

Book review

THOMAS TELFORD'S HOLYHEAD ROAD: THE A5 IN NORTH WALES.

J. Quartermaine, B. Trinder and R. Turner. Council for British Archaeology, York, 2003. ISBN 1 902771 34 6, £17.50, 204 pp.

This book documents the Welsh section of what is arguably the most significant achievement of one of Britain's greatest engineers, Thomas Telford's London to Holyhead Road. Telford himself considered the Menai suspension bridge, at the time the longest of its type in the world, as his single greatest engineering feat.

The book is a well-written research report of a survey of the route commissioned by CADW, Welsh Historic Monuments, to determine the features of the original road that still exist. It is very readable, and describes, using contemporary sources (original documents at the Public Record Office, ICE and elsewhere), the background to the commissioning of the project and its planning and construction. It was the first totally public-funded highway in Britain, replacing earlier turnpikes and poor-quality tracks with a modern high-speed route enabling the mail coaches to travel at the fast average speed of 8 mph over its whole length. Telford designed the route with a maximum gradient of 1 in 30 almost throughout, allowing the coaches to travel at a trot and replacing roads that in places were up to 1 in 6.5. This was accomplished despite the difficult terrain over the 83 miles of mountains, steep-sided valleys and boggy moorland. The improvements to this section of the London to Holyhead road saved 5 hours on an original journey time of 17 hours.

The study came about after the then Welsh Office reviewed the policy for this part of Telford's London to Holyhead Road on completion in 1994 of the A55 coastal expressway between Chester and Bangor, which provided an alternative high-speed route across North Wales. Large sections of the A5 were virtually original apart from the modern road surfacing. With the existence of an alternative the Welsh Office decided that major improvements to the route were inappropriate, considering its character and history. A policy, new to the UK, of fitting the traffic to the road rather than the other way round was evolved, and several proposed improvements were cancelled. This new policy would aim to preserve the existing historic features of the route.

CADW commissioned a full survey of the Telford road to

identify all the extant original features including milestones, structures, tollhouses and coaching inns. At the same time the Welsh Office erected signs identifying the route as an historic route and naming Thomas Telford as the engineer.

The book describes the planning, design, management and construction of this major nineteenth-century project as well as detailing the results of the survey work to identify extant features. In particular, the information on the innovations introduced by Telford that advanced highway and bridge design, including his suspension bridges at Menai and Conwy, is a valuable study of the development of engineering principles. His insistence on consistent and high standards of construction and quality control (for example, particular care for proper drainage and strict compliance with the maximum stone size in each layer of construction) ensured a durable highway that still forms the foundation of much of the present road. The management techniques used to control the 123 different contracts along the route are described.

The survey has shown that generally between 40% and 50% of the route retains original features, and 676 sites have been recorded, examples of which are listed in the volume, including retaining walls, embankments, bridges, milestones, toll-houses, coaching inns and the depots provided at quarter-mile intervals to hold materials for the rapid repair of defects in the road surface. One chapter describes the route and the extant features in detail and is an excellent historic record as well as a guide to anyone visiting. There are also chapters dealing with the great embankments, bridges and the coaching inns along the road.

The industrial archaeology coverage of this great road is excellent, but parts of the historical chapters are not to the same high standard. There are a few minor errors in the text: William Clowes should be Josiah, confusion on the difference between a resident engineer and a contractor is apparent in at least one place, and an assumption that Telford's management and organisational arrangements were new is incorrect. He may have developed those of earlier and contemporary engineers such as Brindley and Rennie but not necessarily innovated. But one early section about Telford's relationships with other engineers of the time does tend to diminish the scale of Telford's personal achievement. The repetition of a reassessment of Telford by Hadfield in 1994, based on Telford's autobiography, suggesting that he failed to acknowledge the

achievements of his equals—an assessment that has been refuted and highly criticised as misfounded and incompatible with authoritative early evidence—tends to lessen the achievements of this eminent member of our profession.

The book is well illustrated with photographs and sketches, and has an extensive bibliography to assist anyone wishing to

undertake more detailed study. It is a very readable account of the construction of the early nineteenth-century equivalent of a major motorway and of the engineering innovation needed. Despite a few failings it is a very interesting and illuminating read.

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