

Bill Harvey Bill Harvey Associates Ltd and OBVIS Ltd

Dean Bridge, Edinburgh (<http://g.co/maps/4x9tr>).

Thomas Telford was responsible for many great bridges and Dean bridge is one of the most celebrated (though least seen). The view for most is from the A90 Queensferry Road.



This certainly gives an impression of the valley, with the tree tops reaching parapet Level. It also shows quality of work, always a feature of Telford's bridges. There is nowhere for a craftsman to hide when he knows the boss can do a better job.

The bridge was built in 1833 and shows the progressive development of Telford's bridges compared with say Dunkeld of 1809 (another one to think about for the future).

Telford had to modify his 3 span design to 4 spans of 90ft because of foundation problems. The roadway is carried on arches with a rise of 30ft. The footway arch springs from pilasters and spans 96ft with a rise of only 10ft. nearly 10:1 span:rise ratio. quite uncommon in bridge work.

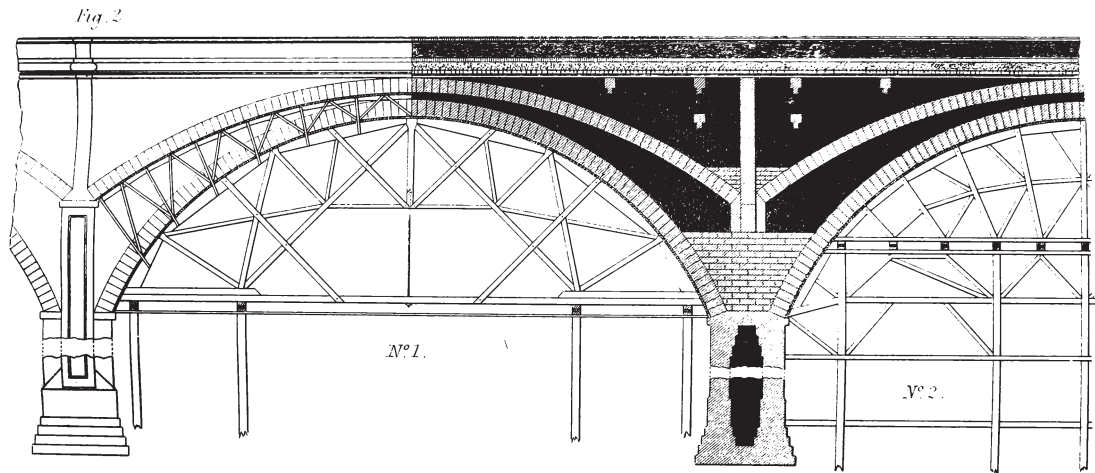


The valley of the Water of Leith, where it passes through Edinburgh's West End, is narrow and steep and so very difficult to build in. Getting a clear picture of the bridge is quite difficult but here we can see both the joys of the wooded valley and the magnificence of the bridge.

The well lit main spandrel and the shadow it casts on the inner spandrel shows well here. The lower spandrel continues upwards leaving a hollow behind the higher. There are further hollows within the width. The pier legs are also hollow.

The Historic Scotland record tells us that the contractor was John Gibb of Aberdeen. This bridge followed closely after the Bridge of Don in Aberdeen but the contractor there is not named.

Once again, we have drawings of the centring which also shows the construction of the bridge itself (below). Note the cross ties over the voids to provide stability for the tall slender walls.



Centring of Dean Bridge, Edinburgh.

It is interesting that the two centres are quite different. I suppose that No1 spans the river and had to have the wider gap whereas No2 stood on the valley side and could have more foundations and smaller timbers. Interesting also that the striking wedges in No2 are at the level of the top of the solid backing. The masons could get on with construction the lower level while the upper was built. Indeed it might have been possible to build the propping section through all the remaining spans and have a single set of centring for the upper level.

Notice that the piers are also hollow. Telford obviously did not believe in the value of rubble fill, seeing it merely as more work for no benefit.





A beautifully elegant structure, if a difficult one to photograph



Here is the road above with the trees from the valley peeping over the parapet. The step in the parapet at the right of the picture is not original but marks where the wall was raised to deter suicides in the 19th Century.

News

Archie-M The latest version of can be downloaded from: <http://www.obvis.com>
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.

Take up for seminars has been very low in the past year. I believe that councils are cutting back on training budgets. WE will float some more dates soon but only go ahead with a meeting if we confidently expect 10 people. Personal commitments suggest a Scottish visit in June. Probably to tie in with an inspection of the plastic bridge in Aberfeldy. We may try to raise an event in the north again in late April. If you wish to declare an interest in either of these please email philip@obvis.com.

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 know.

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