

Navvies and the equipment used to build the line

Several hundred navvies were needed to build the line under the contractors, Messrs. Reed Bros and Co. These navvies not only worked with shovels and wheelbarrows but included trades such as bricklayers, blacksmiths, rock drill operators and carpenters.

The navvies would have lived in encampments in temporary wooden cabins as there would not have been adequate local accommodation. Some families accompanied the navvies as they travelled across the country from job to job. Single navvies generally lived in dormitories with a landlady cooking food that the navvies bought. There would have been several food shops and public houses. Farm labourers were attracted to become navvies because of the higher wages despite the dangers of the work.

The spiritual needs of the navvies would have been attended to by a navy missionary and a mission hall. The Navy Mission Society was formed in 1877 just after the line was completed.

The work was heavy manual labour. Labour saving equipment such as steam excavators were not employed on navy sites until later.

The only photograph that has been found which could be of the construction of the line—possibly Tidenham tunnel south portal (*Yockney family records courtesy of Iain Yockney*)



An insight into the plant and equipment used by the navvies can be obtained from auction sales after the line was completed. This auction notice from *The Star of Gwent*, 9 December 1876 identifies:

- A newly developed Ingersoll pneumatic tunnel boring machine with enough air tubing to supply the machine from an engine outside the tunnel.
- 80 tip wagons which were used to unload excavated earth and rock onto embankments or spoil heaps. These wagons also brought the navvies and equipment to the work locations. The tip wagons were

Sales by Mr. Middleton.
PRELIMINARY NOTICE.

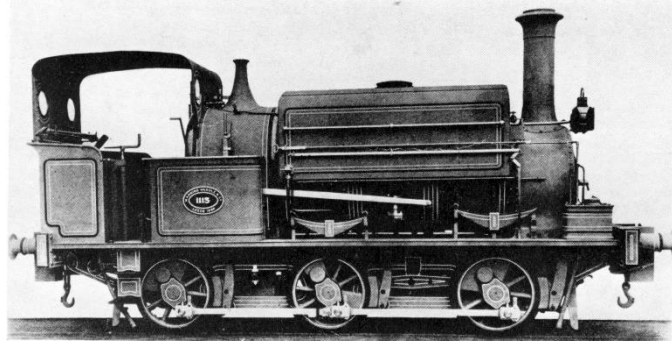
WYE VALLEY RAILWAY.

TO ENGINEERS, RAILWAY CONTRACTORS, AND OTHERS.

The valuable **SURPLUS PLANT and MATERIALS** used in the construction of the above railway and disposed of in consequence of the completion of the line, comprising, in part :—One six-wheel saddle tank locomotive, by Manning and Wardle (nearly new), tunnel boring machine (by Ingersoll), including horizontal ten-horse power engine, accumulator, drills, and about 500 yards 2½ inch wrought iron air tubing, 3 river barges, 80 tip waggons, ballast trucks, rails, sleepers, tunnel shaft gearings, pile engines and monkeys, contents of smiths' and carpenter's shops, stores, horses, carriages, &c., &c., which will be **SOLD by AUCTION**, by

designed to act like a wheelbarrow. They could pivot on the front axle. Considerable excavation was required north of the Tidenham tunnel where the sloping banks of the river are very steep. In addition to excavation, embankments were required to level the trackbed.

- Horses. A large number of horses would have been employed and stabled close to the work. A newspaper sale advertisement, 15 July 1876 described them by name: Short Legged Active Cart Horses – including Polly, Bay Mare, six years old and ; Harness horses including Dick, Bay Gelding, 5 years old.
- A six-wheeled saddle tank engine by Manning and Wardle who built a significant number of steam engines used in the construction of the railways. Wheel washing equipment was often installed on these locomotives as the nature of their work meant that the wheels were regularly covered in mud and dirt. One of the main duties of the locomotives was to haul the tip wagons.
- 3 river barges which would have probably been the shallow river barges known as trows.



Manning and Wardle six-wheeled saddle tank engine. Photograph c 1890. (Wikimedia Commons - public domain)

The working life of the navvies is illustrated below from the S W A Newton Collection at the Leicestershire, Leicester and Rutland Record Office.



A group of navvies pose beside their hut in Leicester, circa 1897. These men are all wearing the unmistakable navvy dress of thick trousers, waistcoat, hat and neckerchief. (Record Office for Leicestershire, Leicester and Rutland)



Navvies and boys at work in a shallow cutting at Grendon-Haddenham, Buckinghamshire, circa 1903. The rails are not the permanent way, but temporary tracks laid by the contractor. Both horses and locomotives were used to pull the large number of tipping wagons required to move the enormous quantities of earth between cuttings and embankments. (Record Office for Leicestershire, Leicester and Rutland)



0-4-0 Contractor's saddle tank locomotive 'ANNIE', built by the Hunslet Engine Co. of Leeds, and photographed in 1896 at rest with her crew and a gang of navvies between Rugby and Willoughby. The navvies are working with their heavy triangular shaped spades.
(Record Office for Leicestershire, Leicester and Rutland)

This photograph is thought to have been taken at Middle Claydon, Buckinghamshire, in June 1897. The man standing on the right was a lay preacher attached to the Navy Mission Society, and he is known to have worked at the nearby Mission room at Calvert where he led services and a Sunday School for the navvies and their families. The family he is posing with here are presumably members of his flock.
(Record Office for Leicestershire, Leicester and Rutland)

The compressed air boring machines, otherwise known as rock drills, operated just as pneumatic drills used by road repair contractors do today. They would have been exceptionally loud. Without ear defenders and in the confined space of the tunnel the sound would have been deafening. After holes were drilled in the rock, they were packed with explosives using a ramrod. Unless the ramrod was copper-tipped dangerous explosions could occur. The tunnel would have been dimly lit by candles and, probably, the smoke from previous dynamiting would be hanging in the air.

The following photographs were taken at a re-enactment of Victorian gang workers for a Channel 4 programme in 1988 at the Dean Forest Railway. They are reproduced here courtesy of Peter Holmes. They show how navvies would have laid the track.



Sizing up the job.



Using sleeper nips to manoeuvre a sleeper into position with the chairs fitted.



12 men manoeuvring a length of rail. The rail weighs approximately 30 kg per metre. It is important that the navvies walk in step to avoid dropping the rail.

Close up of the nips fitting under the head of the rail.



Fitting one of the two sleeper nips for final positioning of the sleeper.

There are conflicting accounts of the drunkenness of the navvies.

Handley and Dingwall (The Wye Valley Railway and the Coleford Branch) record that the navvies, mostly from Ireland, were a hard-drinking crowd and on pay day they headed for the cider houses of Chepstow. This disgusted Christiana Morgan who organised evangelical services with coffee at a building in Woodcroft partly to combat the drunkenness where they could attend bible classes and learn to read. Local sources in Tidenham believe that parenting skills were taught to the navvy's wives.



Christiana Morgan 1818-1889 (*Geoff Mead's papers courtesy of Tidenham History Group*)



The Reading Room at Woodcroft, believed to be the former Baptist Meeting Room and Coffee Room run by the Morgan ladies (*Geoff Mead's papers courtesy of Tidenham History Group*)

Geoff Mead records (Ref Dissertation-Railway influence upon a country parish. Tidenham 1845-1925-courtesy of the Tidenham History Group) that Charles Monks was arrested while working at the Tidenham Tunnel in May 1876 for stealing tools at the Severn Tunnel site where he had been working a few days previously. By February 1875, 'a great many complaints had been made of the damage done to property by navvies going to and from their work during the night and it was high time a stop was put to it.' The most typical offence was drunkenness, but the local magistrates constantly charged them for such activities as stealing from gardens, damaging fences, or taking away clothes. The magistrates could be very strict as one navy found when being 'fined the full penalty' of £5 for keeping a dog without a license.

In contrast the Bristol Mercury reported on the opening of the line that Samuel Hansard Yockney, the senior partner of the Engineers, said in his speech that 'he understood from one of the clergymen living in the district that the conduct of the men had been most exemplary, and that the disorder which so often followed the introduction of a body of navvies into a district had not shown itself there (hear, hear)'.

A similar alternative view as Samuel Yockney's was printed in The Chepstow Weekly Advertiser on 25 October 1862 at a time when other local railways were being built. At that time a viaduct across the Tay had just been built and the Duke of Athole observed at the opening ceremony that 'I was so much pleased, on the whole, by their conduct' and 'on the whole they have behaved themselves remarkably well ...and if they quarrel a little among themselves it seems to me that they rather like it'.

Accidents to navvies were common during railway construction. The Monmouth Merlin of 4 December 1874 records the death of Peter Pidsley age 41. On 9 March 1875 his brother was severely burnt after an explosion. Peter was born at Sowton near Exeter where he was a farm labourer. His father was born in 1796 at Topsham also near Exeter and worked as an agricultural labourer.

CHEPSTOW.
SHOCKING FATAL ACCIDENT.—On Tuesday afternoon a man named Peter Pidsley, a navvy, employed in the construction of the Wye Valley Railway, was engaged, with three others, at a heading of the proposed tunnel in the parish of Tidenham, in moving a large stone, when it slipped from its place and rolled upon the unfortunate man above-named, killing him on the spot. The other men had narrow escapes of their lives, a man named Hawkes, was struck on the leg with a portion of the stone. The estimated weight of the stone was about a ton.

DISTRESSING ACCIDENT AT WYE VALLEY RAILWAY WORKS.

An explosion, which it is feared will terminate fatally, occurred at the works of the above railway company on Thursday evening, whereby three men were more or less injured. One of them, named Pidsley—who, it strangely happens, is a brother to the poor fellow who met with his death almost at the same spot a short time since—was frightfully burnt about the head and body, so much so that, at the time of writing, but very faint hopes are entertained of his recovery. The two other men, who were not so severely injured, it is hoped will recover.

'The Railway Navvies' by Terry Coleman is a well-researched social history of the navvies that explains how their working conditions gradually improved throughout the 19th century.