

Bill Harvey Bill Harvey Associates Ltd and OBVIS Ltd

Ballochmyle Viaduct, the largest arch on the British Railway system

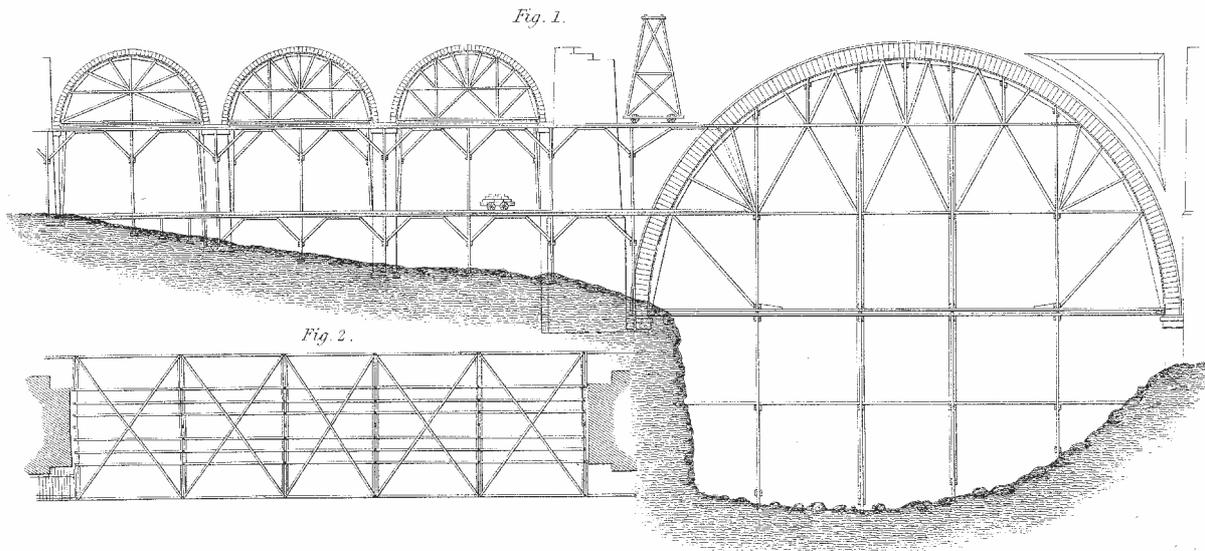
John Millar designed the Glasgow and South West Railway, which eventually was joined from Dumfries to Gretna Green to form an extension of the Settle Carlisle. Ballochmyle was a huge undertaking, but there are many big bridges on the line. See <http://bit.ly/Ballochmyle>.



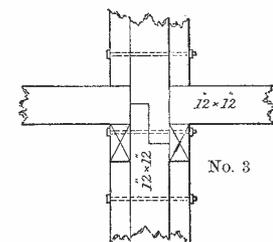
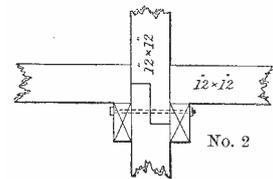
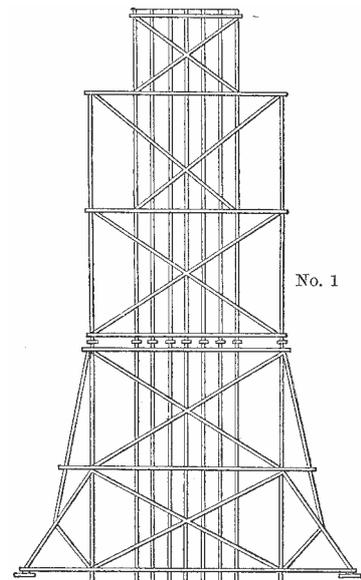
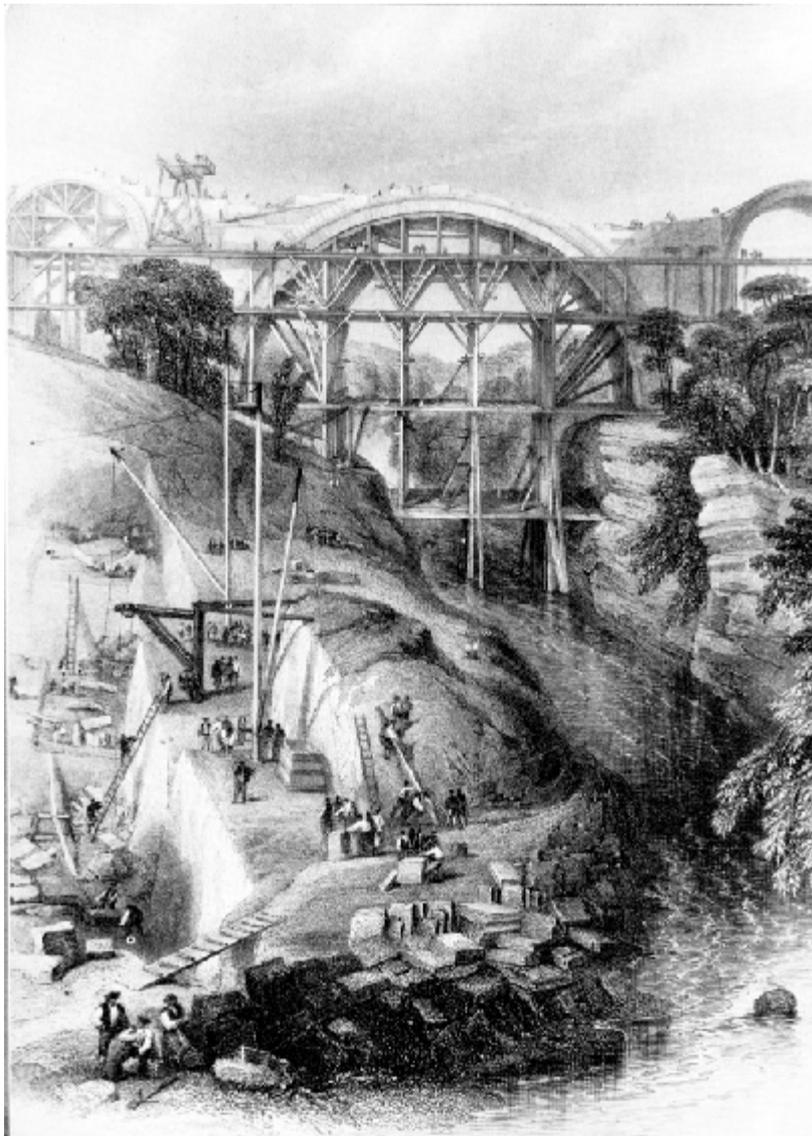
This photo was taken in the 1980s. There is rather more vegetation now The hollow in the foreground is the quarry from which the stone was taken.

Not surprisingly, for a bridge of this scale, the records of construction are thorough and easy to find. Browsing in a second hand bookshop in Glasgow many years ago I found a slightly dogeared copy of Vol 6 of "The Modern Carpenter and Joiner and Cabinet Maker" Published by Gresham in 1903. It includes drawings of a number of arch bridge centres which also include considerable detail of the bridges themselves. The drawing on page 2 comes from there.

There is a painting of the construction, and I assume that the etching below came from that. There is an implication here that the River Ayr was dammed locally to produce a pond for shipping the stone from quarry to site.



Scale to Figs. 1, 2.  
 10 5 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Feet  
 Figs. 1 & 2. Centring of Ballochmyle Viaduct, Glasgow and South Western Railway.  
 BY JOHN MILLER C.E.





It is easy to forget that construction work, being relatively slow moving, was an ideal subject for early photographers. This picture of Ballochnyle under construction probably shows an early Institution site visit. My copy is a little out of focus, but it is sufficient to show the scale of the drawings on the previous page. As with many large bridges, the temporary works are, in themselves, major works.



The scale of the stonework is seen from this closeup of the abutment. These Voussoirs are about 0.5m thick and some are nearly 2m square. Lifting them the 60m from the river with the hand winch on the Gantry crane must have been a serious undertaking.



This picture shows about half the arch. The water stains show the top of the solid masonry. The bridge is of hollow construction with internal spandrel walls under the rails capped with stone slabs. There are also cross walls providing support and these show in the staining on the elevation on page 1.

This magnificent bridge is well worth a detour. If you follow the link on page one to Google Maps you will see a large farm near the top of the picture next to the railway. There is a public footpath down the wooded valley to the main Ayr valley and from there along to the bridge. My first visit involved walking up the river bed from the old road.

#### News

Archie-M The latest version of can be downloaded from: <http://bit.ly/BillH5>

Seminars and courses. Courses are run as a profit making concern by Bill Harvey Associates and need take £3000 to cover the costs so say 10 people at £300 each. The standard charge for Seminars, run as part of the support for Archie-M is £100 which is intended to cover costs only. Dates:

- Birmingham Seminar 13th April
- York Seminar 10th May

Book at <http://bit.ly/BillH4>

If you would like us to run a course (a full day intensive training) or a seminar (intended as an update on arch studies and Archie plus discussion between users) near you, please let [Philip@obvis.com](mailto:Philip@obvis.com) know.

Continuing thoughts about arches and Archie at <http://billharvey.typepad.com>

Moiré Tell Tales: High sensitivity, long range reading. <http://bit.ly/BillH6>

Bill is also giving seminars in Vienna and Munich in late May and talking to the local ICE branch in Cheltenham on 22nd March