

The Transport Revolution: Transport in 1700

In the 18th century the fastest means of travel and communication was the same as in Roman Britain 2000 years before - a man on a galloping horse. For larger numbers of travellers there were coaches, but these were infrequent, slow, uncomfortable and expensive. They were the favourite prey of highwaymen and in bad weather passengers were always having to get out and push. In 1750 a coach took 16 days to travel the 400 miles from London to Edinburgh and 2 days to do the 50 miles from London to Cambridge.

The problem was the state of the roads. Most were cart tracks across the countryside, impassable in winter and full of holes so deep that horse and rider could drown after heavy rain. Sometimes roads just disappeared and one landowner erected a lighthouse to guide travellers to their destination. There was little attempt to construct roads with hard surfaces and solid foundations. The best ones like Watling Street and the Great North Road (now the A1) still used the original Roman paving. This was a problem for the revolution in industry after 1760. Raw materials had to be transported to the factories and manufactured goods sold to as wide a market as possible. The roads of the time couldn't cope. The quickest way of moving heavy goods was to float them by sea or river - on land only slow-moving wagons and packhorses were available. Carting coal 10 miles by road doubled its price. At that figure no one would buy it, so it was not worth expanding production. To grow, industry needed better transport.

Roads Definition of turnpike trusts

These were groups of landowners and businessmen who persuaded Parliament to pass laws authorising them to take over and rebuild stretches of road. To pay for this they were allowed to erect barriers called toll bars at both ends of the road and make travellers pay for using it. The toll bar was armed with spikes to stop horsemen jumping over it - hence 'turnpike'.



The London-Exeter mail coach changing horses at a coaching inn

General Wade (1673-1748)

The first of Britain's great road engineers, he built 250 miles of road and 40 bridges in Scotland 1725-37. Like the Romans, he believed firm foundations were essential and he cambered (curved) the surface so that water drained off into ditches on each side. This was financed by the government to aid military control of a rebellious area.

John Metcalfe (1717-1810)

Known as Blind Jack of Knaresborough and totally sightless from the age of six, he was responsible for 180 miles of turnpike road in the North. The secret of his success was the unlikely use of heather and brushwood as a foundation for layers of stone and gravel. His road surfaces were jagged stones which bonded together under pressure of wheeled traffic.

Thomas Telford (1757-1834)

Son of a Scottish shepherd, he rose from humble stonemason to one of the greatest civil engineers in British history. He began as surveyor of roads for Shropshire and then cut the Caledonian Canal across Scotland from coast to coast. His masterpiece was the London-Holyhead road (the present A5). The natural barriers of Wales presented a problem to road planners and, Welsh roads being impenetrable, the London mail coaches had previously stopped at Shrewsbury. Telford's answer was to drive his road straight through the mountains of Snowdonia and take it over the Menai Straits to Anglesey on his own magnificent stone and steel suspension bridge. His roads were based on a foundation of large hand-laid stone blocks, followed by a layer of smaller stones and a scattering of chippings on top. They were built like the Romans' and will probably last as long.

John Macadam (1756-1836)

He reckoned that Telford's expensive construction methods were unnecessary and demonstrated that a 10-inch layer of small stones was enough, without the massive foundation. Most turnpike trusts naturally preferred Macadam to Telford. Macadamized roads transformed the country and permitted travel at speeds thought impossible a generation before. By the 1830s 1100 trusts controlled over 20,000 miles of road (though this amounted only to 20% of the total). Improved road surfaces and better-designed coaches reduced the London-Edinburgh time to 2 days and London-Cambridge to 7 hours. A good stage-coach (so-called because its four horses were changed at every 'stage') averaged 10 miles an hour and the 'Independent Tally-ho' averaged 14 miles an hour from London to Birmingham. Post Office mail coaches were the fastest (on a blast from their post-horn, toll gates were opened in advance), so news of Wellington's victories over Napoleon were chalked on their sides. Coaching inns sprang up along the main routes, where travellers could eat and horses be changed (200 horses would be used to pull a coach from London to Exeter). Fares were expensive. At a time when a labourer earned 50p a week, a ticket from Norwich to London cost £1.50 - though admittedly it was cheaper to ride on the roof! Travel was for the rich. Nevertheless, in 1740 one coach a week travelled from Birmingham to London and by 1783 there were 30 a week and by 1829 34 a day. But the coaching era was short-lived. The growth of railways in the 1840s emptied the roads until the motor car arrived after 1900.