

Castle Semple Loch History & Hydrology



Castle Semple Loch is situated to the southeast of the Renfrewshire hills in the Lochwinnoch Gap. The loch is 25 kilometres south west of Glasgow and 15 kilometres east of Largs. The village of Lochwinnoch is sited at the northwest end of the loch.

Geology and Geomorphology

The loch is situated in a glacial trough between two sections of the Clyde Plateau lava. The underlying rock is basaltic lava laid down in the Carboniferous Period 320 -270 million years ago. The glacial trough is overlain with sediments belonging to the Carboniferous Limestone Coal Series with more recent alluvial deposits on top. An area of boulder clay intrudes along the eastern edge of the Barr Loch.

History of Castle Semple Loch

It is likely that Castle Semple Loch was at one time joined to the lochs of Barr and Kilbirnie and in more recent times, the New Statistical Account for 1836 refers to them as being united on occasions of great rainfall.

It was only in 1735 that a wooden bridge was constructed across the narrow channel between Castle Semple Loch and Barr Loch. At this time Colonel William MacDowall deepened the outlet of Castle Semple Loch for two miles in length. This made it possible to obtain a hay crop from around the area of the Barr Loch.

The Castle Semple Estate Plan, around 1767, shows that a drainage channel cut through the Barr Loch created meadows at Barr, Aird and Peel. There was further work, by the second William MacDowall in 1773, on the drainage channel in the middle of the Barr Loch to improve water flow to Castle Semple Loch. Additionally, a drain with an enclosing embankment gathered water from the north side of the Barr Meadows into the main channel. Previous work had canalised part of Castle Semple Loch and this loch was reduced to about one fifth of its original area.

The third William MacDowall increased the water level in order that constant head of water was maintained for the cotton mills. Crops were not guaranteed in the Barr Meadows and in 1814 work was begun by James Adam to improve the drainage of the area. Adams improved the canal that drained the south side of Kilbirnie Loch and on the north side removed sandy soil from existing works replacing it with puddle clay and rebuilding the embankment. To overcome the higher water level that had been established for the mills it was necessary to construct a surplus water drain on the south side of Castle Semple Loch that discharged below the weir at

Elliston. The drained lands covered around two hundred and thirty acres and were used for crops of oats and hay.

As maintenance of the drainage system decreased in the 20th century it was mainly used for hay crops and by the 1940s it had become rough pasture. During the World War Two there was a period of no maintenance and the Barr Loch re-flooded in 1946 and has remained under water since this time.

A Local Authority weir was constructed in 1970\71 as to allow a compensation flow of five million gallons of water per day for industrial use into the Black Cart Water. The water level in Castle Semple Loch is very changeable due to the lack of automated control at the weir.

Present Hydrology in Castle Semple Loch

The main water flowing into Castle Semple Loch is the River Calder with the outlet of the Black Cart Water. An underground pipe above Muirshiel takes water from the River Calder across to Kaim Dam. Kilbirnie Loch is connected to Castle Semple Loch through the Dubbs Water that drains into the River Calder. The Maich Water drains into Kilbirnie Loch. Yardfoot Burn in the south flows into Dubbs Water and the Roebank Burn drains Barcraigs Reservoir also to the Dubbs Water. There is no flow through a disused sluice at the southwest end of Kilbirnie Loch that was constructed in 1979 to regulate flow into the Barr Loch. A former sluice at the north-east end of Barr Loch was used to control the outflow, but during periods of spate this now allows a backflow into the loch from the River Calder.

The Aird Meadows at the RSPB Nature Reserve is separated from Castle Semple Loch by the 1814-15 bund, but this is breached in several places. Although, sandbags were placed on the bund between Castle Semple Loch and Aird Meadows in 1996 these temporary repairs did not prevent the flow of water between the two lochs. The culvert on the A760 between Aird Meadows and Barr Loch was blocked by the RSPB to help regulate flow into Aird Meadow. There are three other waters that flow into Castle Semple Loch from the north; the Lade, the Beech Burn and the Black Ditch Burn. Just to the north of St. Brydes the Risk Burn and the Wattiston Burn flow into the outlet to the Black Cart Water.

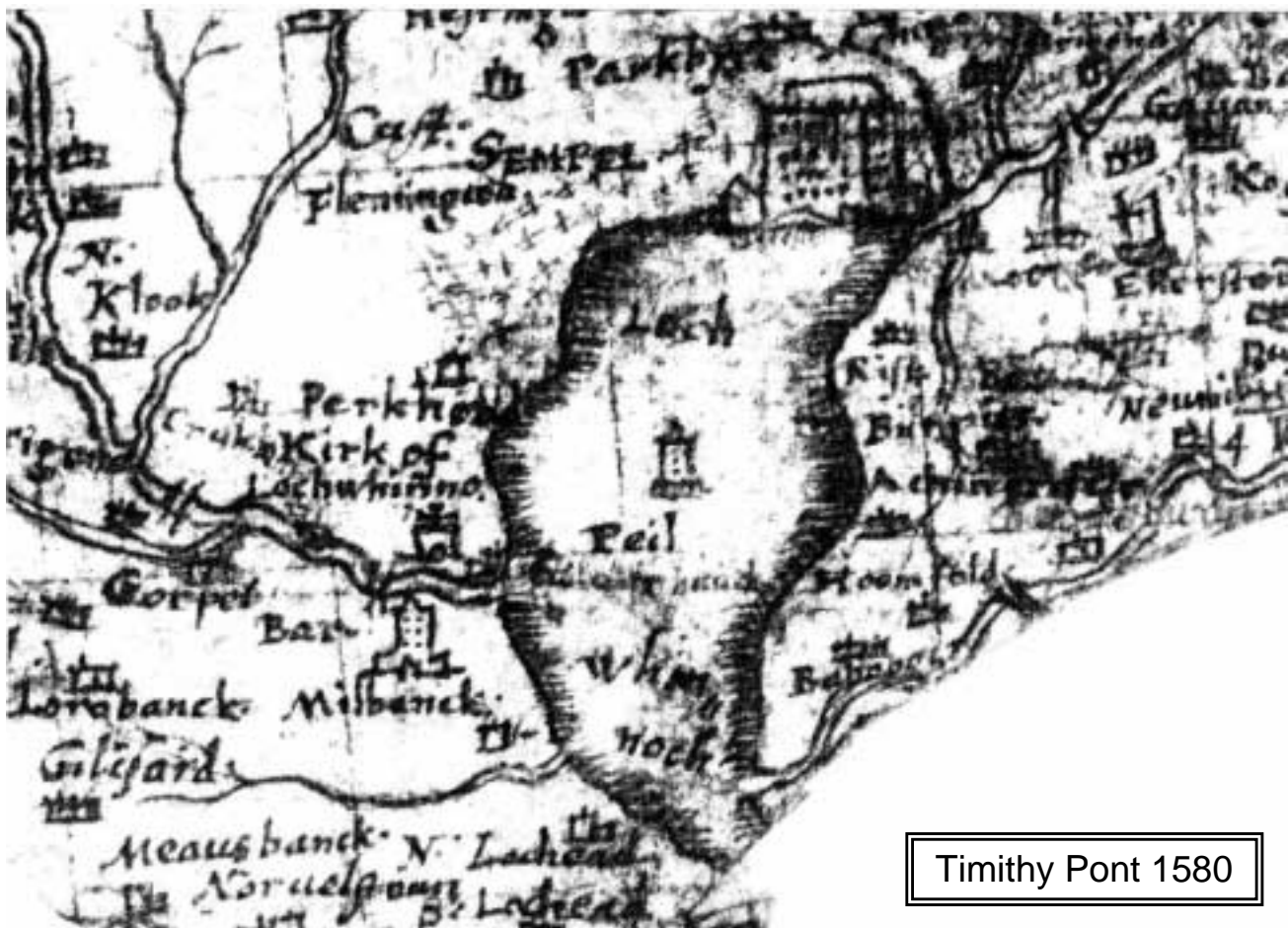
The catchment area includes in the North; Calder Water, Queenside Muir, Queenside Loch, Raith Burn, Cample Burn and Garpel Burn. The north of the catchment area runs over the hilltops of Hyndal Hill (379m), South Burnt Hill (451m), Burnt Hill (486m), Hill of Stake (522m), East Girt Hill, Misty Law (507m), Capet Law, Lady Moor (386), Cairn Auchembourg (359m), Lamb Hill, Rashlieyett, Glengart, Barrhill and the Kilbirnie Loch.

To the east the catchment area is bounded to the hilltops of Craig of Todholes (297m), Little Craig Minnan, Windy Hill (316m), The Kaim Dam Loch and the Marshall Moor, Little Burntshils village, Crossfalt and the Temple Hill, and the Black Cart Water.

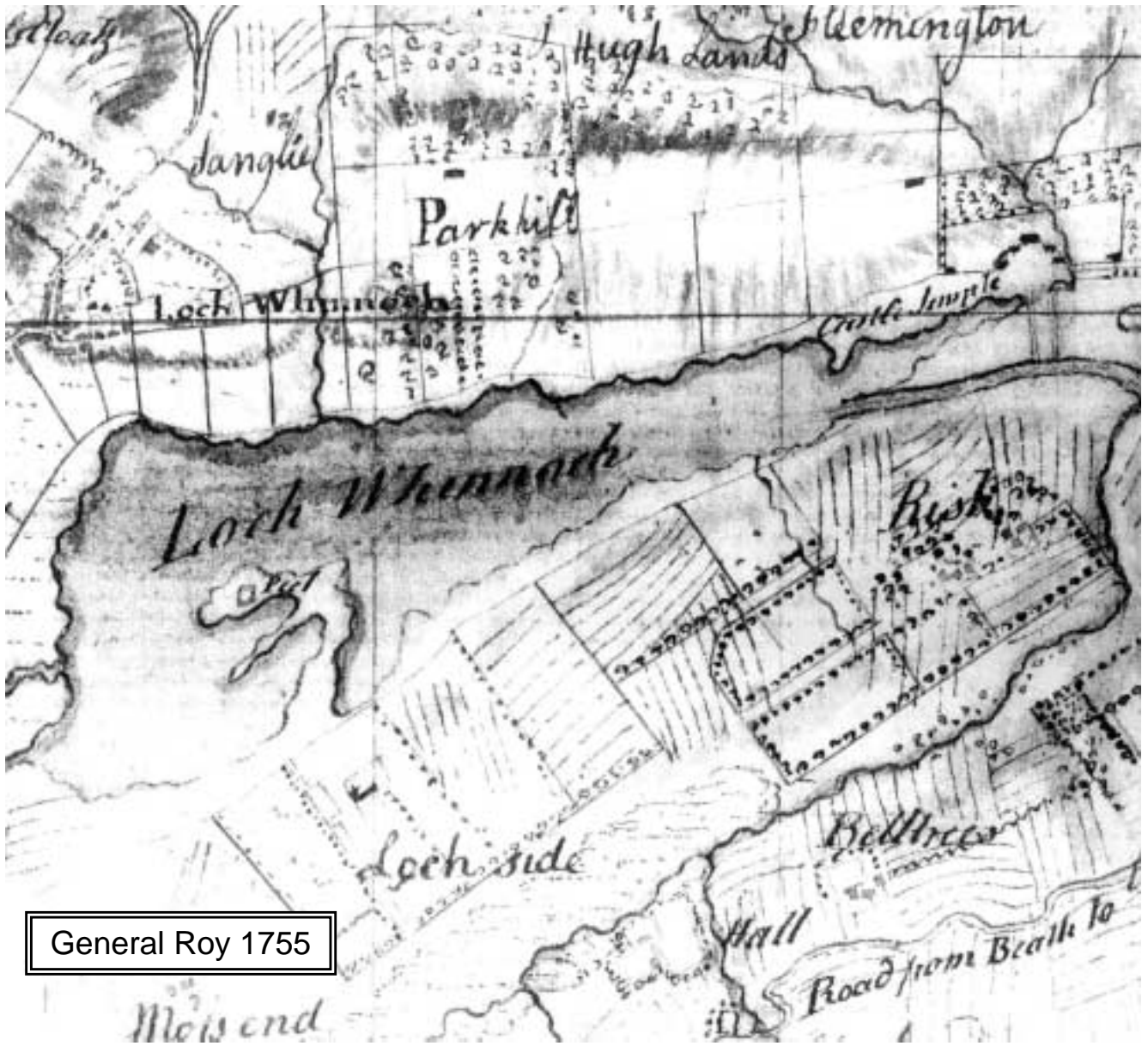
In the South the catchment is bounded to Glengarnock, Crawfield, Whitestones, Manrahead, Hill of Beith (124m), Fullwoodhead (184), Lochlands Hill, Reivoch, the Muirhead Burn, Rashiefield, Muirend, Lorabar, Earls Hill, West Gavin, Mid Gavin, Risk Bridge and the Black Cart Water.

Designations

Castle Semple Loch and Barr Loch were first notified as a Site of Special Scientific Interest in 1949. These two lochs and Kilbirnie Loch are within Clyde Muirshiel Regional Park that was designated in 1990 to encourage recreational use of the countryside.



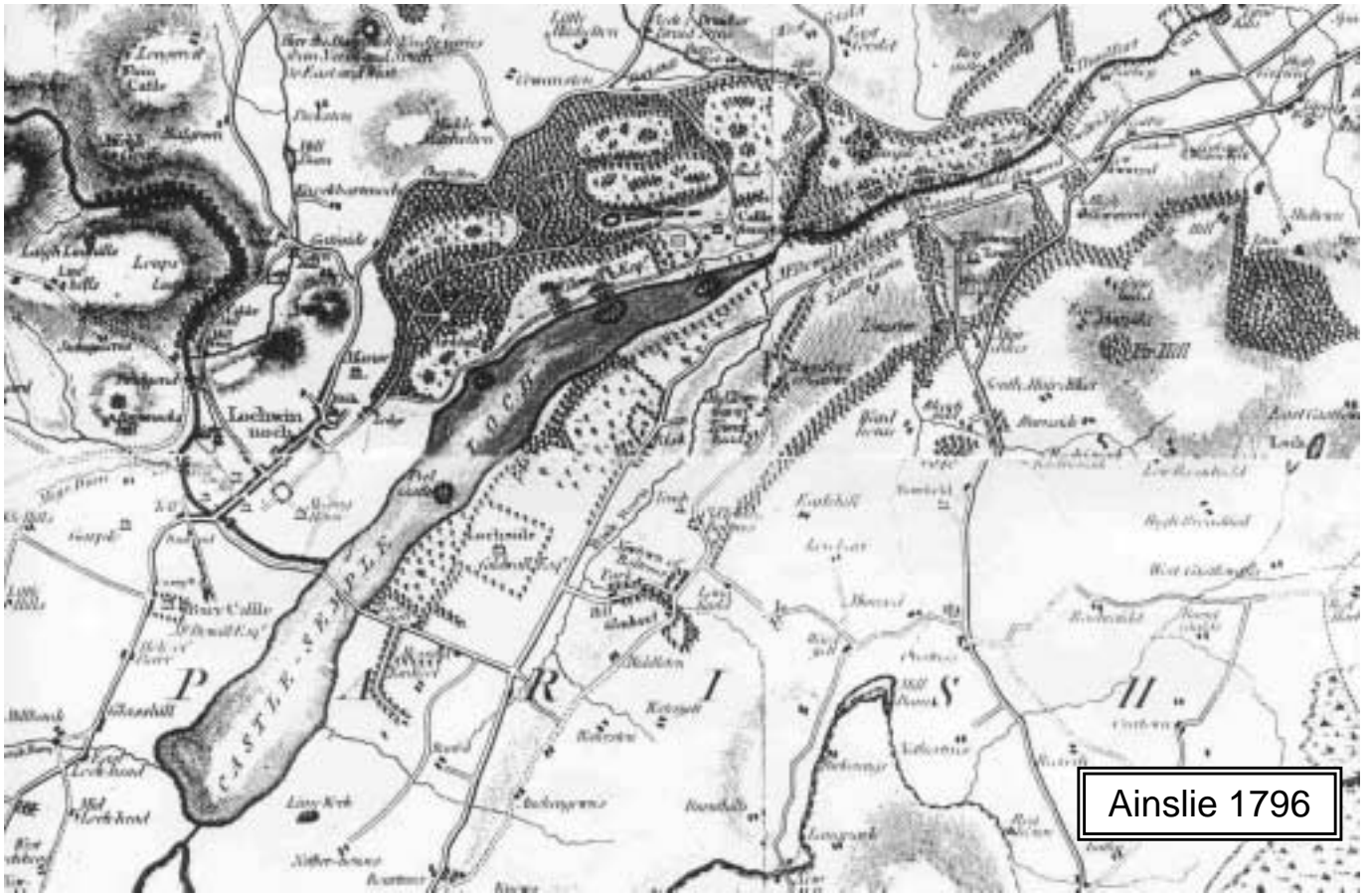
Timothy Pont 1580



General Roy 1755



Estate Plan pre 1767



Ainslie 1796



Aerial image 2003