



THE ROCKET

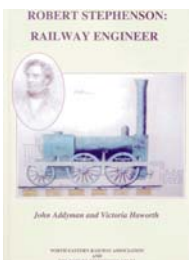
Publications

Robert Stephenson: Railway Engineer



The July 2007 edition of BACK TRACK gave a 5 star credited review of;

Robert Stephenson: Railway Engineer by John Addyman and Victoria Haworth pub. NERA *This well produced and illustrated book aims to survey the whole range of*



Robert Stephenson's railway work and correct the imbalance due to Smiles who credited most of Robert's early work to his father George. Whilst George may have

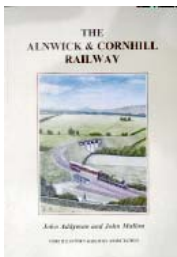
been the greatest of the pioneers and be famous worldwide, Robert was one of the three 'greats' of the 'Heroic Age' of railways along with Joseph Locke and Isambard Kingdom Brunel... This is really essential reading and reference for any student of railway history and is not just a 'memory-jogger' for those who rarely study the period covered; there are useful things to learn on every page and the book helps to explain many engineering attitudes and things that happened in later years, long after he was gone.

Robert Stephenson: Railway Engineer
full price £19.95

This 176 page A4 size publication is printed on gloss art paper throughout with a case-bound colour cover. There are in the order of 110 monochrome photographs and line drawings together with 4 pages of colour illustrations.

£24.45 including p+p to UK address.

Alnwick & Cornhill Railway



A book launch of Alnwick & Cornhill Railway pub. NERA took place at Barter Books, Alnwick on Friday 30 November 2007 at 7p.m. The joint authors are John Addyman and John Mallon. £13.50 including p+p to UK address

Robert Stephenson Abroad, Egypt 1847-59



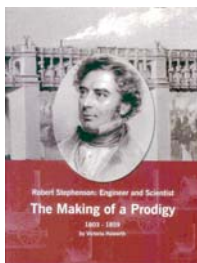
ROBERT STEPHENSON ABROAD
EGYPT
1847 - 1859

Full price £5.45
Favourable reviews of Robert Stephenson Abroad, Egypt 1847-59 were published in the journals of the Stephenson Locomotive Society and the Railway and Canal Historical

Society.

Special Price to Friends £3.99 plus £1.00 p+p to uk address

The Making of a Prodigy



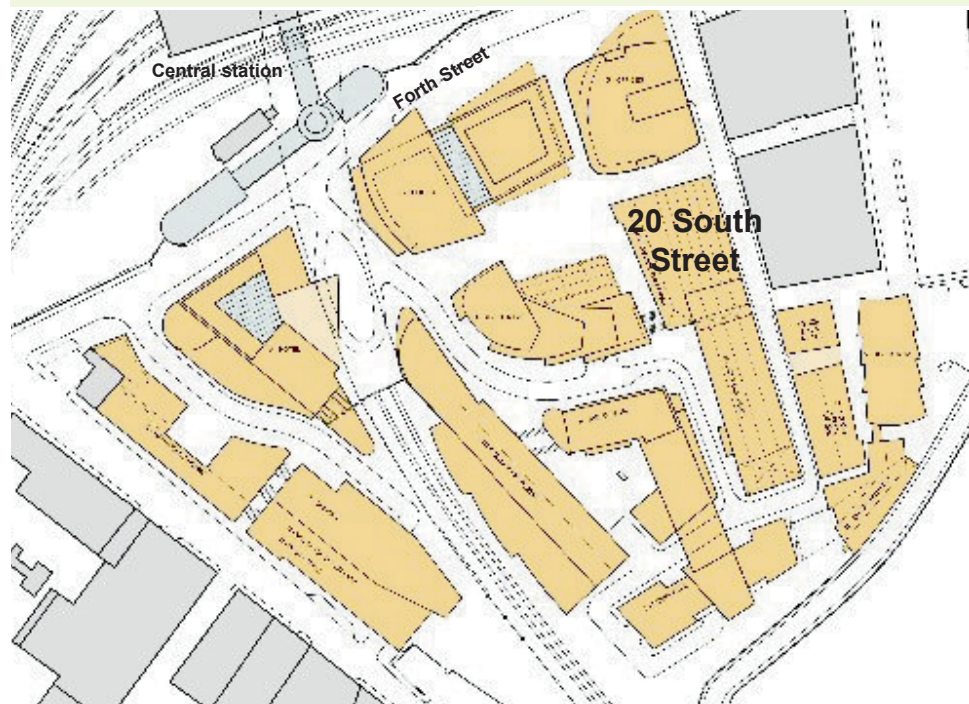
Full price £11.80
Robert Stephenson - Engineer And Scientist - The Making Of A Prodigy
90pp. by Victoria Haworth. *Writing from such a distance, he lived from 1803 -59, is not easy and the*

author attempts to tease fact from fiction and lay to rest the confusion that various myths have created..... Review by Steam World.

Special Friends price Price £8.95 plus £1.55 p+p to UK address



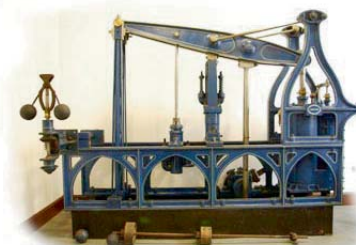
THE ROCKET



The Stephenson Quarter development is described as a 1 million sq. ft. multi-use development in Newcastle City Centre. Silverlink Property will develop a mixed-use scheme on the 9-acre site and will include

around 300,000 sq ft of office space, behind Central Station. It will also create two hotels, retail units, 250 apartments, a centre for creative industries and large public spaces. The ten-year phased £250m development is Silverlink's second major scheme in the city centre, following Trinity Gardens.

Thanks to the continued support of all Friends the Trust continues to deliver its objectives.



A very special thanks to Friend Ben Crowdy and helpers for reassembling and renovating the Atlas Centre Lathe -circa 1915 which makes a fine complimentary exhibit in the Annex alongside the Grasshopper engine.



Maintenance work update

May Gurney Rail are the framework contractors for Network Rail, with Mott MacDonald acting as consultants on this Grade I structure.

The nature of the works dictated a high level of openness and co-operation between Client, Consultant and Contractor as, at the outset, it was not known how extensive the wear and tear really was. The original refurbishment contract cost was around £5.5m but this has escalated considerably as work progressed to £30m. The decision to shot-blast all metalwork down to bare metal proved both revealing and expensive as it revealed several major cracks and much localised corrosion. A total paint thickness of around 1330 microns, corresponding to 33 coats of paint, was noted.

Because of the structure's listed status, English Heritage in consultation with the Conservation Officers of both Newcastle City and Gateshead Councils sought to replace like with like where renewal had to take place and this created some interesting challenges in the case of cast iron members. These tended to be less in the way of structural members and more items such as hollow cast hand-rails which



Bridge during refurbishment

required foundry skills which are rare today. However, the need to expose the bottom ends of all of the steel road-deck hangers (which run through hollow square cast-iron columns) required extensive use of stitch drilling and subsequent reinstatement of sections of cast iron to full design strength.

The road deck is based on 150 mm hardwood planks with a bituminous overlay while the footways are treated softwood timbers. At an early stage in the works, it was decided that impact protection of the cast-iron columns to current standards was



Construction of girder runways to transport materials required during the refurbishment of the High Level Bridge

essential and in consequence, it was announced recently by Newcastle City Council (the designated Highway Authority for the bridge) that, on completion, only buses and taxis travelling in a southerly direction would be allowed, with no access for cars or commercial vehicles in either direction.

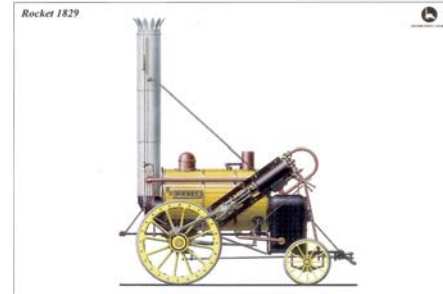
One sobering thought is that the original works brief from Network Rail required the bridge to be stabilised for a further 50 years, at which time it is possible that it will be decommissioned as a part of the transport infrastructure and become purely a listed monument. Designing a replacement to carry the rail traffic across the Tyne will no doubt fall to some future Robert Stephenson.

A further item on the High Level bridge appears in the current edition of *The Gazette*.

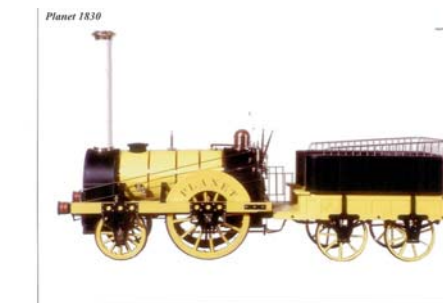


NEW From Trust Shop

Now available at special price to Friends of the Trust at £1.50 per set of 4 including p+p to uk address. The cards are postcard size 6" x 4" approx.

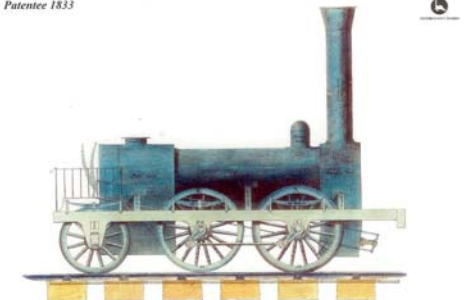


Rocket 1829: Although designed by Robert Stephenson to meet the "Stipulations & Conditions" of the Rainhill Trials scheduled for October 1829, the Rocket formed part of his locomotive development programme begun in January 1828. Rocket proved to be the prototype of all subsequent steam locomotives and was rapidly superseded as Robert built on its success by introducing more innovative features.



Planet 1830: This was the first of Robert Stephenson's locomotives to have inside cylinders built below the boiler to help conserve heat and improve efficiency. Robert succeeded in the difficult undertaking at that time of making the necessary crank axle and introduced a double frame in order to reduce the strain on this axle.

Patentee 1833



Patentee 1833: A six wheeled development of the Planet, incorporating and patenting all Robert's former practices such as multi tubular boiler with integral firebox, smoke box, blast to stimulate the fire, improvements to the valve gear and his latest innovations, the steam brake and the removal of the flanges on the driving wheels to reduce stress on the crank axle. The Patentee type was the basic locomotive design chosen by Daniel Gooch to serve the broad gauge Great Western Railway.

Long-Boiler 1841



Long-Boiler 1841: This was a further patented design aiming at greater efficiency and power by increasing the boiler dimensions. Robert's improvements to the valve gear immediately led to the "Stephenson Link Motion". It proved to be a hugely popular model, still in use on the continent of Europe 100 years later.