involved deepening the existing river. He noted: 'consequently a canal brought up level from the east corner of Belltrees yard is sufficient to drain the lowest point of the Castle Semple Loch.... the present canal ought to be wrought 2 feet 8 inches lower under Elison Bridge'. Watt also appreciated that the success of the drainage scheme was much more subtle than simply lowering the bed of the Black Cart. He carried out full-scale experiments, damming and filling the whole of the loch and measuring the time taken for it to drain, when the wind blew from different directions (9).

Watt's work demonstrates that the loch could be completely drained in 1730, however surveys and maps must always be read with caution. Two decades later Roy's survey shows only Barr loch drained, with Castle Semple almost full. In the 1780's an estate plan also shows the central part of Castle Semple loch still flooded. Such maps cannot be taken as evidence of the success of drainage schemes, as they only provide a snapshot of the loch at a particular time of year. There is no doubt that the loch was often completely dry in summer, but could then be partly or wholly flooded throughout a wet winter. It is thus impossible to compare the schemes at different dates, as they depended on the season and amount of rainfall before the survey was carried out.

The early drainage schemes involved not only deepening the Black Cart, but also altering its course. The present route of the Black Cart is canalised and straightened, and is not the original route of the river. There are several pieces of evidence for this, firstly suggestions in the landscape of alternative routes, and the river may have originally left the loch in a dip in the ridge at NS 382599. Secondly, it would have been much easier to dig a canal on adjacent virgin land, than attempt to deepen a flowing river. It is thus likely that the canal was constructed in adjacent land, then the old course filled in. Thirdly, there is firm evidence that the river originally followed a meandering route through the shallow valley. Both Watt and Roy's surveys still show a winding section from Elliston to the present Garthland bridge. Although deepened by 1730, this section was not straightened and canalised until the 1760-1780 period (see Figures 5 & 6).

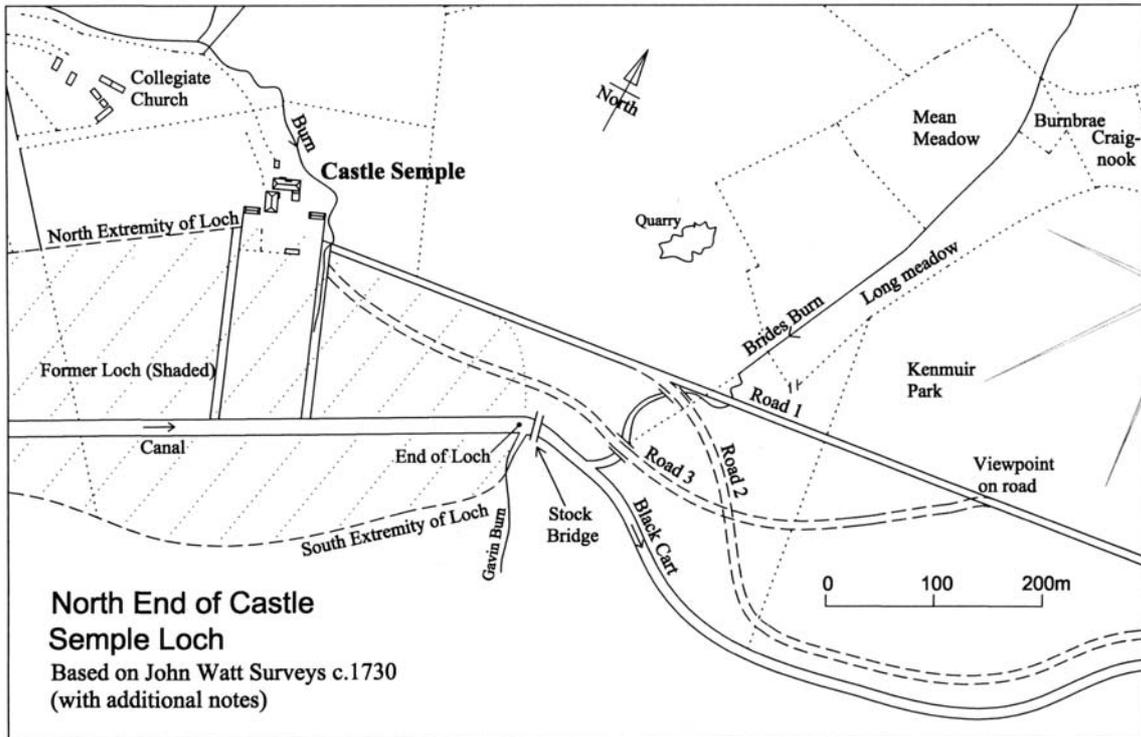


Figure 5

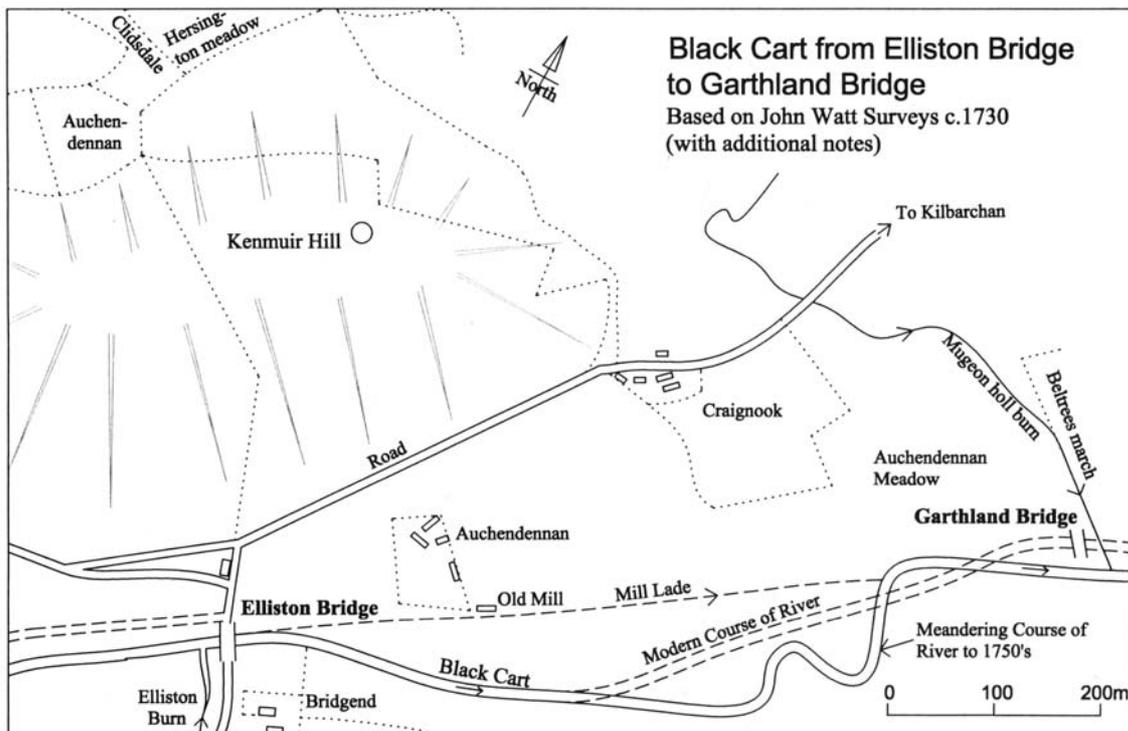


Figure 6

It is difficult to gauge not only the original line of the Black Cart, but also the amount of deepening actually carried out. Again there are various pointers, most obviously the depth of the canalised river below the adjacent land and the ridges of excavated spoil material which are still very evident along the banks. Perhaps the best evidence is found at the site of old Auchindennan Mill, which now lies stranded well above the river (Figure 6). The early maps show the mill lade starting at Elliston bridge, and a mill dam had existed here from the thirteenth century (10). This dam would have been the first thing to be removed when attempting to drain the loch.

Changes to this stretch of river were not confined to deepening, but affected a variety of bridges. There were at least five bridges on this short section of the Black Cart and its tributaries in the eighteenth century. The first was Stock Bridge, crossing the narrows where the Black Cart exited from the loch (Figure 5). This was demolished by McDowall shortly after he purchased the estate, probably because it lay in view of his new mansion (11). On either side of the Cart in this area, the Brides Burn and Risk Burn enter the Cart. The valley of the Brides Burn was one of the most fertile in the area and was already enclosed in Watt's time, with irregular fields named and apportioned to various tenants in the area. Watt's surveys show the Brides Burn only partly straightened, compared with its modern course.

The Brides Burn was crossed at a variety of points by at least three different alignments of the east approach road to the house. In the 1730's (Road 1 on Figure 5) the road ran straight to the house and the terrace is still evident, crossing the landscape. By the 1780's (Road 2) it followed the banks of the Cart from Elliston Bridge, then swung west to meet the original road after crossing the Brides Burn on a new bridge. The third route (Road 3) initially took the old road, then swung down to the Cart, crossing it at a third point at Fancy Bridge, which survives in ruins. The routes were not chosen at random, but developed along with ongoing estate improvements. They demonstrate how landscape improvement was not a one-off process but changed at the whim of the landowner and the latest fashion. It is still possible to appreciate the reason for taking the approach road up and over the crest of the ridge, before dropping down to the Brides Burn. The view down the loch, which comes into the visitor's view when passing over the ridge, is one of the most impressive in Renfrewshire.

On the Cart itself, by far the most important bridge in the area was Elliston Bridge (Figure 6). This was on the main road from Kilbarchan to Ayrshire. After crossing the bridge to the north side of the Cart, the road followed the surviving ditch up the side of Kenmuir hill to the lost fermtoun of Craigneuk, before dropping down again and crossing the Mudgeonhole Burn and heading for Kilbarchan. Elliston bridge was situated directly downstream of the present adjustable weir, where the Elliston burn meets the Cart, and ruins of the south abutment still survive. In Watt's surveys of 1730 the bridge had a single arch rising to 22 feet 6 inches above the river, with parapets 4 feet high. It was rebuilt in 1762 (12), but the bridge, its approach roads, and its flanking cottages were demolished and deliberately erased during further estate improvements in the 1780's. The bridge was replaced by the present 'New' or Garthland Bridge downstream (13). The Elliston name persists, but has been transposed to the bridge where the A737 crosses the Elliston Burn.

### **Castle Semple House**

The old 'Castle' of Semple was demolished in 1735 and its location has always been a puzzle. Fragments of evidence over the years have supported the castle lying close to, or on the site of, McDowall's ruined mansion and its restored pavilions. The solution lies partly in Watt's surveys and changes to the loch. Watt shows the castle shortly before demolition (Figure 5) and confirms that it stood directly on the site of McDowall's mansion, although with a larger footprint. Crawford had described the buildings twenty years earlier as forming

'a large court'. This agrees with Watt's depiction, with two large blocks at right angles and a smaller projection, forming a U-shaped courtyard (14).

The position of the castle is initially puzzling, as it lies in low-lying ground, with no apparent defensive advantage. This would appear to contradict its early date and its high status in Renfrewshire. If it had a defensive function, why was it on such a seemingly vulnerable site? However the old castle may not have been as poorly located as first appears. Today the site of the castle and the ruined basement storey of the later mansion are high and dry, 100 metres north of the edge of the loch. However, again this is related to the alterations to the loch discussed above. The meadow in front of Castle Semple is on reclaimed land, and the gradual draining and alteration of the loch has completely changed the landscape in this area. The former extent of the loch in the 1730's is shown shaded on the plan, although it is likely to have originally been even more extensive.

Watt's surveys show the castle lying on the northern edge of the loch (Figure 5). This is apparently confirmed by the illustration on Pont which shows the castle actually extending into the loch. Crawford also described the Castle, only two decades before its demolition, as being 'upon the brink of the loch' (15). It is thus clear that the situation of the castle, lying in the edge of the loch, was partly defensive, and raises the possibility of a former ditch or moat on the landward side. This may have combined with the burn on the north east side which is shown by Watt and gradually became a formal landscape feature, partly in tunnel.

This study is part of a larger ongoing study of the loch and its drainage schemes. Watt's surveys provide a unique insight into the pre-improvement landscape, and raise all kinds of questions. For example, on Figure 5 a scatter of buildings will be seen directly south of the Collegiate church. These buildings had disappeared by the 1750's. Could they be early ecclesiastical buildings, or simply a small fermtoun?

### Sources

1. Watt's account books survive, recording payments to him by Colonel McDowall for surveys from 1728-1735 (Boulton & Watt collection, Birmingham City Archives, Muirhead Papers: C/7/18).
2. In Watt's time, the entire loch was termed Castle Semple Loch - the name Barr Loch was not actually used until the loch was split by the present causeway and bridges from the mid eighteenth century. For background to this and to the loch drainage in particular see: Clark, S., 'Messing About With Water: Loch Management at Lochwinnoch', *Scottish Local History*, Vol.28 (1993).
3. ie down to Thirdpart, which was owned by Semple of Beltrees until purchased by McDowall in the late 1750's, until when it was called Belltrees (Semple, 1782 p.121).
4. Glassford: Semple, W. History of the Shire of Renfrew (1782) p.149; Poll Tax (Lochwinnoch) in Semple, D., *Transcripts of 1695 Poll Tax Roll for Renfrewshire* (Glasgow 1864), republished by Malden, J. (Paisley 2002), p.220.
5. Adam writing in 1814 stated that 'two attempts had formerly been made to drain the whole of Lochwinnoch Loch, by deepening the outlet. The first of these was made above a century ago and the last about sixty years since': Adam, J. 'Account of the drainage of Barr Loch and adjoining lands', *Transaction of the Highland and Agricultural Society* (1829).
6. Calculations indicate that the Calder Water in spate could fill the loch from empty to a depth of two metres in less than 12 hours.
7. 'McDowall in 1773-4 made a large canal, 9 feet deep, 36 feet broad, 63 feet wide at the top all the way from the hall of Thirdpart to opposite Castle Semple house, being a course of nearly 2 miles long, which cost nearly £3,000 by which above 400 acres of loch is got dry in summer, of a very deep rich soil, where a hay crop is taken off annually. However the foresaid canal, after all, is too narrow' (Semple, 1782 p.155).
8. A Scots ell was just over a yard.
9. eg Watt's measurements of the 'Surface of the water at the Cross Dyke when the loch has been 24 hours dammed and a strong easterly wind blowing'.
10. Auchindennan Mill (various spellings): Anderson, E.G.R. 'The Parish of Lochwinnoch' (1987), p.21 (but the mill is nothing to do with St Brides mill on the nearby St. Brides Burn). In the Poll Tax of 1695 the miller was William King (Malden, above, p.196). It is ironic that McDowall rebuilt a dam on the site of the old mill dam in the 1790's to permanently re-flood the loch.
11. The removal of this bridge was part of the reason behind the Heritors' dispute with McDowall in 1732 regarding bridging points of the loch at Stock Bridge and at the modern causeway which splits Barr and Castle Semple Lochs (Anderson p.15).
12. Elliston Bridge, on the main road from Kilbarchan to Kilmarnock, was rebuilt bearing date 1762 (Semple, 1782 p.160).
13. The stylised date on Garthland bridge can be read as either 1767 or 1787. However the later date is more likely, as Semple still refers to Ellison Bridge in 1782 (with no mention of Garthland Bridge) and Ainslie denotes Garthland Bridge as the 'New' Bridge in 1796.
14. As with all maps, the plan must be read with caution, as it may partly or wholly indicate what is proposed, not what is existing. For example pavilions were just coming into fashion at the time and the two shown in front of the buildings are likely to be proposals, not existing. However Watt's accuracy can also be gauged from his surveys of other castles, for example he shows Barr castle with a similar hipped roof and outbuildings which, though now demolished, are clearly evident from marks in the surviving tower walls.
15. 'Part of which seems to be a very ancient building': Crawford (1710), reprinted in Semple (1782), p.142.