



# LECTURE

Craigellachie Village Hall  
1 November 2014 at 2pm

## Telford and Craigellachie Bridge 200, 'Something like a spider's web'

By Prof/Dr Roland Paxton  
MBE FICE FRSE

School of Energy, Geoscience, Infrastructure and Society  
Heriot-Watt University  
Institution of Civil Engineers' Panel for Historical  
Engineering Works



## Westerkirk Churchyard grave, Dumfriesshire

Telford's father died soon after his son's birth and he was brought up by his mother in poverty, she and he living off occasional farm work and charity

Later, as a stonemason, 'laughing Tam' carved this headstone to his 'unblameable shepherd' father's memory - he had an earlier brother Thomas who died an infant!



©Paxton

## **Langholm Bridge c.1775-78**

where Telford worked as a apprentice stonemason following a good general education at Westerkirk village school



## Edinburgh & Glasgow Union Canal terminus 1822

In 1780-81 Telford went to Edinburgh as a stonemason and worked on the 'New Town'. He studied drawing and architecture part-time [later to be consultant engineer on this canal project]



Telford's ambition then took him to London where he worked as a stonemason on Somerset House 1782-84



©Paxton

Bridgenorth Church 1792 -  
Telford now a self-taught architect

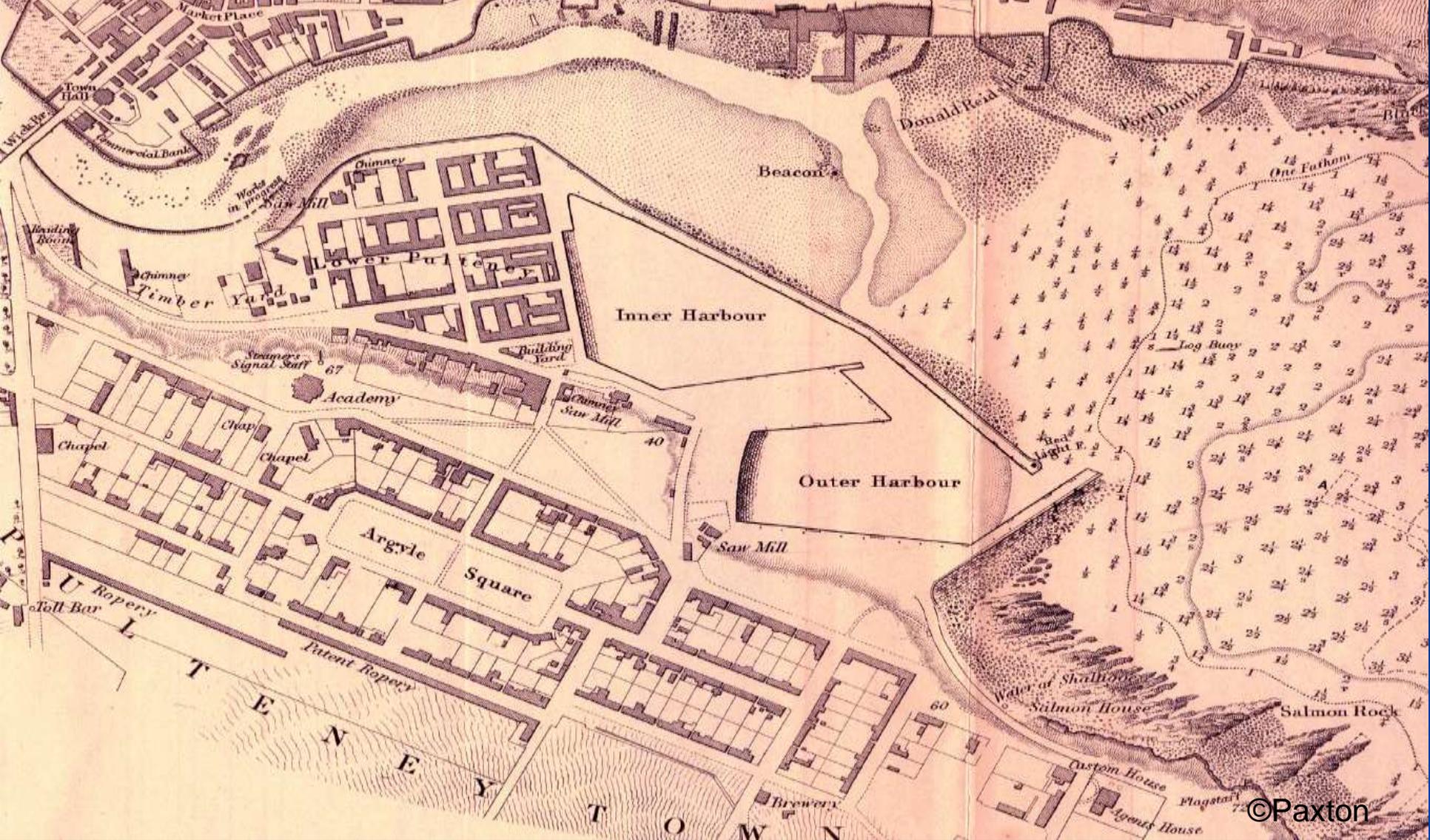
©Paxton



©Paxton

## **Ullapool, British Fisheries Society c.1790 –**

Telford acted as an hon surveyor/architect on layout and buildings at the request of his powerful Salop patron Sir Wm Pulteney MP



## Pulteney Town, Wick c1790-1831

Telford acted as surveyor/architect/engineer to British Fisheries Society



©Paxton

**Argyll Square, Pulteney Town, Wick** Telford - Architect



## Montford Bridge Salop 1790-92

The first bridge  
built to Telford's  
design as  
County Surveyor



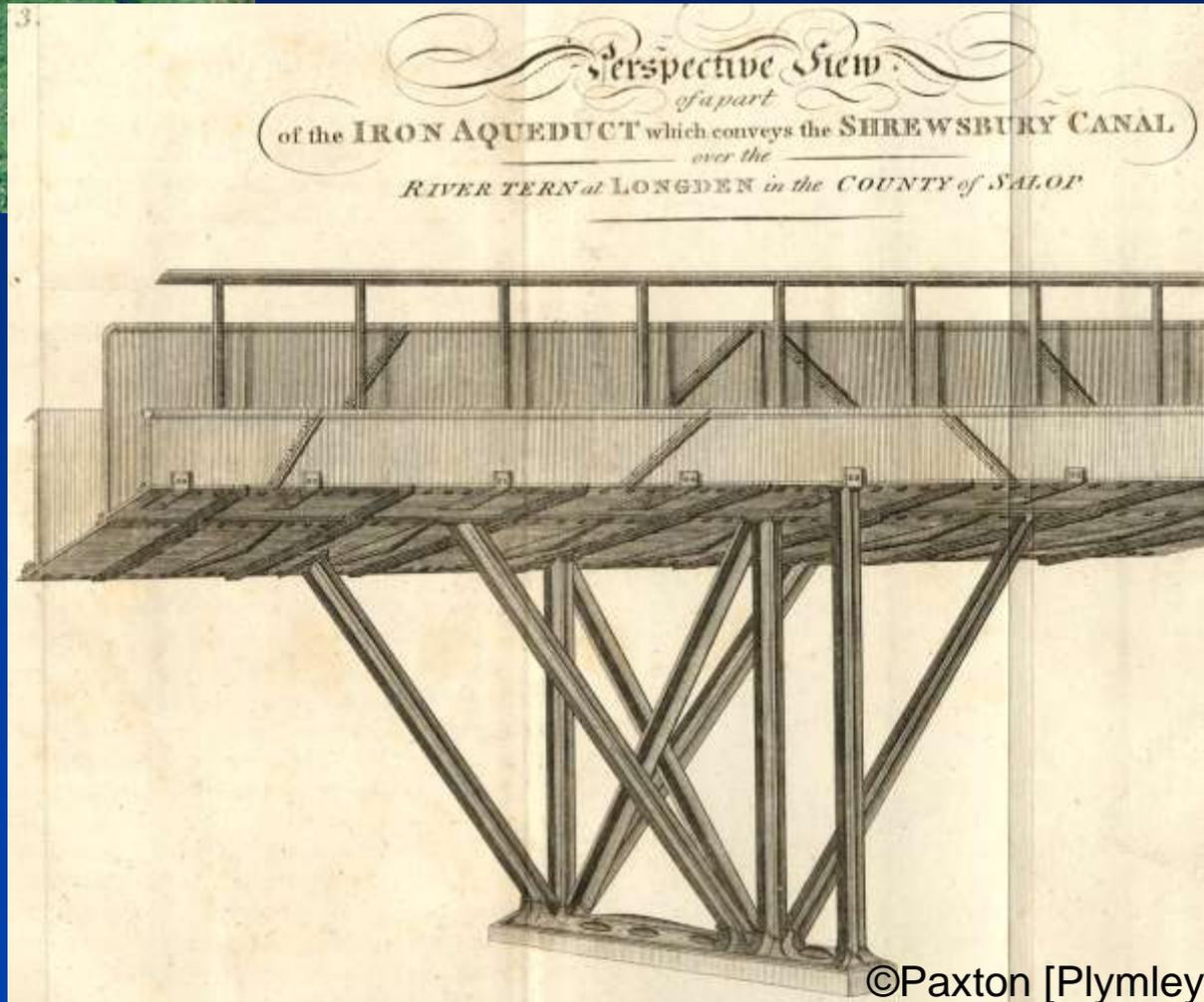
©Paxton

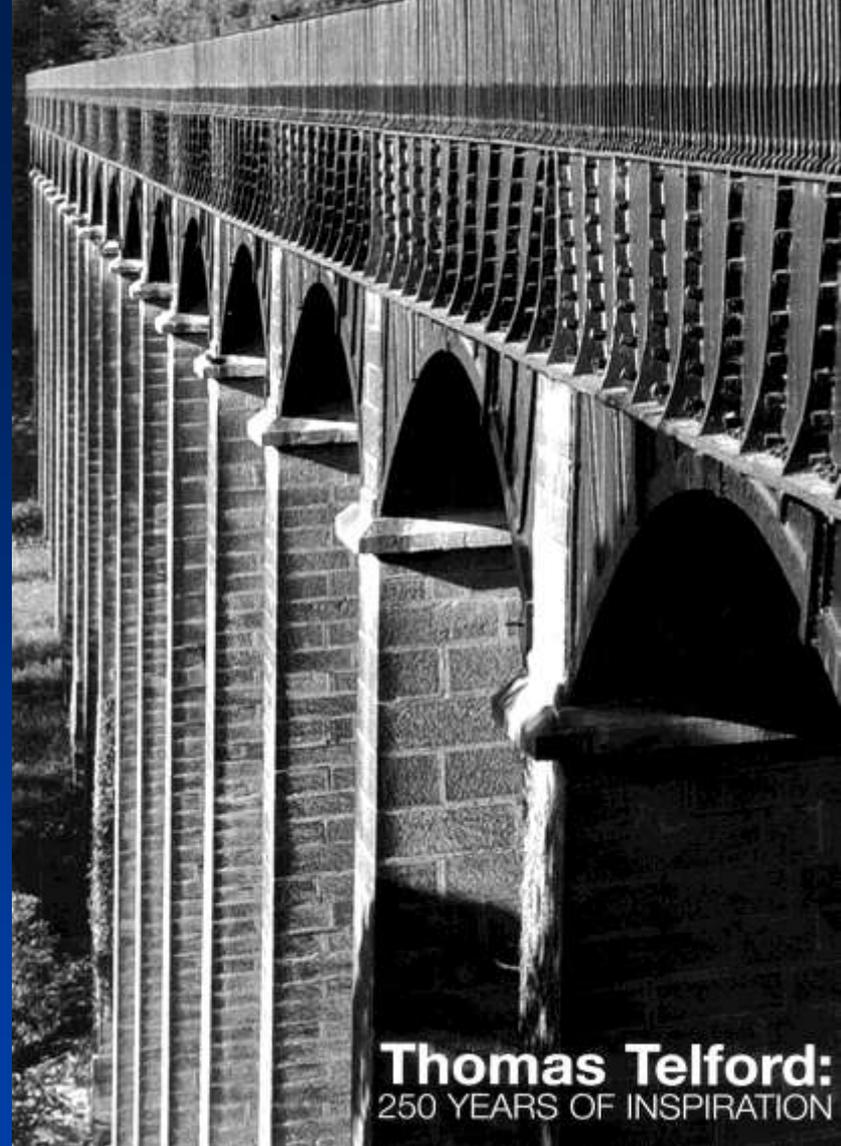
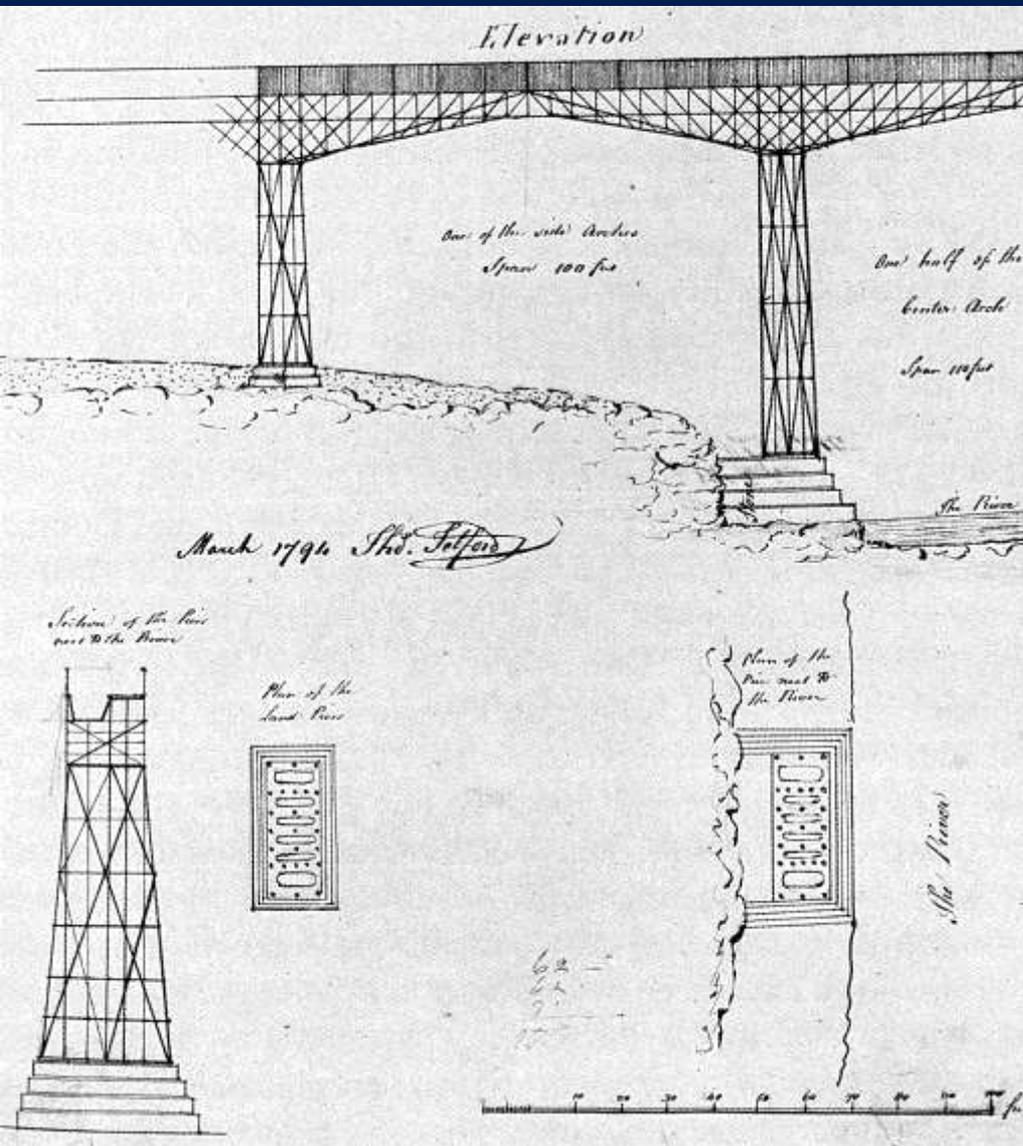
**Bewdley Bridge, Salop 1795-98, still in service**  
Note Telford's attractive neo-classical design



## Longdon-on-Tern Aqueduct on Shrewsbury Canal erected 1795-96

Telford's innovative  
iron aqueduct - in use  
for 170 years –the  
prototype for  
Pontcysyllte Aqueduct





## Pontcysyllte Aqueduct, Ellesmere Canal 1794 -1805

Embryo design and as built. Although Jessop was chief engineer for Canal, Telford and Hazledine designed and erected the aqueduct



**Pontcysyllte Aqueduct, Ellesmere Canal 1795 - 1805**  
***'The supreme structural achievement of the canal age'***  
[Paxton — *Proc ICE, Civ Engrg* 160, paper 15039 p3]



Impression of  
Telford's wax  
'aqueducts'  
seal 'TT'  
on a letter of  
1819

[

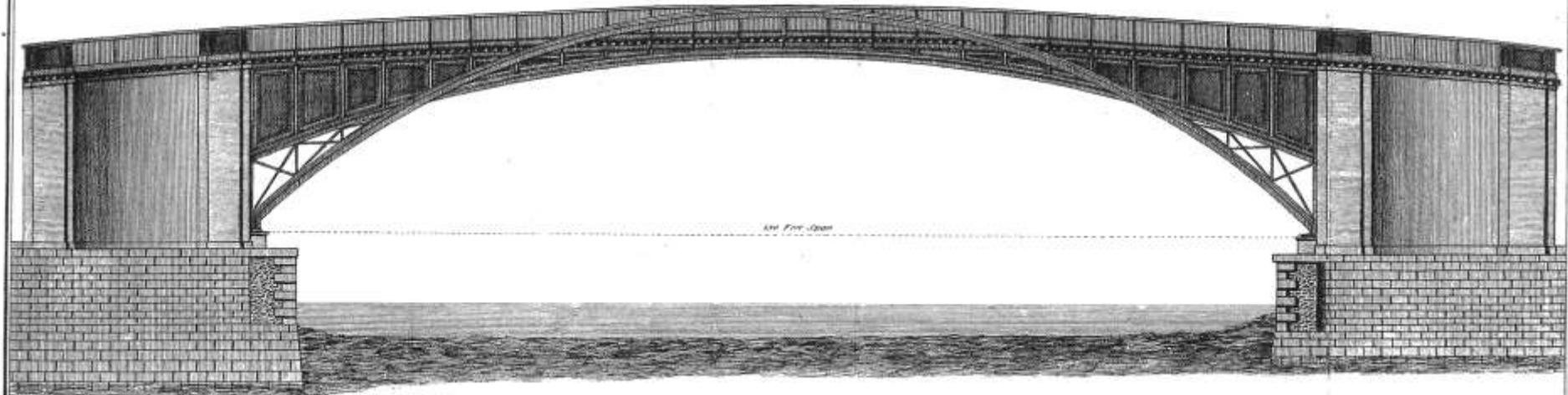
©Paxton



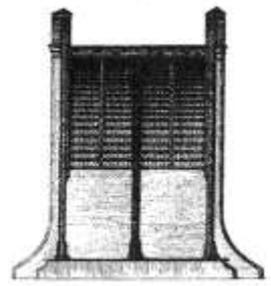
©Paxton

**The world-landmark Iron Bridge, Coalbrookdale**  
(1779 - 80) of **100½ft** span [Blackfriars Bridge, London (1769)  
had a 100ft span] influenced Telford's use of iron in bridge-building

Plan Elevation & Section  
 of the  
**IRON BRIDGE** built over the **RIVER SEVERN**  
*At BUILDWAS in the COUNTY of SALOP*  
 In the Years 1795 & 1796.



Scale of Feet



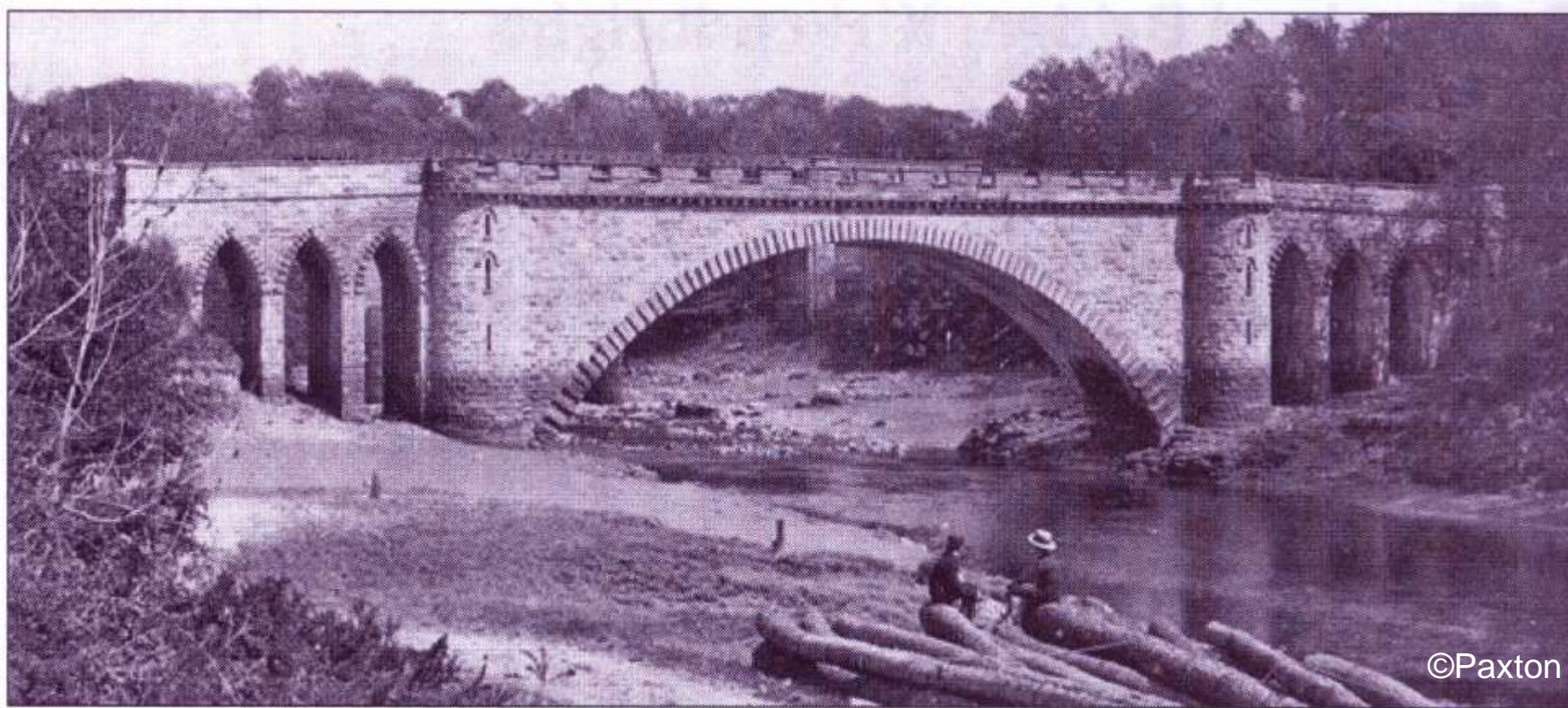
©Paxton

**Buildwas Bridge, Salop 1796** – Telford made its arch flatter than Iron Bridge achieving a 30% span increase for ½ the weight. The world's 2nd long-span iron bridge - finished before Sunderland

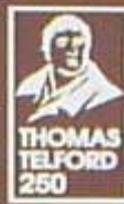


©Paxton

**London Bridge 1800-01** – Telford's ambitious proposal for a 600ft cast iron span, 6 times of that achievable in stone. Possibly practicable with firm abutments. Considered for 20 years, not built



**Tongland Bridge, Kirkcudbright 1804-08 112ft span**  
Note Telford's Gothic style embellishments which took the form of towers at Craigellechie a few years later



COMMEMORATION OF THE 250th ANNIVERSARY OF THE BIRTH OF  
**THOMAS TELFORD (1757-1834) FRSE FRS**  
**'ESKDALE TAM'**

**FIRST PRESIDENT OF THE INSTITUTION OF CIVIL ENGINEERS.**

**CANAL INNOVATOR, 'COLOSSUS OF ROADS', 'PONTIFEX MAXIMUS',  
CREATOR OF THE WORLD'S FIRST GREAT SUSPENSION BRIDGE AT MENAI  
STRAITS AND OUTSTANDING PROMOTER OF ENGINEERING KNOWLEDGE.**

**TELFORD'S SCOTTISH WORK INCLUDED MORE THAN 1,100 BRIDGES, 1,200  
MILES OF ROAD, THE CALEDONIAN CANAL, 32 HIGHLAND CHURCHES,  
MANY HARBOURS, AND WATER SUPPLY TO EDINBURGH AND GLASGOW.**

**THIS PLAQUE IS PRESENTED TO EDINBURGH'S TELFORD COLLEGE BY THE  
INSTITUTION OF CIVIL ENGINEERS, THE ROYAL SOCIETY OF EDINBURGH  
AND HERIOT-WATT UNIVERSITY.**

**UNVEILED ON 2 JULY 2007 BY**

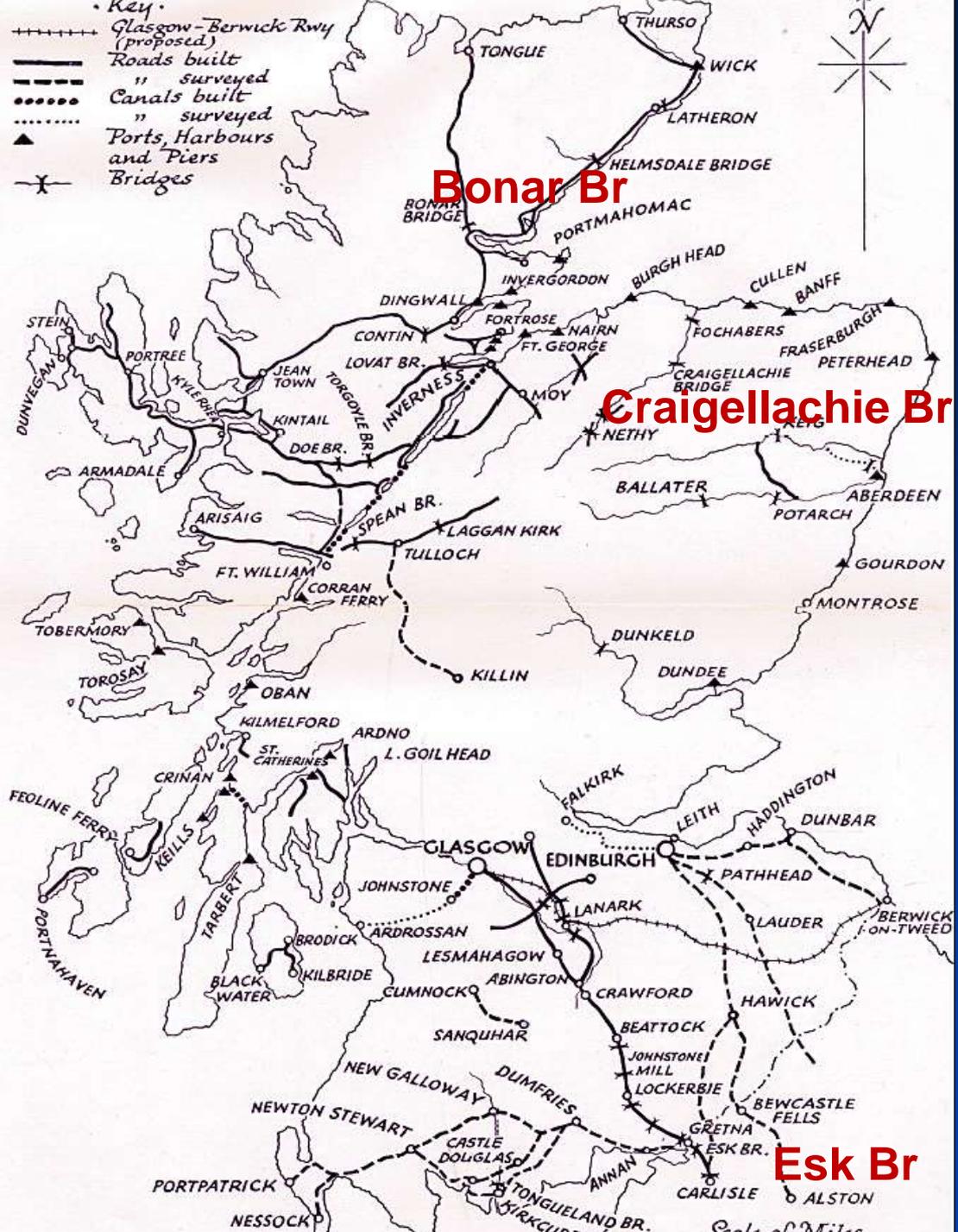
**H.R.H. THE DUKE OF EDINBURGH, K.G., K.T.**



*The*  
**Royal Society**  
*of* **Edinburgh**



©Paxton



# Scotland:

Showing roads, bridges, harbours, piers, canals & railways for which Telford was the Engineer 1790 -1834

From c.1800 he lived at Salopian Coffee House London- from 1821 at 24 Abingdon St near ICEHQ (President 1820 - 34) & H of P. For more than three decades he was essentially parliament's engineer - in addition to his private practice



**Bonar Bridge 1810 - 12** (pre-erected at Plas Kynaston June 1812) - its 150ft span was destroyed by pier failure in a flood in 1892 - the precursor of Craigellachie Bridge

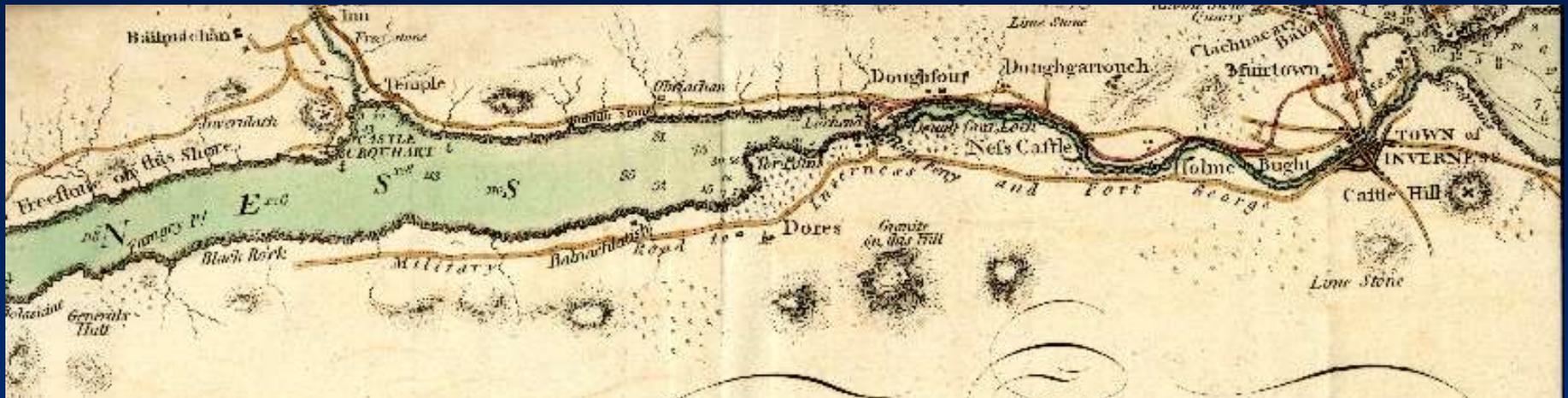


**Glenshiel Bridge 1817** – standard Telford Highland bridge



One of 3  
longitudinal  
cavities to  
reduce weight  
and facilitates  
inspection

**Dunkeld Bridge 1808 – Telford's largest Highland bridge**



*GENERAL PLAN of the INTENDED*  
**INLAND NAVIGATION**  
*From the EASTERN to the WESTERN SEA*  
**BY**  
**INVERNESS AND FORT WILLIAM.**

*By Messrs Jelford & Dornier.*

WESTERN SEA.

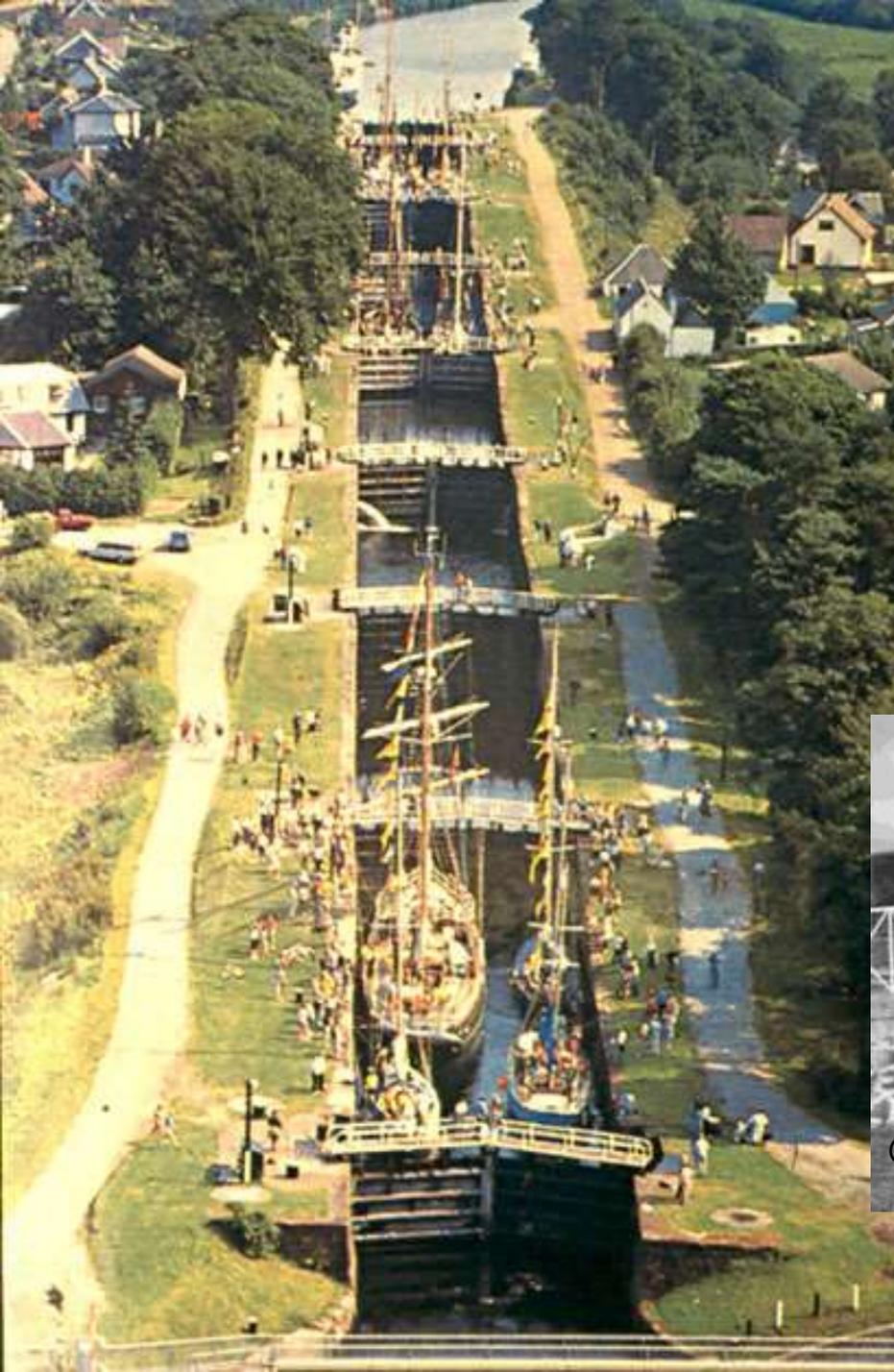
*Reduced from the original surveys by John Baird.*

*Engraved by J. Barlow & Co. Edinburgh.*

**Caledonian Canal plan 1804 -**  
**North end. Canal 60 miles long -**  
**38 miles through lochs**



**Caledonian Canal (1804-22) Corpach Sea Lock 1808 -12**



## Caledonian Canal – Neptune’s Staircase, Banavie 1808-11

*‘this series of locks was then the world’s largest . . . The project significantly advanced canal engineering practice’*

Contractor: Simpson & Wilson



©Paxton

**Moy iron turn-bridge 1820 – the last surviving - Telford/Hazledine**



## Caledonian Canal

Ship being towed  
in Loch Oich  
c.1835

Laggan cutting  
& Loch Ness

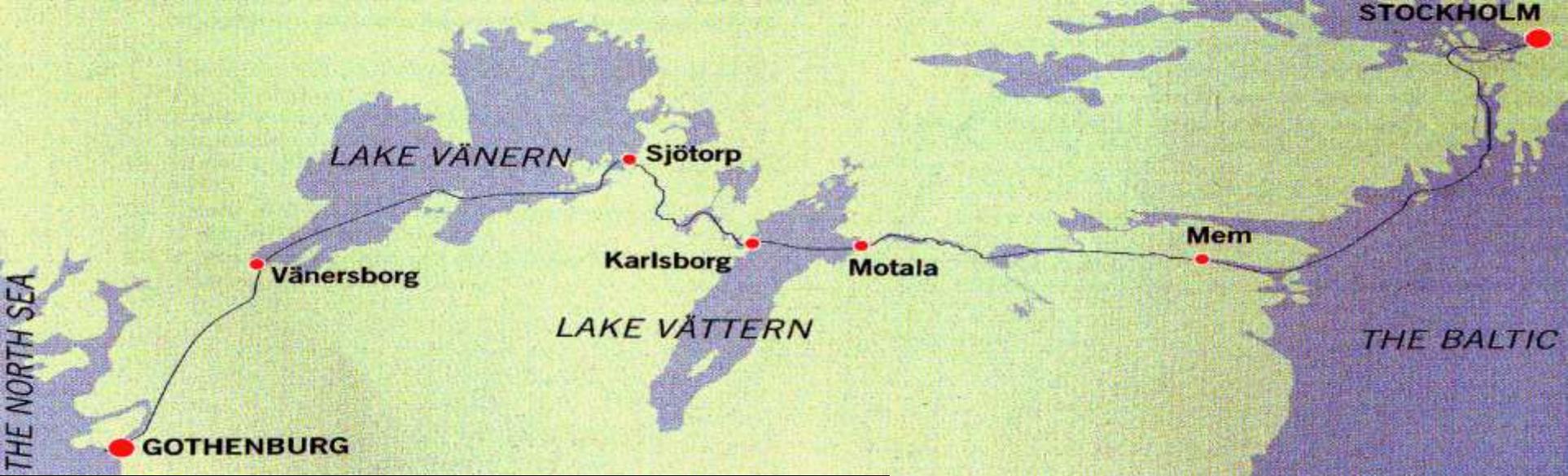




# Caledonian Canal – Clachnaharry Sea Lock 1811

Contractors: T.  
Cargill &  
Simpson [ just  
before taking on  
Craigellachie  
Bridge]

Lock built on  
compressed clay  
infill – an  
engineering  
masterpiece



**ice**  
Institution of Civil Engineers

COMMEMORATING THE LANDMARK COAST-TO-COAST SHIP CANALS OF  
SCOTLAND AND SWEDEN  
CALEDONIAN CANAL

ENGINEER: THOMAS TELFORD (1757-1834)

CONSULTING ENGINEER: WILLIAM JESSOP (1745-1814)

THIS 60-MILE (96KM), 120FT WIDE CANAL BETWEEN THE NORTH SEA AND ATLANTIC OCEAN WAS CONSTRUCTED FROM 1804-22 ON AN UNPRECEDENTED SCALE, WITH 28 LOCKS 40FT WIDE AND 25FT DEEP, USING STATE-OF-THE-ART TECHNOLOGY

IN 1808 THIS PROJECT INFLUENCED COUNT BALTZAR VON PLATEN (1766-1829) AND, ON BEHALF OF KING GUSTAVUS IV OF SWEDEN, HE INVITED TELFORD TO ADVISE ON AND JOINTLY STAKE OUT BETWEEN LAKE VÄNERN AND THE BALTIC SEA THE

**GÖTA KANAL**

PROMOTOR and MANAGER: COUNT VON PLATEN

ENGINEERS: SAMUEL BAGGE (d 1814), GUSTAF A. LAGERHEIM AND JOHAN EDSTRÖM

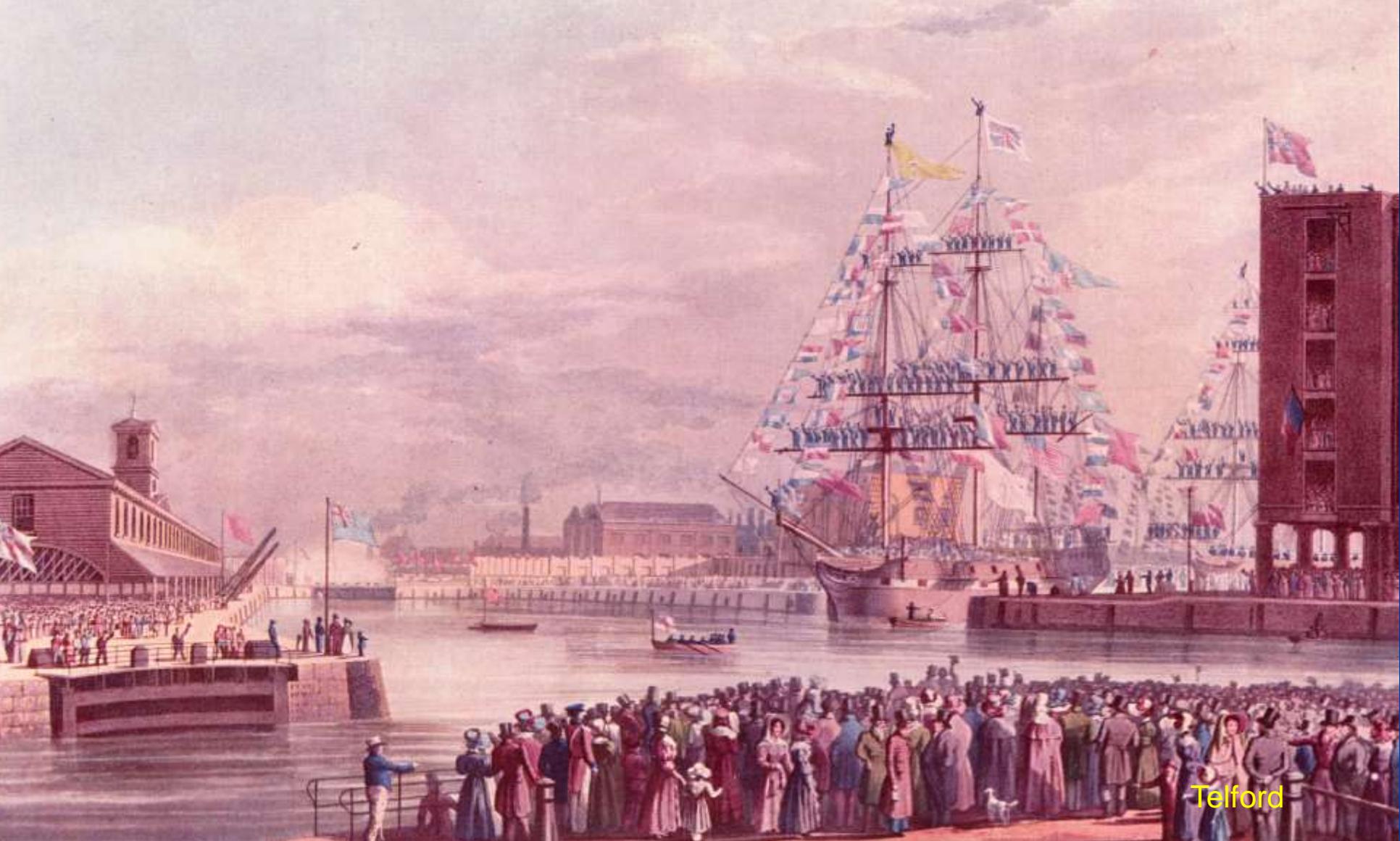
CONSULTING ENGINEER: SIR THOMAS TELFORD

THIS 190KM (119 MILE) CANAL, WITH 58 LOCKS 24FT WIDE AND 12FT DEEP, WAS BUILT FROM 1810-32 BY 58,000 CONSCRIPTED SOLDIERS UNDER VON PLATEN'S DIRECTION WITH TECHNOLOGY AND CRAFTSMEN PROVIDED BY TELFORD

PRESENTED TO SCOTTISH CANALS AND AB GÖTA KANALBOLAG BY  
THE INSTITUTION OF CIVIL ENGINEERS

JUNE 2013

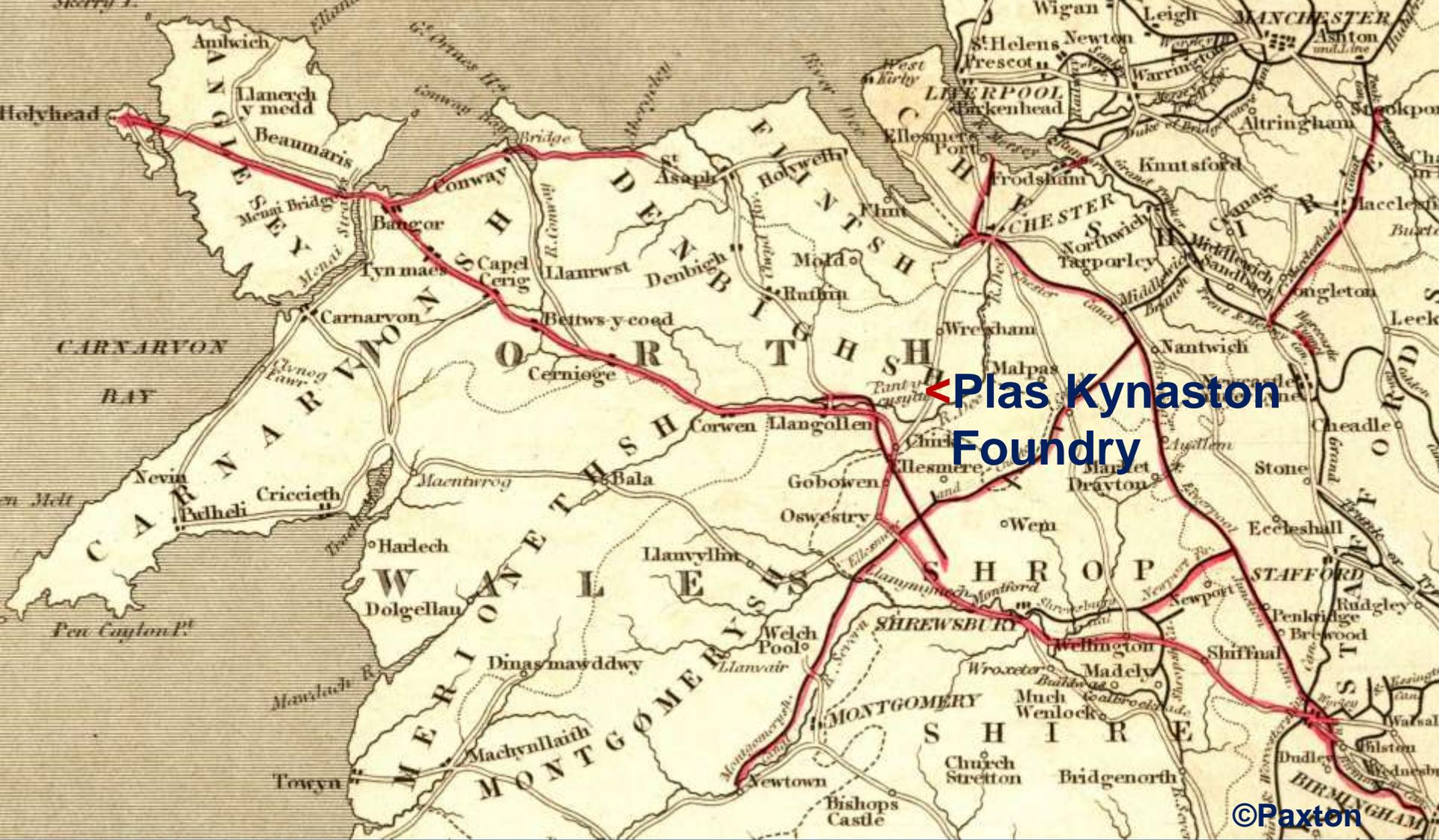
**Göta Canal, Sweden  
1809-32 - 119 miles &  
Author's organised ICE  
canal plaques at Motala  
& Inverness 2013-14  
Telford consultant  
(knighted against his  
wishes by King  
Gustavus IV)**



Telford

# World-class St Katherine's Dock, London 1829

## Telford Engineer



Telford canals [Birmingham & Liverpool and other] & Holyhead Road - Note Hazledine's Plas Kynaston Foundry where Craigellachie Bridge ironwork was made



©Paxton

**Harecastle Tunnel** engineered by Telford on the *Trent & Mersey Canal* in 1824-27 - nearly 3,000 yds long



## **Birmingham & Liverpool Junction Canal – High Bridge, Woodseaves**

Telford used direct lines and deep cuttings to minimise the number of locks and reduce boat travel time



©Paxton

**Ellesmere & Chester Canal and River Mersey – Ellesmere Port**  
*'a canal/seaport interchange peak of efficiency of the Canal Age'*  
[Paxton *BDCE* 2002]



## **Edinburgh & Glasgow Union - Avon Aqueduct 1822**

12 no 50ft spans  
carrying an iron  
trough – still used

Telford was the  
consulting engineer.  
Hugh Baird - engineer

# ENGLAND

SHOWING TELFORD'S ROADS AND BRIDGES

-Key-

- Roads constructed under Telford's supervision
- - - Roads surveyed by Telford
- ≡ Bridges

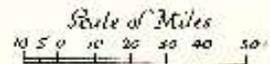


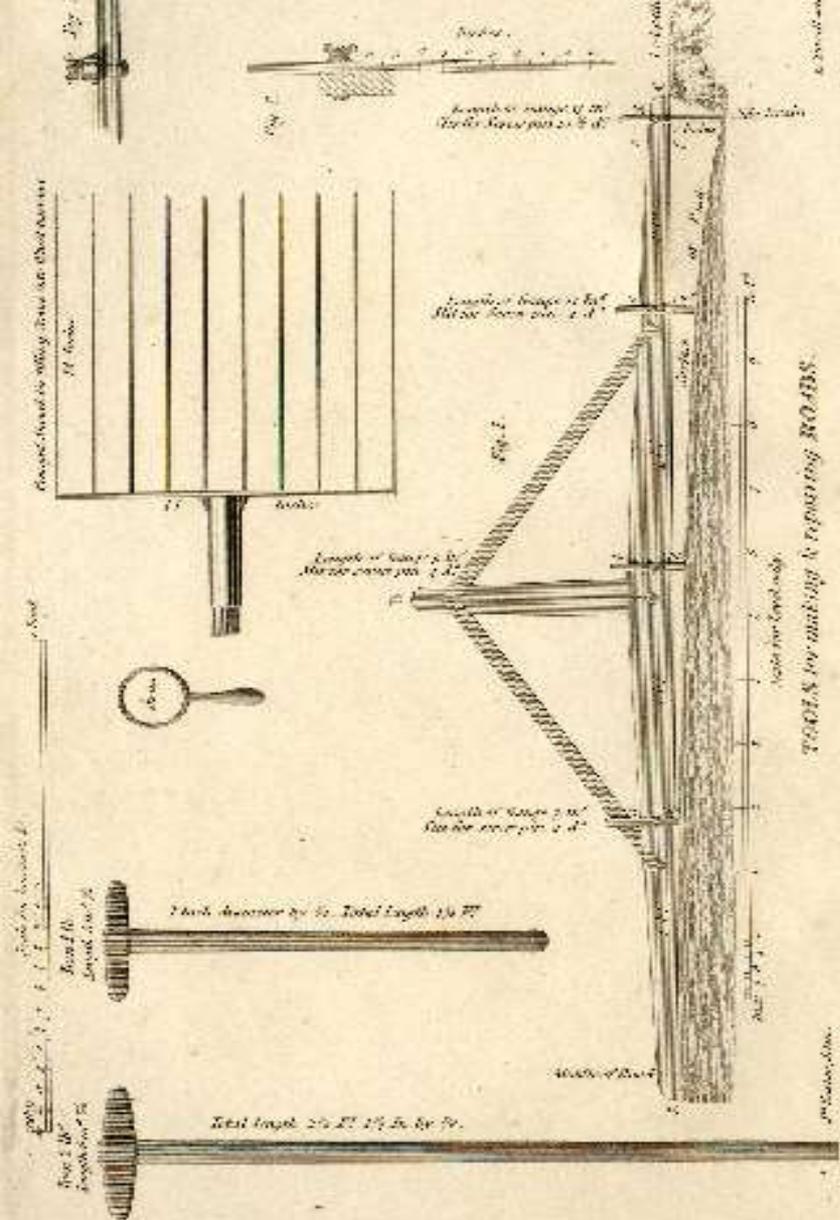
**North Fen  
Drainage  
48,000 acres  
c.1830**

**Telford's  
Roads and  
Bridges in  
England**

– Holyhead  
Road  
engineered by  
Telford 1815-29

Other main routes  
were surveyed





GENERAL RULES  
FOR  
**REPAIRING ROADS**

RECOMMENDED BY THE  
PARLIAMENTARY COMMISSIONERS  
FOR THE  
IMPROVEMENT OF THE MAIL COACH ROAD FROM LONDON,  
BY COVENTRY, TO HOLYHEAD,  
IN THE  
THIRTIETH TRUSTEES BETWEEN LONDON AND  
SHREWSBURY.

ILLUSTRATED WITH A PLATE.  
*[by Thomas Telford]*

FOURTH EDITION.

LONDON:  
PUBLISHED BY J. TAYLOR,  
AT THE ARCHITECTURAL LIBRARY, 59, HIGH HOLBORN,  
1823.  
Price 2s.

**Holyhead Road – Telford dubbed ‘Colossus of roads’-his nationally used ‘General Rules for Repairing Roads’ 1820-**

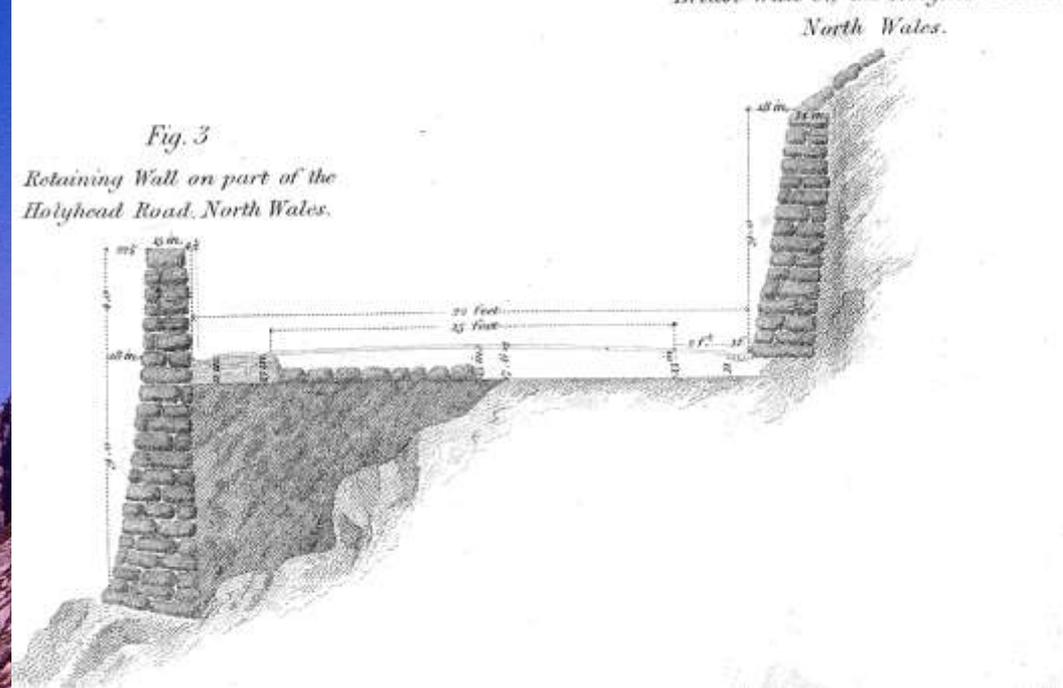
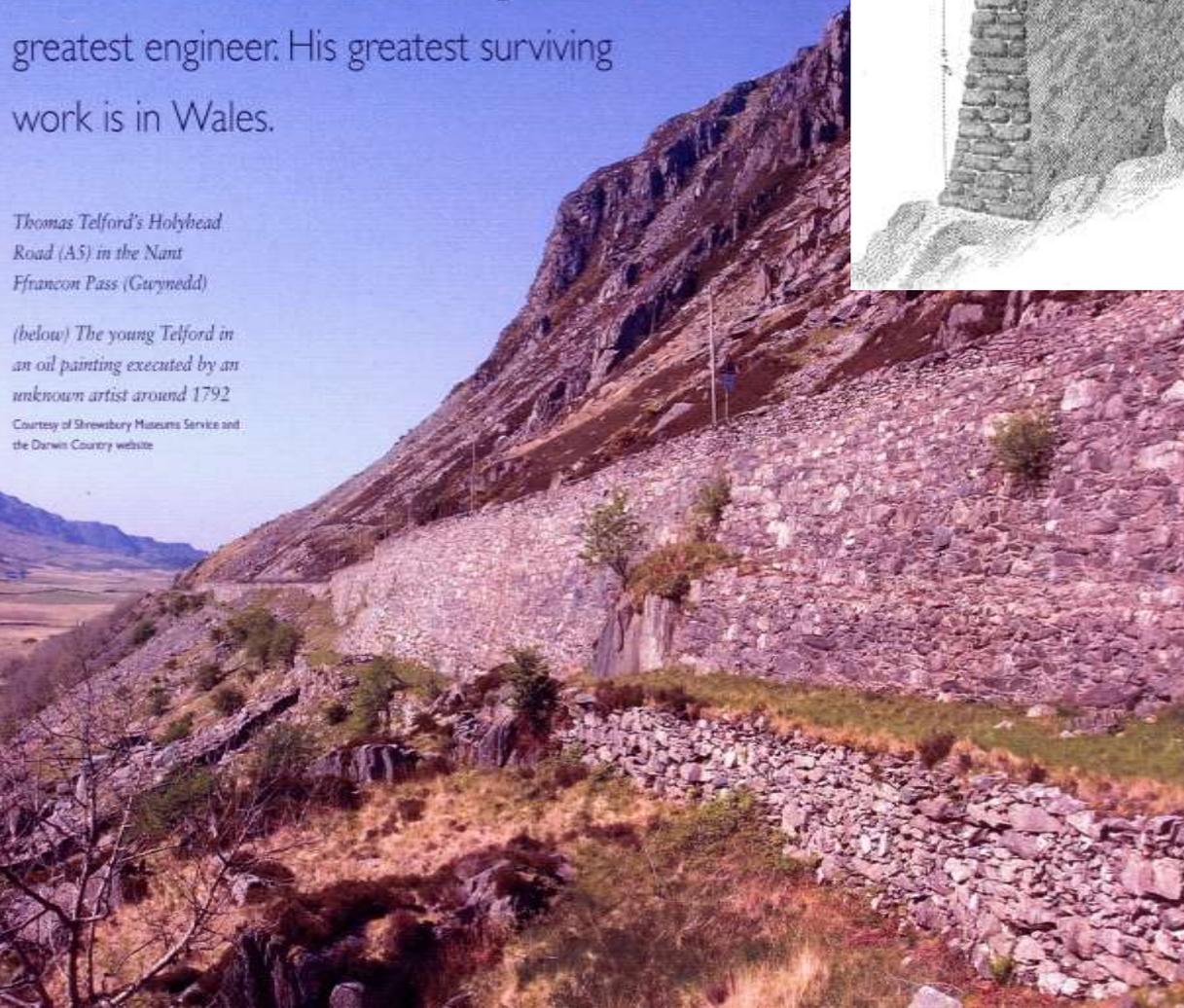
# Colossus of roads

Rick Turner, a Cadw inspector of ancient monuments, argues that, on the 250th anniversary of his birth, Thomas Telford should be recognized as Britain's greatest engineer. His greatest surviving work is in Wales.

*Thomas Telford's Holyhead Road (A5) in the Nant Ffrancon Pass (Gwynedd)*

*(below) The young Telford in an oil painting executed by an unknown artist around 1792*

Courtesy of Shrewsbury Museums Service and the Darwin Country website

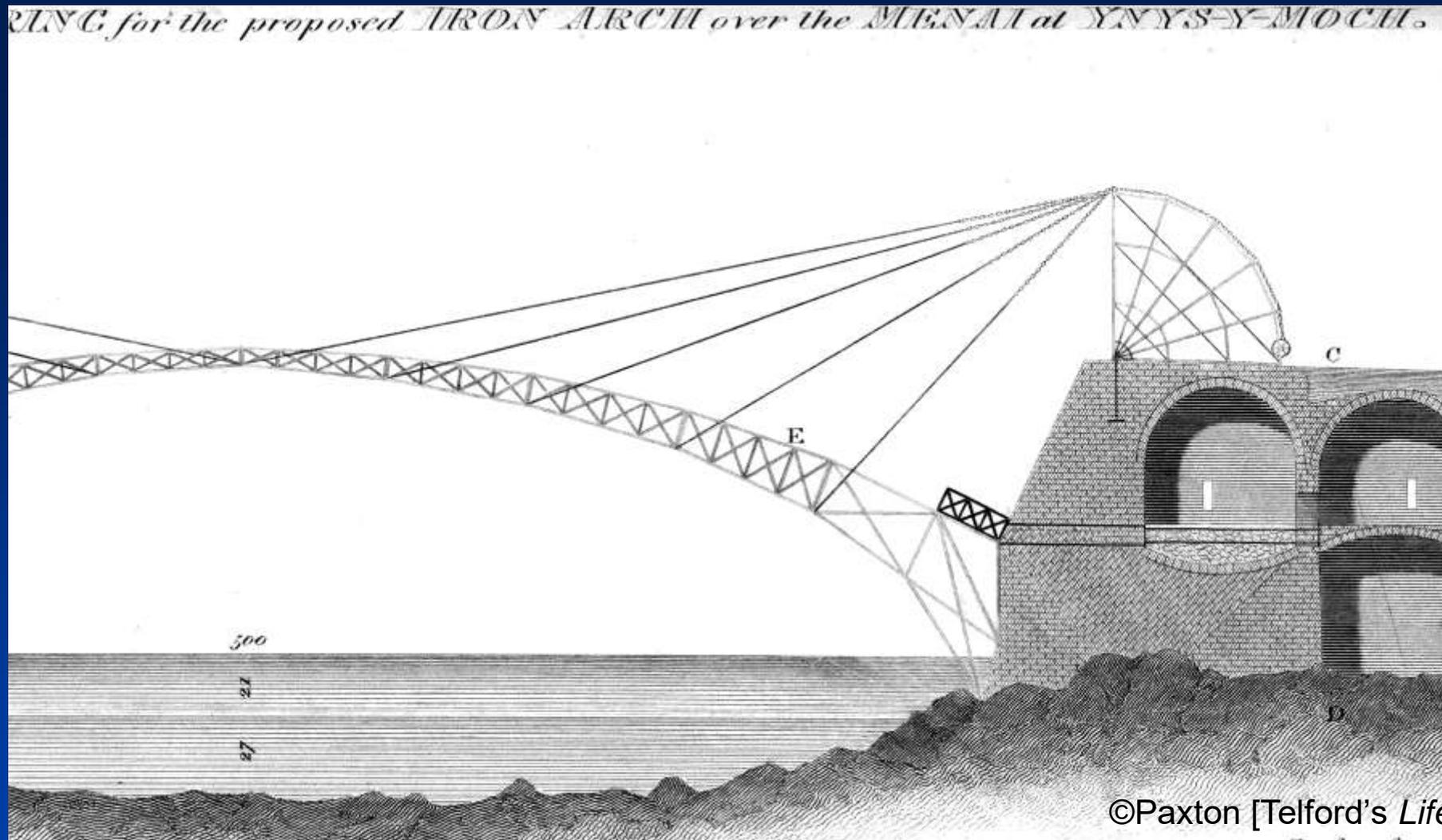


## Holyhead Road - Nant Francon Pass, North Wales

– major retaining walls built c.1820 - still in use

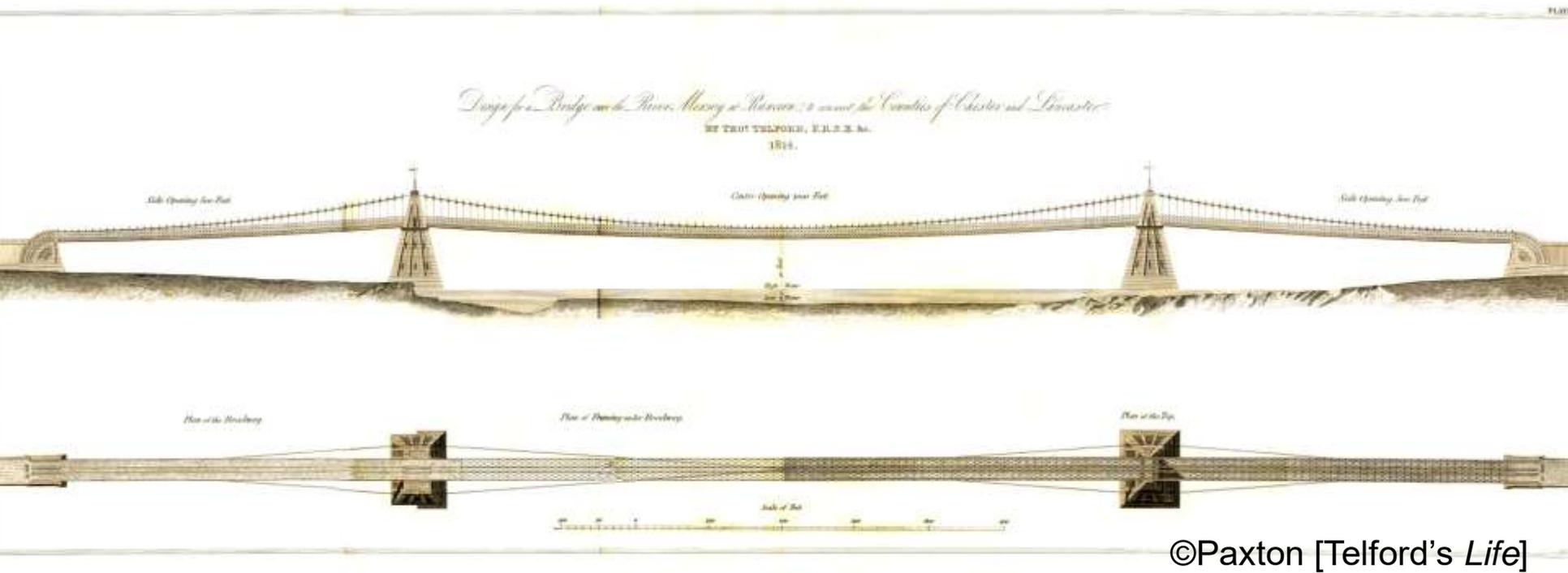
Note: Telford's hand-placed stone road base - adopted nationally to

1950s



## Menai Bridge suspended centering -

A novel Telford proposal of c.1810 for erecting a 500 ft span cast iron arch at Menai – not erected



©Paxton [Telford's *Life*]

## Runcorn suspension bridge proposal – 1814

Spans: 500ft – 1000ft – 500ft

Probably then technically too ambitious but significant as the precursor for the world's first great suspension bridge erected over Menai Strait by 1825



©C.Morris

**Menai Suspension Bridge 1819-26 of 580ft span**  
*‘established this genre as the most economic means of achieving the largest spans’, which it still is. [Paxton 1980]*

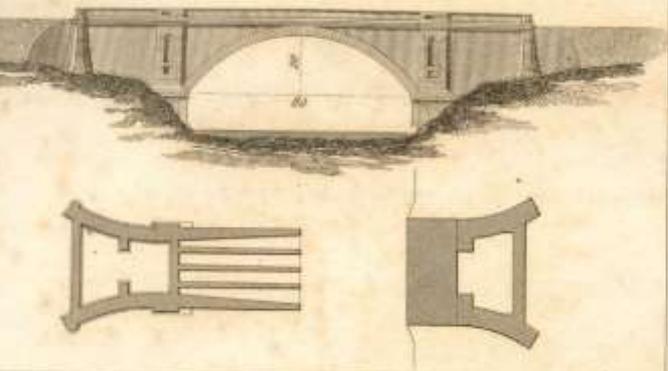


©Daily Post

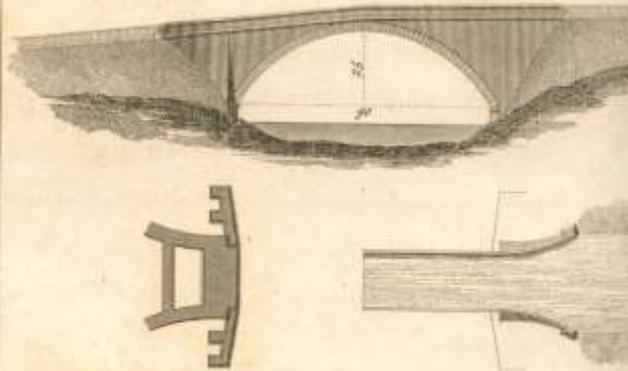
**Conwy Bridge 1826** at IHCEL plaquing on 26 June 2003. Now preserved by National Trust – ASCE President Jackson & author!

GLASGOW and CARLISLE ROAD.

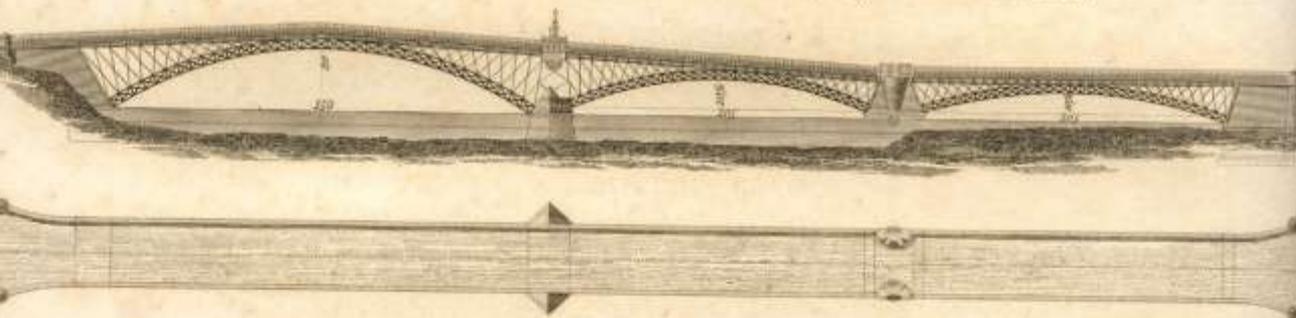
Bridge over the River Avon near Hamilton.



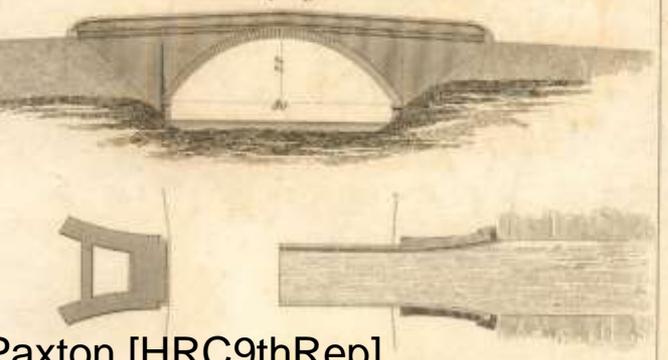
Bridge over the River Clyde at Elvanfoot in the County of Lanark.



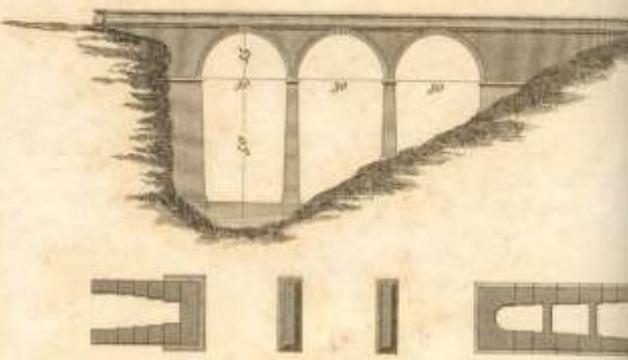
Bridge over the River Eske in the County of Cumberland.



Bridge over the River Annan at Johnstone Mill, in the County of Dumfries.



Bridge over Birkwood Burn near Lismahoy.



# Glasgow and Carlisle Road

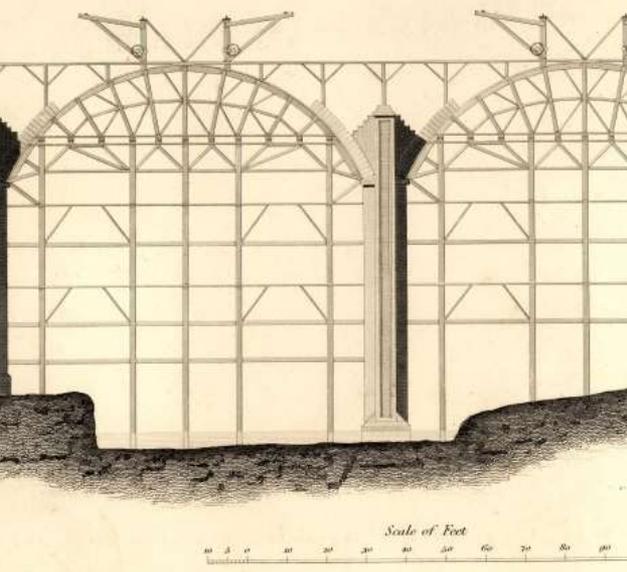
1815-25

[M74 forerunner]

Note use of  
Telford/Hazledine  
Bonar/  
Craigellachie  
Bridge genre  
near Carlisle

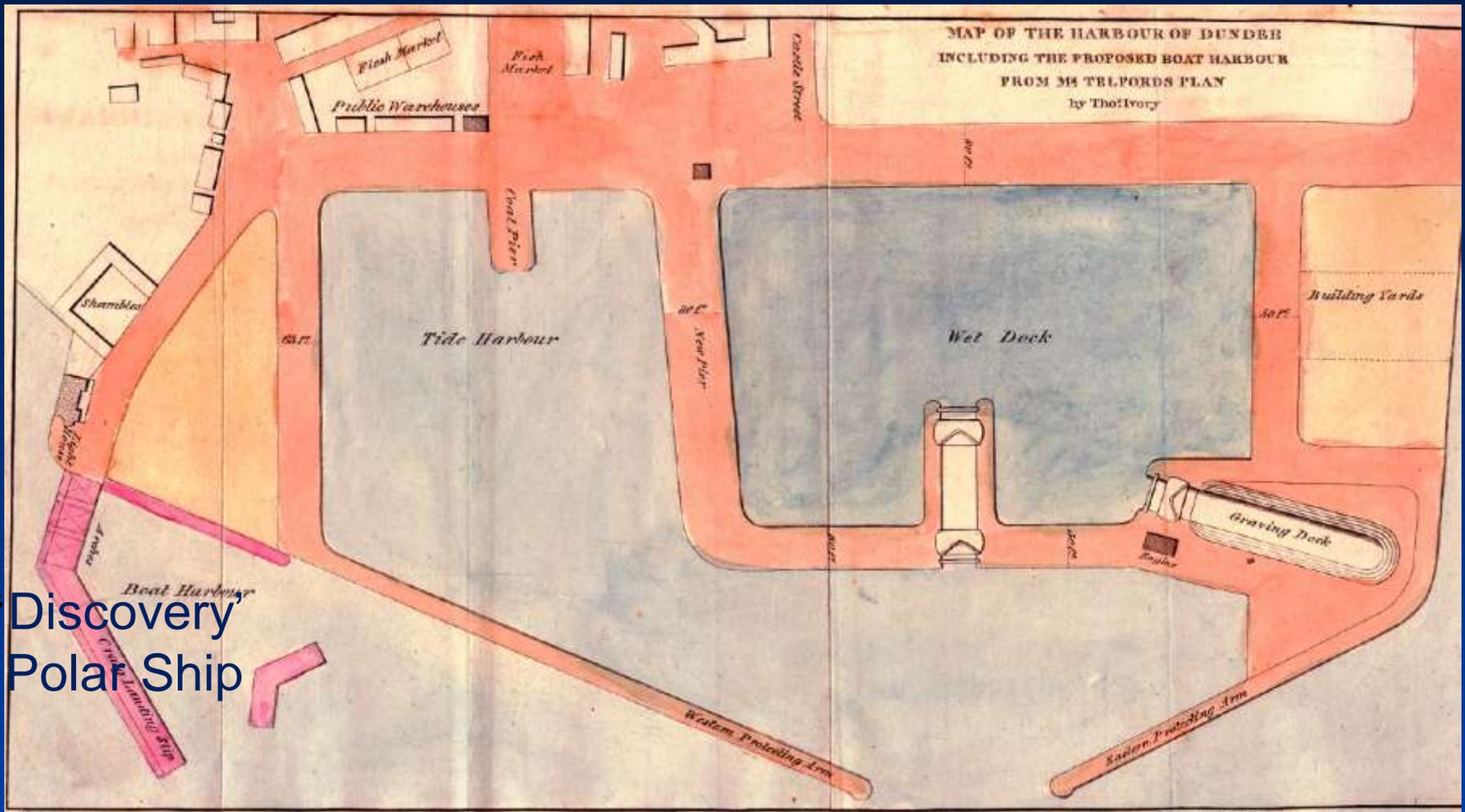
1797 DEAN BRIDGE, EDINBURGH.

Plan of the CENTERS used in constructing the DEAN BRIDGE, EDINBURGH.



## Dean Bridge slenderness 1829-32

*'with Glasgow Bridge a fitting crown to Telford's creative life'* (Sir A.Gibb)



Dundee Harbour Improvement c.1830 Telford's Plan



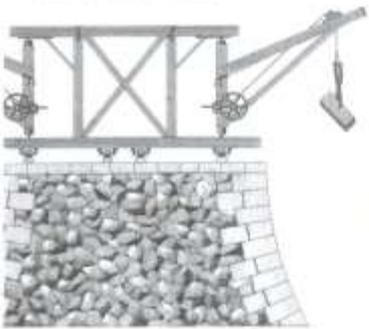
©Paxton

## Dundee Harbour c.1845

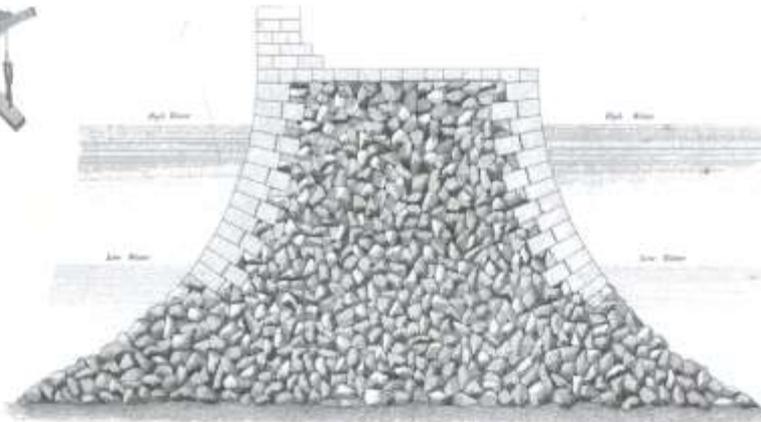
Note - only the lighthouse now remains

ABERDEEN HARBOUR.

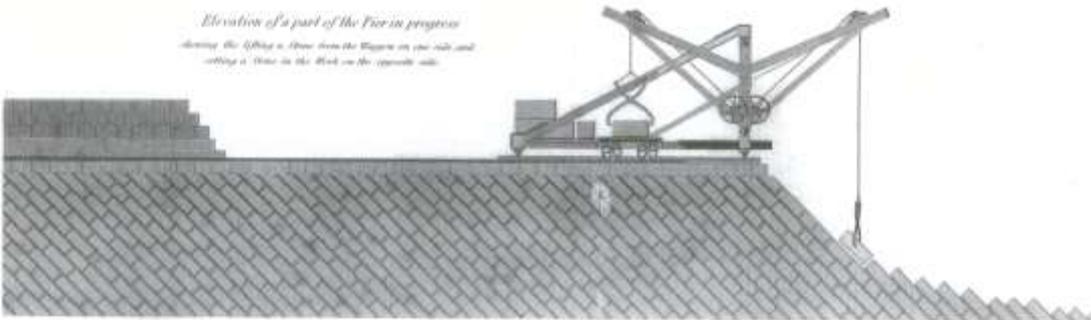
*Transverse Section of the Pier in progress*  
*showing the movable frame used for raising the*  
*stones of the Magazine & the Building.*



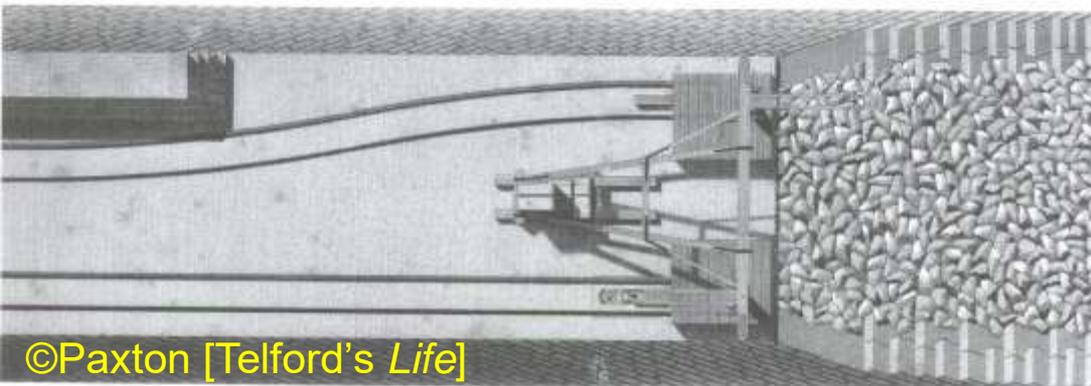
*Transverse Section of the Finished Pier*



*Elevation of a part of the Pier in progress*  
*showing the lifting frame from the Magazine on one side and*  
*setting a stone in the Work on the opposite side.*



*Plan of a part of the Pier in progress*  
*showing the Stone, and the Ballast for bringing down the material.*



©Paxton

**Aberdeen Harbour**  
**North Pier 1815**  
**Contractor J. Gibb**

©Paxton [Telford's Life]



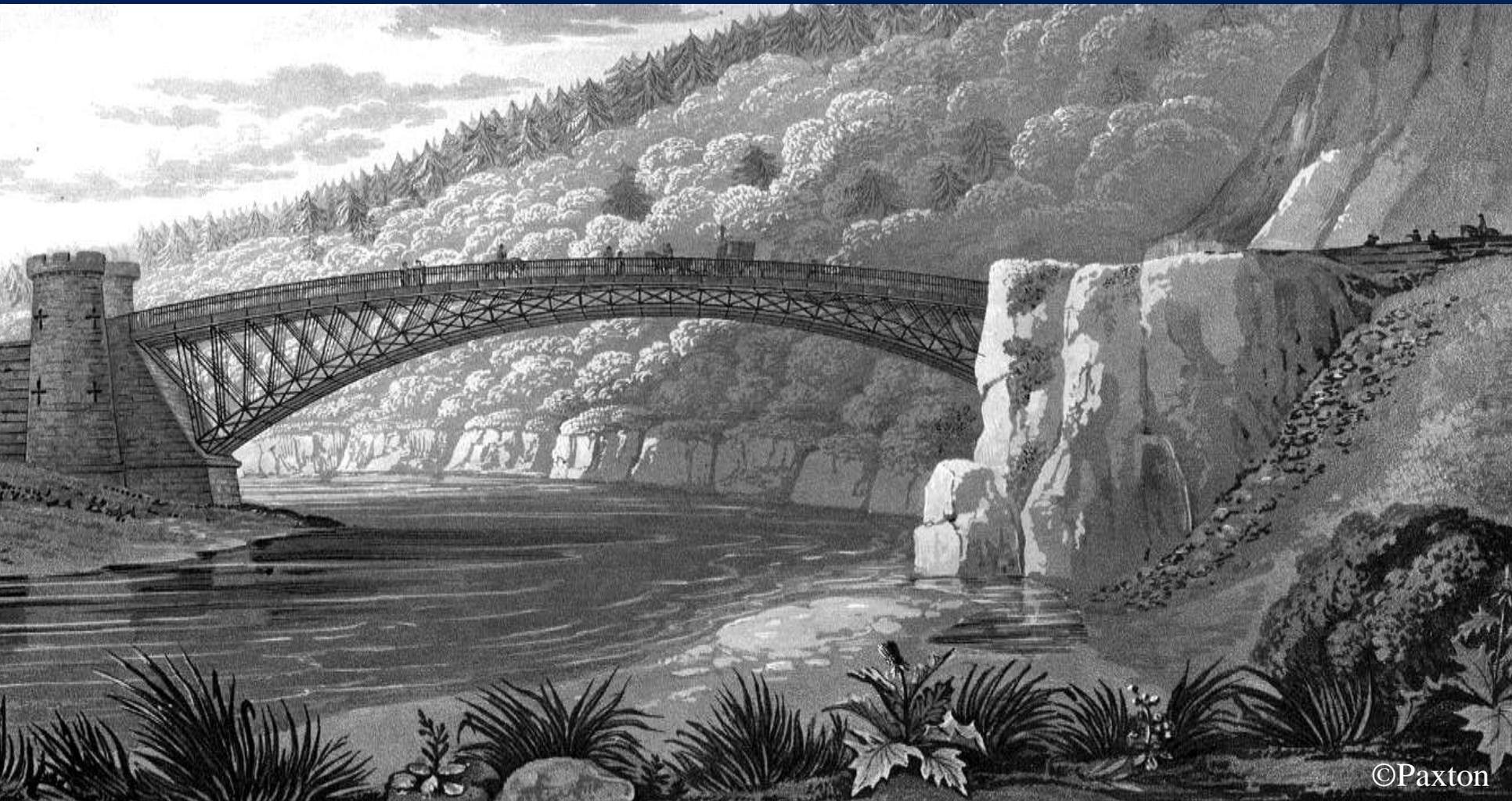
Dorothea Jordan in the farce 'The Devil to pay'

Telford never married living like a soldier on active service. He was outgoing, cheerful and got on well with people – was a great manager practising fairness and able to delegate work without losing control. His recreations included writing poetry and going to plays - 'one word from Mrs Jordan has more effect on me than all the fiddlers in England'



THOMAS TELFORD

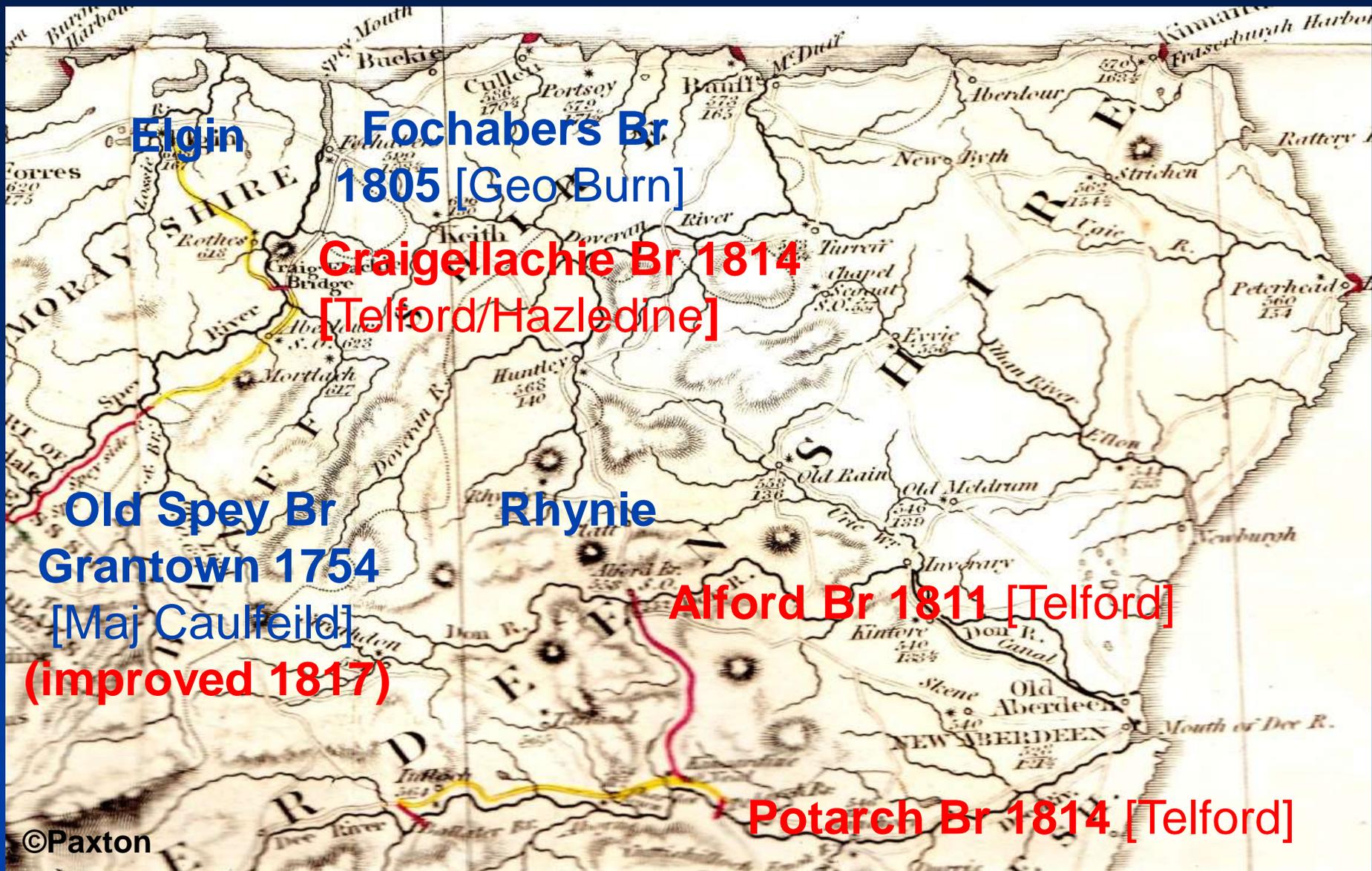
**Westminster Abbey –  
Telford's grave & statue  
[died 2 Sept. 1834]**



©Paxton

## **Craigellachie Bridge soon after completion**

Drawn and published by J. Grant, Elgin, 1828. Sculpt. W. Read



**Highland Roads & Bridges Comm. Map 1821**  
 new work in red

## **CRAIGELLECHIE BRIDGE started with Telford Report - 9/1812**

*'At Craig-Ellachie I met Provost Brown of Elgin, Mr. Young of Bamff, Mr. McInnes, and others interested in the application to the Commissioners for aid in constructing a Bridge over the Spey; I am convinced that a bridge would [be beneficial]*

*Having measured the width of the river, and learned the height to which the floods rise, and having considered the nature of the foundations, the depth of water & other circumstances, I became satisfied that any stone bridge with piers in the river would cause an expence and continual risk; but an iron arch of the same span as that at Bonar (150 feet) I am convinced might be accomplished for about £8000.*

*I have prepared a Plan, Elevation, and detailed Estimate, about £1000 of which must be incurred for driving a gallery into the Rock of Craig-Ellachie, formerly alarm-post or fire-signal station of the Grants, this being the only practicable mode of approach from the North ... (signed) **Thomas Telford***

# Craigellechie Bridge creation - Key people

**Local subscribers** whose contributions were essential for a 50% government grant

**Thomas Telford**, Engineer to Highland Roads & Bridges Commission

**John McInnes, Dandaleith**, farmer, who acted as *Inspector of Works* reporting to James Hope Commission Secretary & Telford

**Simpson & Cargill**, contractors who had just built Bonar Bridge and were constructing part of the Caledonian Canal

**William Hazledine**, sub contractor, specialist ironfounder at Plas Kynaston Foundry [1800], near Ruabon, Denbighshire, maker of the ironwork, whose site foreman **Wm Stuttle** superintended the casting of and site erection of the arch

# Craigellechie Bridge creation – Local Subscribers

**From a list of Oct 1812 by Mr Fraser of Castle Grant sent to McInnes**

Col Sir W Grant £1200; Arndilly £300; Balindalloch £200; Aberlour £200; Mr Young for Kininvie £100; Mr Grant of Elchies £300; Lord xxx's trustees £100; Duke of Gordon £200; Town of Forres £50; Sir H and Rev Mr Grant £20; P. Keith MP £21; Rev Dr Nicol 5gns; Capt Grant of Tullochgorm 2gns; A Gordon, Cairnfield 5gns; Maj Grant, Achermich 5gns; Mr L Dick, Relugas 5gns; B Lawson, Ballimore 5gns; Mr Fraser, Castle Grant 10gns; Capt Cumming, Docharn 5gns; Mortlach & Cabrach tenants £240; B Abercromby MP 5gns; Morayshire Farmers Club £33.12s; Mr Chalmers, Aberdeen 2gns; Rothes & Provost Brown [Elgin] £175; Mr Niven, Lumsden 5gns; Mr Urquhart Meldrum 3gns; Mr Grant, Drummner 5 gns; Dr Leith, Whitehaugh 5gns; Mr Farquharson, Bryda 5gns; Mr Farquharson, Naughton 5gns; Mr Rannie, Cullen 5gns; Mr Staples, Cullen 3gns; Jo. Ingram, Keith 2gns; Mr Grant, Cullen? £5; Mr A McWilliam, Buss £2; Robt Bremner £4; James Gordon, Rivals £1; Jno Lobar, Cumiston £2; Rev G Innes, Cullen 5gns; **Subscriptions at Aberdeen.** Mr McInnes £40; Ja Grant, Heathfield 5gns; Rev Macpherson, Knockando 10gns; Rev Grant Inveravan 10gns; Sir G Abercromby Bt 10gns; Robert Warden £21; T Wilson Cullen House; A Wilson, Cullen 10gns; Jas Shearer £50; Mrs Grant, Elchies £20; Rt Hon Sir Wm Grant £30; A Grant, Tullochgriban 5gns **Total £3497.6s. By 31 Dec 1813 c.£4000 paid** NLS MS 15375

'Craig Ellachie Bridge ...  
now opened ... [to] the  
astonishment of all who  
have beheld it ... the  
passenger seems like  
entering a frightful cavern  
excavated in the rock 100ft  
perpendicularly ... with no  
apparent outlet, but on  
[rounding] the turret he  
finds himself extricated  
from this labyrinth by a  
smooth and spacious  
passage [Mr Simpson  
praised for completing the  
whole in masterly style']

No. 131.]

[Price 1s. 6d.

THE  
**Scots Magazine,**

AND  
Edinburgh Literary Miscellany,



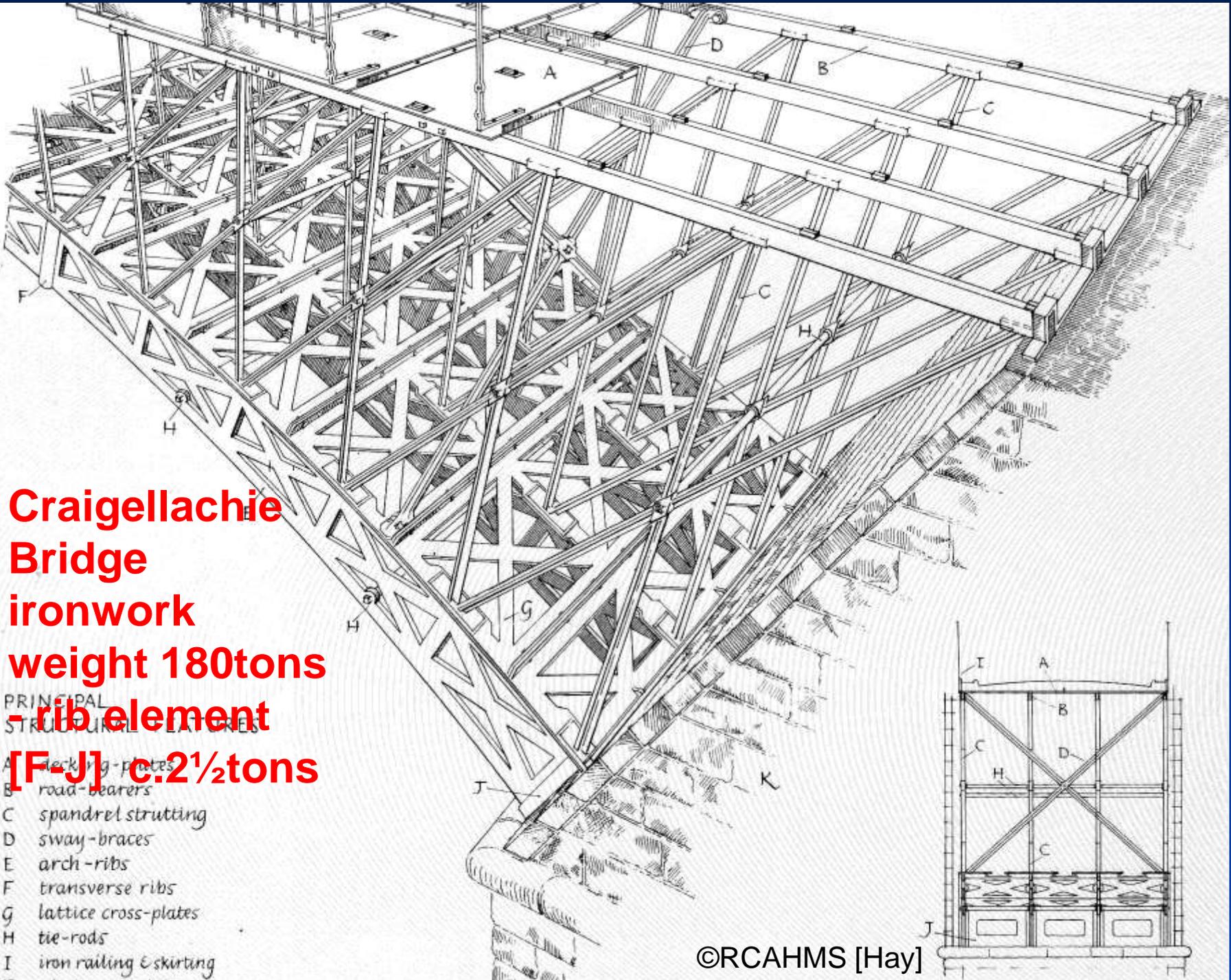
FOR NOVEMBER 1814.

**Craigellachie  
Bridge  
ironwork  
weight 180tons  
- rib element**

**[F-J] c.2½tons**

PRINCIPAL  
STRUCTURAL ELEMENTS

- A deck-plates
- B road-bearers
- C spandrel strutting
- D sway-braces
- E arch-ribs
- F transverse ribs
- G lattice cross-plates
- H tie-rods
- I iron railing & skirting



# Chronology of Craigellachie Bridge Creation 1812-14

**Mid-1812** - Bridge initiated by Col Sir Wm Grant & John McInnes  
**September 1812** Telford's plan, elevation and estimate prepared

**9 August 1813** - subscriptions for half £8000 estimated cost raised  
[HRC found balance] - contract agreed [signed mid-1814] work began

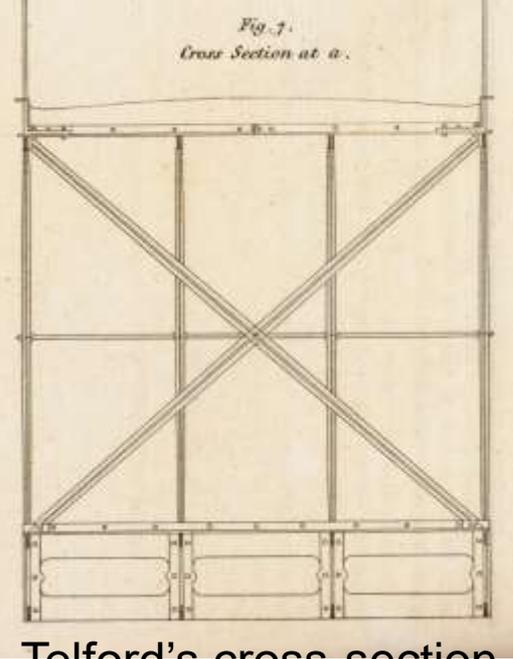
**22 Dec 1813** - working at breast wall N side embankment S side.  
Local larch used for timberwork – granite used quarried locally

**28 May 1814** - work force c.70 – c.300 yds breast wall done and  
foundation to arch springings on piled platforms - framing centers,  
the piles for their support all fixed in river and tie beams laid – so  
secured that no risk from ordinary flood – centering platform in use  
as a service bridge for 'wheeling rock rubbish' from north side

**July/Sept 1814** - centering up -180t bespoke iron elements (£2891)  
from Ruabon carried by waggon from Spey Mouth and erected

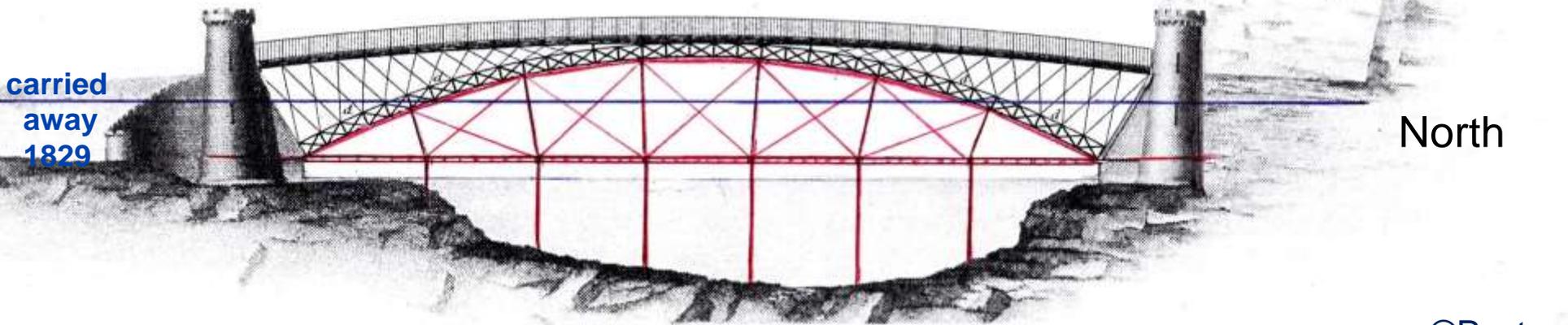
**October 1814** - Bridge passable - rock blasting to full road width  
N side - Bridge opened to public at **beginning of November 1814**

Fig. 7.  
Cross Section at a.



Telford's cross-section

carried  
away  
1829



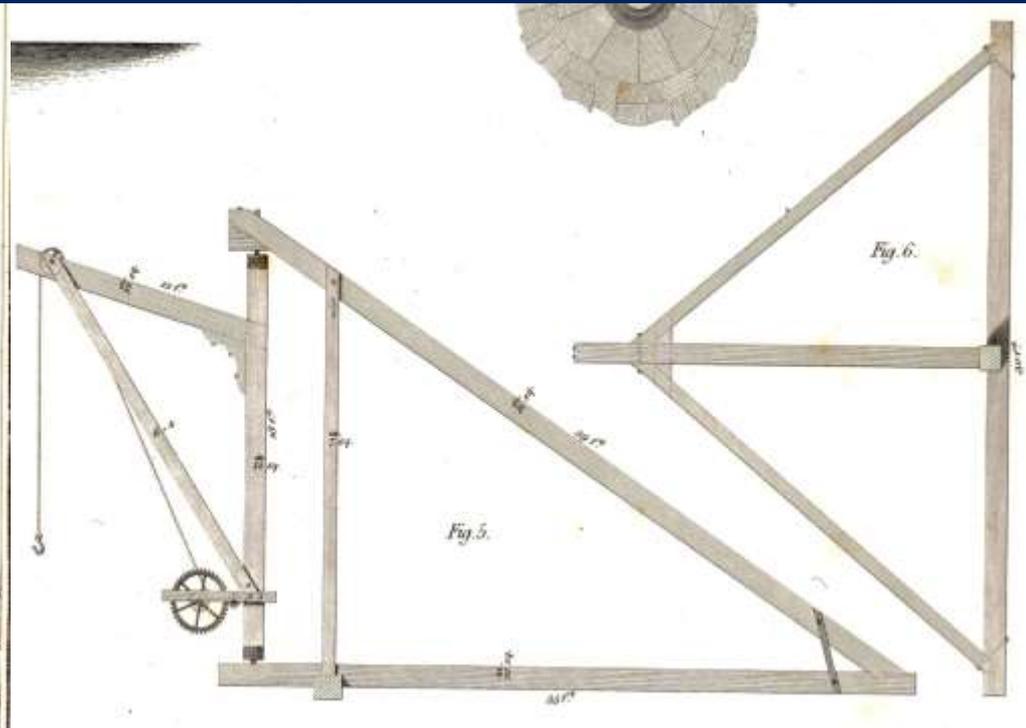
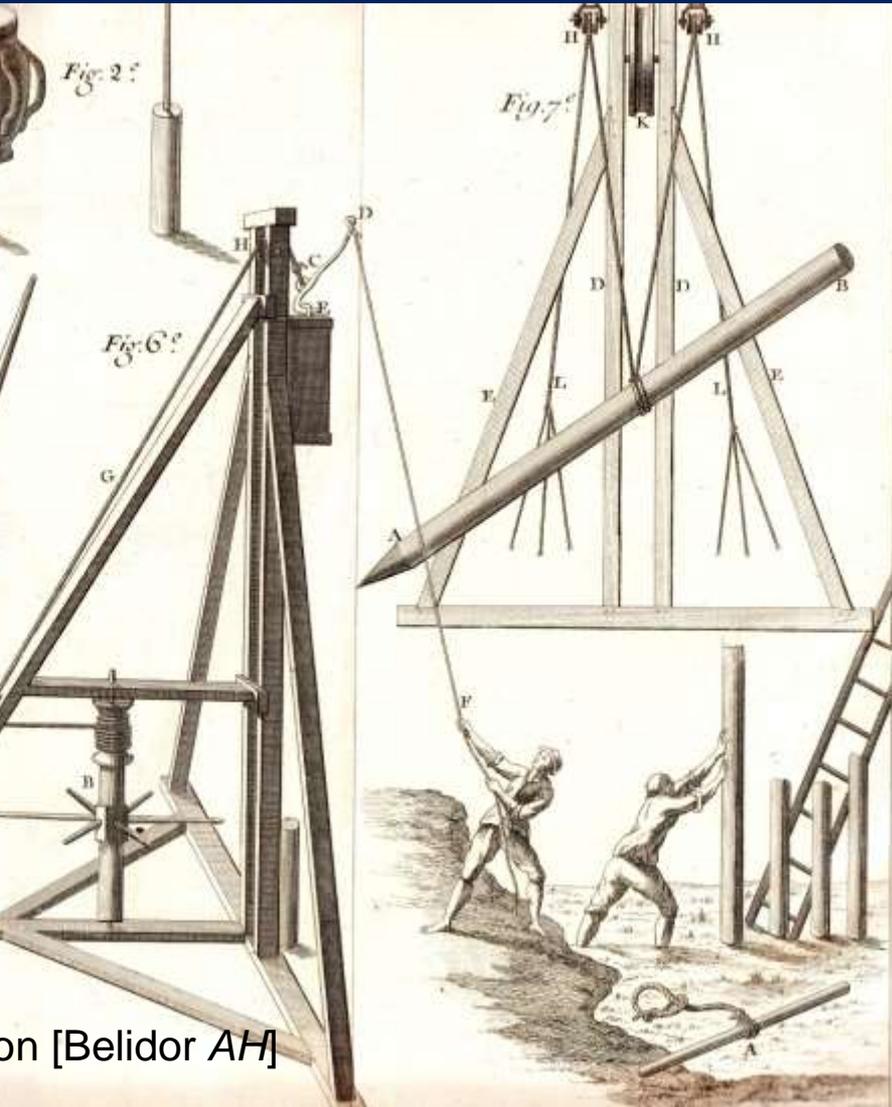
North

©Paxton

Bridge elevation with notional arrangement of temporary larch centering 1814. Its platform across river used for 'wheeling rock rubbish' from North side. 4.8.1829 flood level in blue

# Craigellechie Bridge erection - Notional piling & cranage

Piles driven 'until 3 strokes of the engine ram of 3cwt raised 5ft do not drive the pile 1 inch' [McInnes 4<sup>th</sup> Rep. 29.3.1814 NLS MS. 15375]



The cranes used were probably variants of this Caledonian Canal type but with longer jibs for a max. load of a 2½ ton rib element

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**Craigellachie Bridge  
Reconstructed above  
the ribs with significant  
retention of ironwork  
and character in 1963-64**

**Bypassed in 1972 by  
present steel beam and  
concrete bridge  
Consulting Engineer  
W. A. Fairhurst and  
Partners [Bill Lawson]  
Contractors: Wm Tawse  
Ltd and Sir Wm Arrol & Co  
Ltd**

# International plaquing by American and UK civil engineering presidents in 2007





**Danish civil engineers visiting bridge in 2012 as seen from the 1972 bridge, serendipitiously a great viewing point**



**Craigellachie Bridge – Concorr Inspection July 2014 – Bridge is in generally good condition but work costing of the order of £400,000 is needed to keep it in good order**

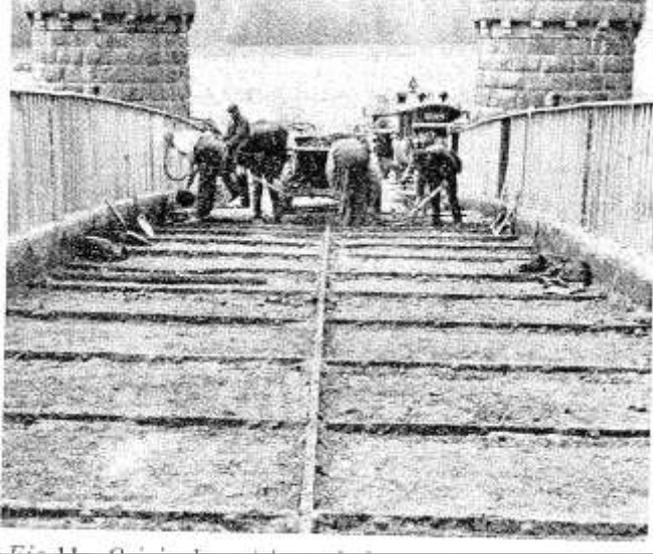


Fig. 11. Original Telford/Hazledine road deck-plates



©Concorr

**Craigellachie Bridge refurbishment 1963/64 – Original Telford/  
Hazledine road deck-plates exhibiting joint corrosion in 2014**



**Craigellachie  
Bridge -  
Corrosion 2014  
Concorr images**

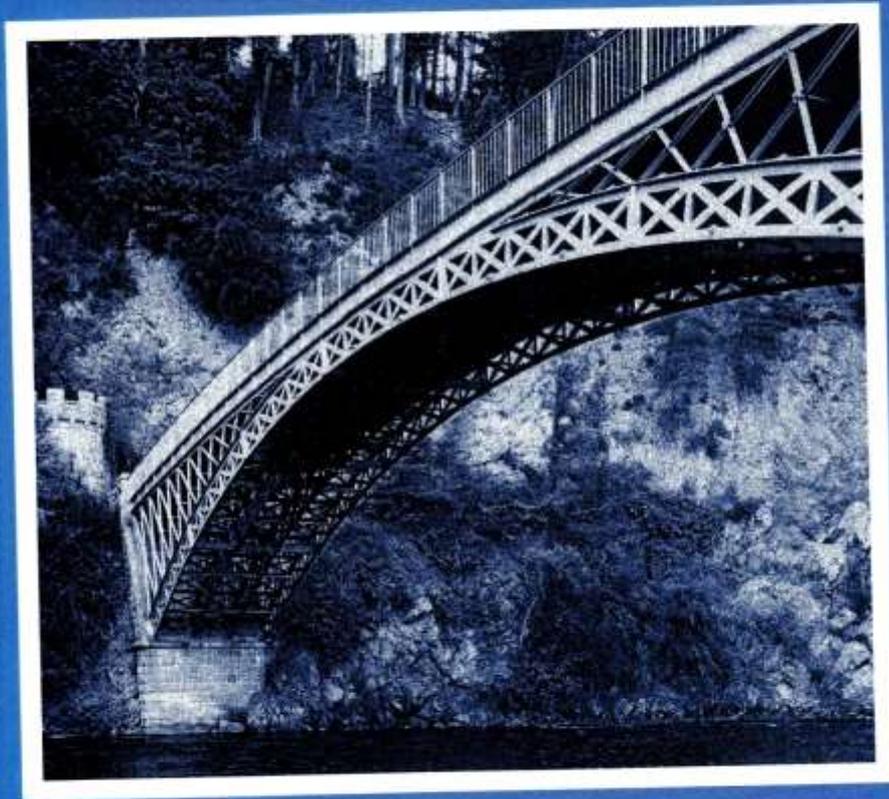
**Tewkesbury Bridge 170 ft span – Telford/Hazledine 1826**  
**Note vertically orientated spandrel framing.**





Until c.1890 bridges influenced nationally by the lattice spandrel genre eg Water St, Manchester 1848 & 5 miles upstream of here Carron Bridge 1863 - engineer Alexr Gibb former Telford contractor

# CIVIL ENGINEERING HERITAGE



SCOTLAND HIGHLANDS AND ISLANDS



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Historical  
Monuments of  
Scotland

Roland Paxton and Jim Shipway

**Today**

**Craigellachie Bridge  
enhancing the cover of  
*Civil Engineering Heritage  
Scotland Highlands and  
Islands* in 2007**

**Copies still available from  
ICE Scotland  
105 George St  
Glasgow G2 1QL**

Craigellachie Bridge is technically outstanding as the world's earliest surviving example of a novel light-weight prefabricated cast iron bridge type that made a major contribution to UK transportation before the railway age.

By 1830, with spans longer than practicable in stone, and exhibiting an unparalleled combination of strength, economy and intuition, the genre was in service at nearly half the world's cast iron bridges with spans over 32 m. Until c.1890, its elegant lozenge spandrels enhanced the appearance of scores of bridges nationally.

I am honoured to have been invited to do a talk on this great occasion and delighted to see the establishment of a 'Friends' group which hopefully will provide essential support for the bridge's preservation for the next 200 years