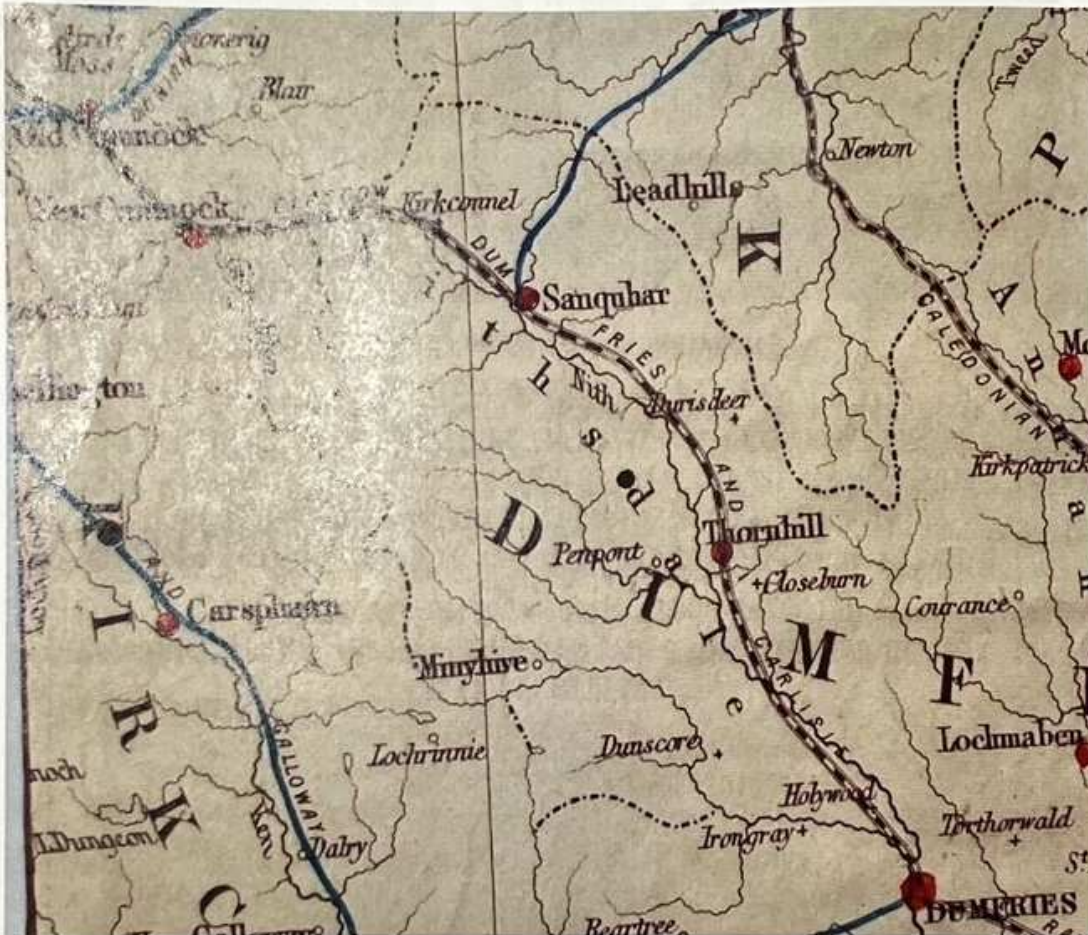


THE GLASGOW, DUMFRIES & CARLISLE RAILWAY LEGACY OF JOHN MILLER, CE FRSE

Commemorated by a plaque at New Cumnock Station on 2 May 2013

by Professor Roland Paxton *MBE FICE FRSE*
Vice-chairman ICE Panel for Historical Engineering Works

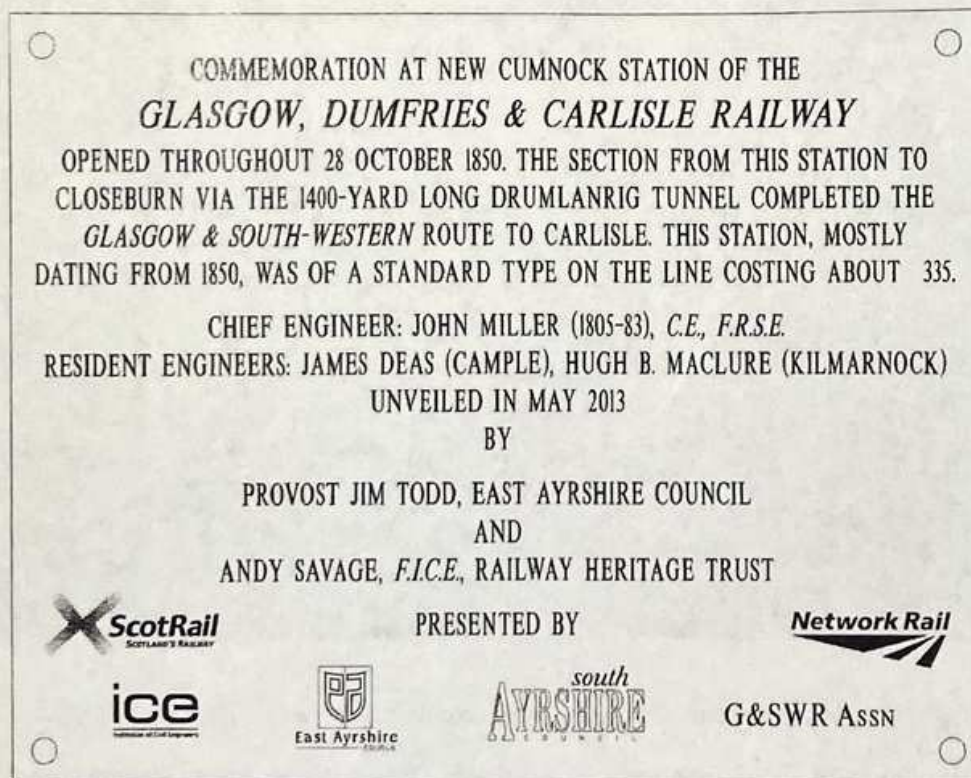


Map of Railways in Scotland Octr 1846 – note Closeburn to New Cumnock on GD&C Railway

The Institution of Civil Engineers in Scotland, further to its plaque commemoration of Miller's railway engineering achievement in east and central Scotland at Haymarket Station in 2005 and, from Glasgow westwards, at Ayr Station in 2011, has now provided a third at New Cumnock Station, with the valuable support of the G&SWR Association, Network Rail and ScotRail. We are honoured that Provost Jim Todd of East Ayrshire Council and Andy Savage, Executive Director of the Railway Heritage Trust, have kindly agreed to unveil the plaque, a knowledge promotion contribution to the refurbishment of part of the 1850 station for railway and local community use.

This railway line between Glasgow and Carlisle, although longer than Locke's Caledonian Railway alternative via Beattock Summit (opened 1848), was better engineered for steam locomotion in terms of its gradients and for more than a century served as the main line between the cities. It is still well used. Construction of the New Cumnock to Closeburn length of line was in accordance with the usual practice, that is, let in several-mile long sections to various contractors. For supervision of the execution of the work as designed Miller relied on his competent resident engineers James Deas (based at Cample site office near Thornhill) and Hugh Maclure from the Engineer's Office at Kilmarnock.

This plaque commemorates the line, opened throughout on 28 October 1850 on completion of the 26-mile length of line from New Cumnock to Closeburn, near Thornhill (see map). The Drumlanrig section, with the possible exception of those including Miller's masterpieces further north, Lugar Water and Ballochmyle Viaducts, required his consummate design skill and proved the most difficult to construct. It included the lofty masonry viaducts at Cample, Carronhill, Carron, Enterkin Burn¹ and Crawick¹ and the 1400-yard Drumlanrig Tunnel.²



Plaque proof layout as prepared for manufacture by Alexander Pollock *Precision Engravers*

¹ Network Rail's recent sensitive refurbishment of spandrel cracking in the Crawick and Enterkin Burn viaducts attracted a well-deserved *commendation* in the Saltire Awards for Civil Engineering in 2011.

² For some further information on the railway and its structures (and Dumfries Station), see: Hight, Campbell. *The Glasgow and South-Western Railway*. Oakwood Press, 1965, various pages. Paxton, R. & Shipway, J. *Civil Engineering Heritage Scotland Lowlands and Borders*. Telford, 2007, 36-38.

The illustrations in this tract are from originals in the author's possession. Map from *Scottish Railway Gazette*.



Carron Viaduct

The reason that the Drumlanrig section was so difficult to achieve, which delayed completion until October 1850, was meeting the Duke of Buccleugh's requirement that the railway should not continue along the Nithsdale valley floor through the grounds of Drumlanrig (passing about $\frac{3}{4}$ mile in front of the Castle). Meeting this condition involved a considerable detour and elevation of the line from Carron Bridge, via an otherwise unnecessary Drumlanrig Tunnel with tall viaducts at each end, to Enterkinfoot, where a massive retaining wall was required to support the railway.



Enterkinfoot Retaining Wall supporting railway above (near tree line). R. Nith below barrier.

The Drumlanrig section, including the tunnel 'key to the whole line' cost the then huge sum of nearly £150,000 (equivalent now to about £100m). Construction of the tunnel in difficult rock conditions proved beyond the skills of the contractor for this section, Brown & Oliver, who in 1848 found it expedient to enter into an arrangement with Thomas Campbell an expert tunnelling contractor who successfully completed the contract by October 1850. The number of men at work on this section in 1847 was 600 [GD&CR Minute Books 1-3 NAS].

Letter from Resident Engineer Hugh Maclure's Copy Letter Book

George Martin Esqr.

Kilmarnock 29th August 1850

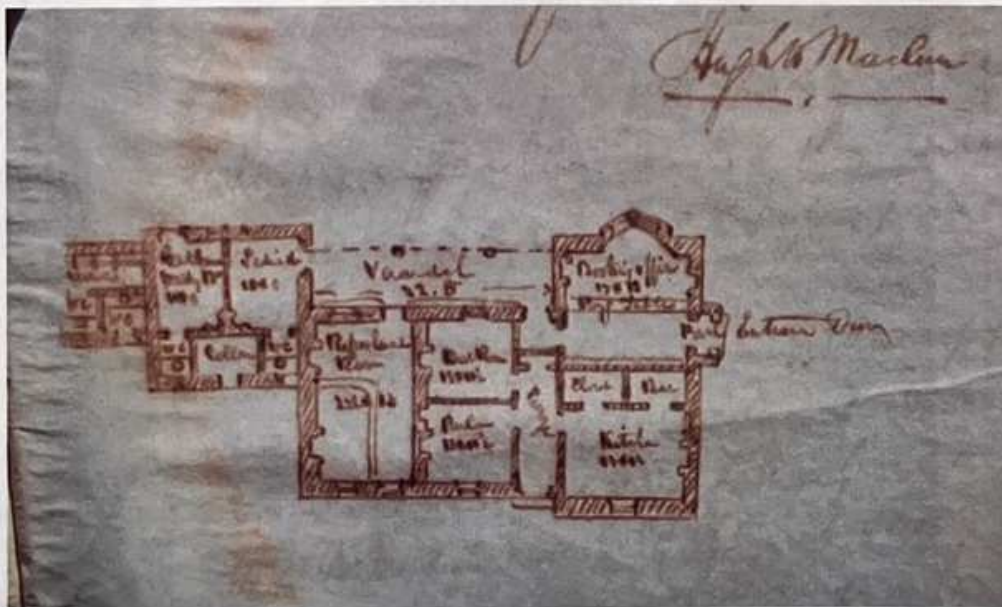
My Dear Sir,

I am favoured with your letter of yesterday's date.

As to the Accommodation & Cost of our Station Rooms, I think the best plan is to send you a rough tracing of one of them. We have adopted this style at Old Cumnock, New Cumnock, Kirkconnel, Thornhill & Closeburn and the Average Cost is £335 each.

I may mention that our Station House for Sanquhar is built on a larger scale as we will require always the call here for ... a refreshment room and cabin waiting rooms as per hand sketch. The cost of the extra size house is £460. You will understand that the Costs of Platform Water (for Passengers) and Loading Bank Water for Cattle, Minerals &c. are not available. On an average the Cost of these Works for our Stations was about £35.

I hope the above information is something like what you require and if anything other is wanted I shall be happy to supply you with anything you may require. (signed as below)



Maclure's 'rough drawing' of a typical style of station adopted on the GD&CR c. 1850

School of the Built Environment, Heriot-Watt University, Edinburgh, 2 May 2013. (100 copies)