

THE WOOLHOPE NATURALISTS' FIELD CLUB
(ARCHAEOLOGY RESEARCH SERIES)



RESEARCHING THE LEOMINSTER CANAL

Part 4 : RAIL - then PLATE

(*“ . . . these damned tramroads!”*)

Recalling the Survey of 1789

by

Thomas Dadford Junior

(*revisited with Gerry Calderbank*)

AN EARLY ENCOUNTER . . . *canal, rail and visitors*

- The Brecknock & Abergavenny Canal -

- **June, 1792: originally, the 'Abergavenny Canal' was intended to run from the Glangrwyney Ironworks, past Abergavenny, to the Usk tideway at Newbridge, between Usk and Caerleon.**
- **October, 1792: an extension to Brecon was approved. Following an approach from the Monmouthshire Canal, another extension linking the two canals was also agreed.**
- **1792: work commenced with a linear survey of just under 33 miles for the canal, plus several feeder tramroads.**
- **The engineer-designate was Thomas Dadford Junior, who was already engaged in building the Monmouthshire Canal; his plans and estimates were then approved in November, 1792.**
- **The effect of these contracts was to virtually debar him from continuing his work with the Leominster Canal, which he now seemingly deserted.**
- **Three feeder tramroads were envisaged - of which the Clydach Tramroad was the first to be built, in 1794.**

This activity was observed and recorded by two antiquarians during their travels through Monmouthshire, with their objective being a travel guide for the county. The book appeared in 1801 and it also included their river voyage from Ross to Chepstow – Chapters 35-36 – ‘Navigation of the Wy’ (sic).

Archdeacon William Cox 1747 - 1848



- Born in London, the son of the Court Physician to King George II.
- Education: Eton College & Fellow of King's College, Cambridge - Ordained.
- Chaplain at Blenheim Palace & tutor to the sons of the Duke of Marlborough.
- 1775: Henry, Earl of Pembroke engaged him and Capt. John Floyd, Dragoon Guards, to escort his son on the Grand Tour.
- 1779: Franco-Spanish involvement in the American War forced their return.
- Based at Blenheim, further involvement in 'Bear Leading' wealthy young men & travel writing.
- 1788: Lord Pembroke presented him with the living of Bemerton. Possible first acquaintance with Richard Colt Hoare.
- 1798: Their joint tour of Monmouthshire was most probably financed by Colt Hoare.

– ARCHDEACON WILLIAM COXE . . . Antiquarian and Travel-writer –

Preamble . . . to Jeremy K. Knight's Introduction for the New Edition of 'Coxe', (1995)

*A Traveller in Gwent two hundred years ago might have encountered two other visitors. Both were from Wiltshire. One was a short, rather stout clergyman in his early fifties, the other a tall, slender man some ten years younger. They were the Revd William Coxe, vicar of Bemerton (George Herbert's old parish), west of Salisbury and Sir Richard Colt Hoare, the owner of Stourhead, where each generation of his family had added its own particular contribution to the house and its grounds. Coxe and Hoare were in Monmouthshire collecting material for a book which Coxe was writing and Colt Hoare illustrating: *An Historical Tour in Monmouthshire*, finally published in two volumes in 1801, and often referred to simply as 'Coxe's Monmouthshire'.*

Whereas most of Coxe's written output seems to bear little weight with the literary critic nowadays, then the same cannot be said of his writings for archaeologists, antiquarians and historians although, even in such circles, his contribution to industrial archaeology has, until recently, been very underplayed. It's therefore remarkable that quite recent books on the Monmouthshire iron industry have sometimes omitted this primary source. Aside from his Picturesque lineage there has sometimes been, amongst certain archaeologists, a tendency to merely associate Coxe, because of the Colt Hoare linkage, with the barrow digging of some contemporary antiquarians - and thereby to forget the objectivity that his Latin scholarship sometimes brought to bear upon the more rigorous study of Celtic (especially Welsh) antiquity. This omission has now been rectified, and a more accurate appreciation of his work asserted, in the splendid 'Introduction' contributed by Jeremy Knight to the latest facsimile reprint of "*An Historical Tour in Monmouthshire*".

However, in the present context we must put aside any of his linguistic and Romano-British subject matter and all of the overseas tourism. We concentrate, instead, upon the significance of Coxe to the study of the early industrial landscape history and archaeology of Monmouthshire in general – and to his observations on transport in particular. Knight attaches huge importance to Coxe's descriptions of the contemporary industrial development which, during his third tour, he encountered around the iron-making uplands of Monmouthshire – together with his historical accounts of its recent past – as being of great significance to the industrial historian; and, incidentally, Knight informs us that 'pit coal' denoted coke

" . . . Coxe is a major primary source for the early industrial history of the county, particularly its iron industry. His list of the 'principal manufactories in Monmouthshire' gives a snapshot of this at a crucial point in its development. Charcoal furnaces, some going back to Elizabethan times, survived at Pontypool, Tintern and Abercarn, though the last was not used. There was also a series of charcoal furnaces for converting the cast pig iron into wrought bar iron, but the first of the new coke-fired blast furnaces ('pitcoal furnaces') were appearing at places like Nantyglo, Ebbw Vale and Blaenavon, though these pioneer settlements were not yet the black industrial towns of the future. Coxe was shown around the Blaenavon ironworks by one of the Cockshutt family, associates of the Crawshays at Merthyr Tydfil and elsewhere. His account provides precious detail of industrial and work processes, and such matters as the building of a railroad or tramway. Colt Hoare's drawing of the new ironworks at the end of its first decade is equally full of technical detail, and deserves careful scrutiny. The coal industry by contrast was still in its early days. Coxe noted that coal from Blaenavon supplied the surrounding area, though in fact this was not the result of the foundation of the ironworks. Local small landowners and farmers had been operating productive and profitable sale-coal pits at places like the Bloreng and Nantyglo long before the advent of the pitcoal furnaces."

Jeremy K. Knight – (1995)

For both the historian of early railways and more general readers, Chapter 24 is packed with contemporary information, to such extent that it might seem invidious to pick out any single item, whereby selection simply becomes a matter of personal choice. With many readers this will possibly be the detailed mining history; but for myself, from first acquaintance, it was the vast amount of detail regarding the construction of early Monmouthshire railroad track (including its evolution from cast iron to wooden sleepers) together with Coxe's explicit description of the 'cars' and, in particular their, 'grooved wheels'.

At first reading I had assumed a most uncharacteristic lapse in Coxe's language since he must surely have meant 'flanged' wheels? But evidently not, because further investigation and some extensive re-reading of Barrie Trinder (1983) plus the earlier writers such as Frederick S. Williams (1850) *et al.* recalled that both railway and mining tracks share a long, evolutionary progression. In short, the writers recount an evolution (at Coalbrookdale) from simple timber tracks to iron "scantling" plates laid over the wooden rail, and similar developments - albeit using just iron - near Derby, Ashby-de-la-Zouch and also in South Wales. In the first chapter of my (1880) edition of 'Our Iron Roads' Frederick Williams goes into considerable detail - but with some of this seemingly at odds with Coxe. Williams's Sheffield account relates an opposite sequence of change - from timber sleepers to stone blocks - so perhaps it's merely a chronological confusion since such change also occurred in S Wales (albeit only shortly after the Coxe excursions) when John Hodgkinson - of Abergavenny - started to replace the local Dadford and Sheasby edge rail with Outram-style plateway.



MONMOUTHSHIRE by Nathaniel Colman

This map accompanied
Archdeacon William Cox's
book of 1801:

"An Historical Tour in Monmouthshire"

The tour was undertaken by
Cox and Sir Richard Colt
Hoare (of Stourhead) in the
Autumn of 1798.

They would return twice
more – in the Spring and
Autumn of 1799.

Sir Richard, a competent
artist, made field sketches in
order to illustrate the book.

He also toured the district
independently of Cox,
writing as follows:

***THE CLYDACH TRAMROAD . . . is made at the heavy
expense of a thousand pounds a mile and its utility consists in
transporting very heavy burdens with few horses.***

*It is formed by long bars of iron cramped together, and
strengthened by others fixed crossways.*

*A deep cart with iron wheels is made to fit exactly the iron
track.*

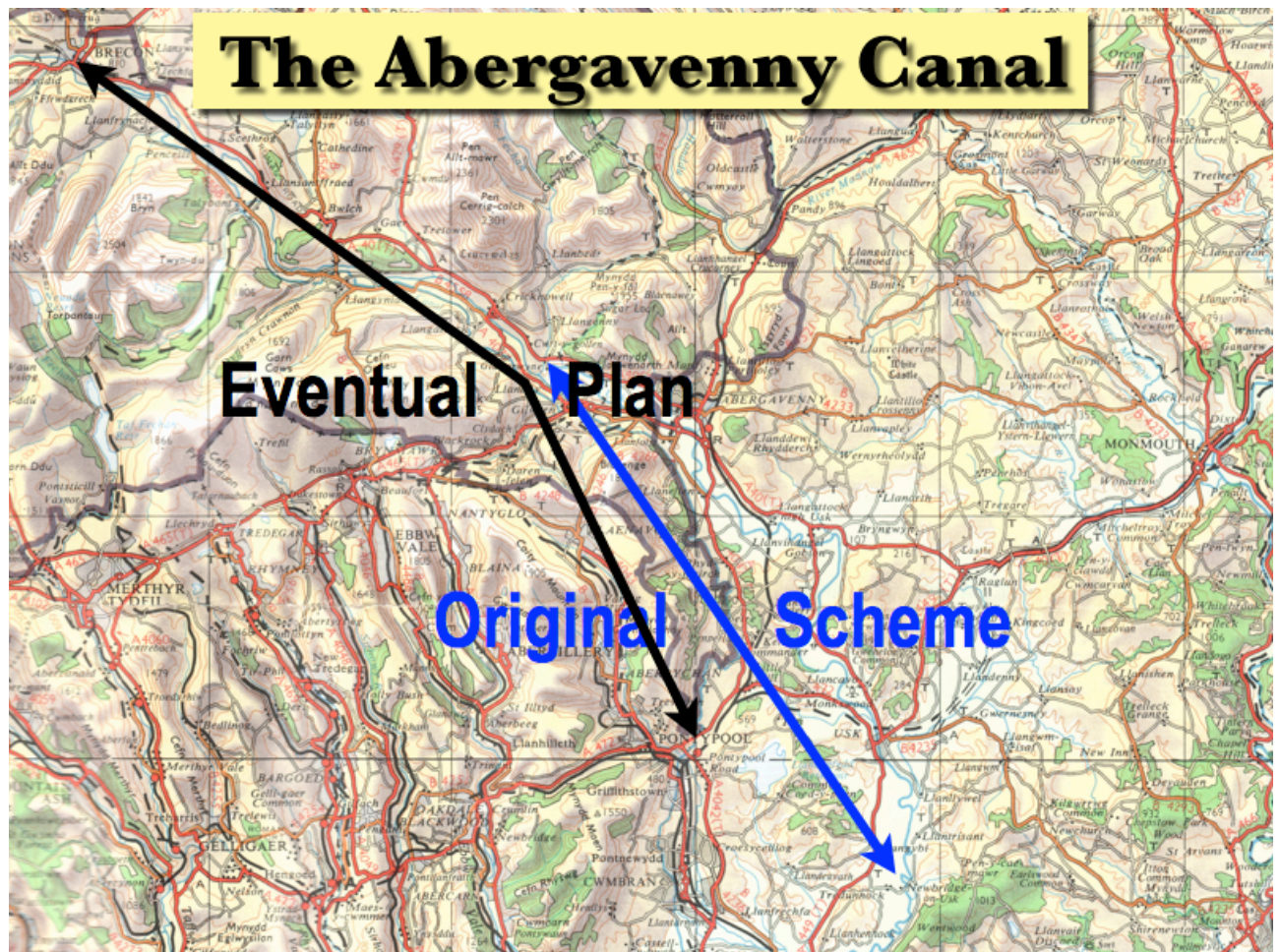
*The friction by this means is so small that they run with the
greatest facility.*

*It is curious to see a number of these carts laden with iron
stone etc running with great velocity down the sides of the
mountains without any horses.*

*One or two men stand behind the cart and by means of a lever
stop the motion of the wheels instantaneously.*

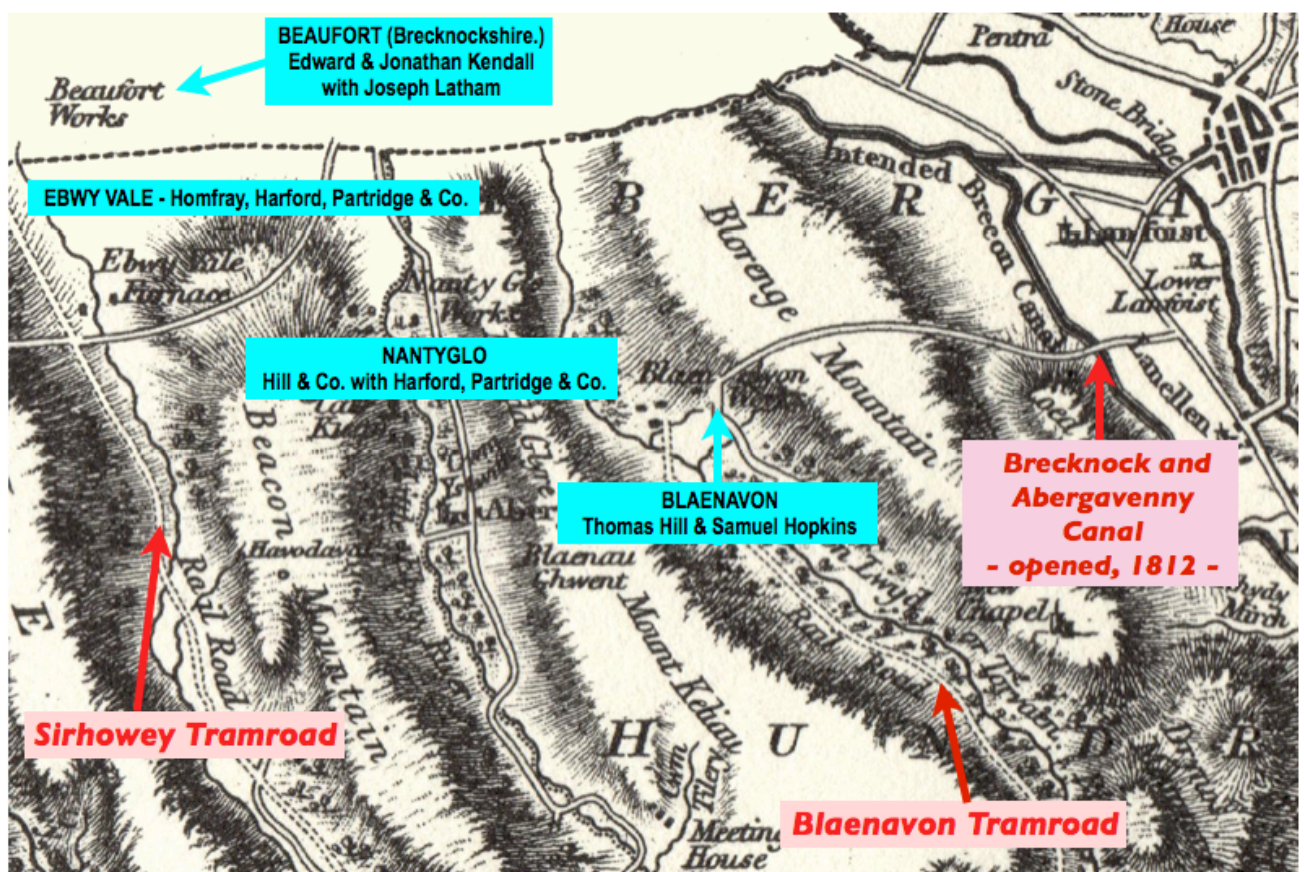
These carts carry the weight of three tons.

(Richard Colt-Hoare - 1798)



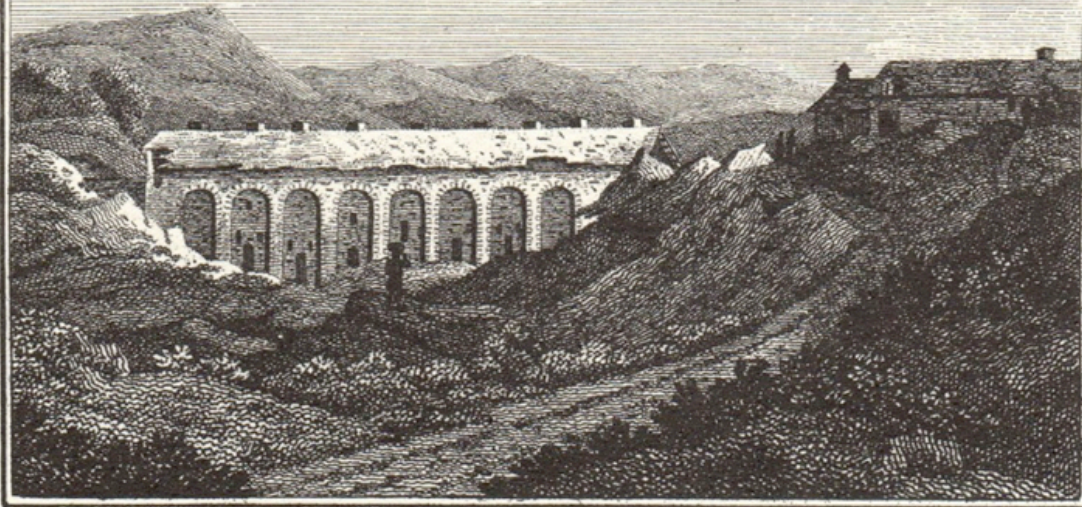
Adjacent Industry & Transport - c. 1800

(showing some early ironmaster partnerships)



- BLAENAVON -

Sketch by unknown artist - 'R.H.'
(almost certainly Richard Hoare !)



R.H. del.

W.B. direx.

COVER'D BRIDGE AT BLANEAVON.

Published March 1.1800, by Cadell & Davies, Strand.

- BLAENAVON IRON WORKS - Richard Colt Hoare's Fied-sketch - 1798



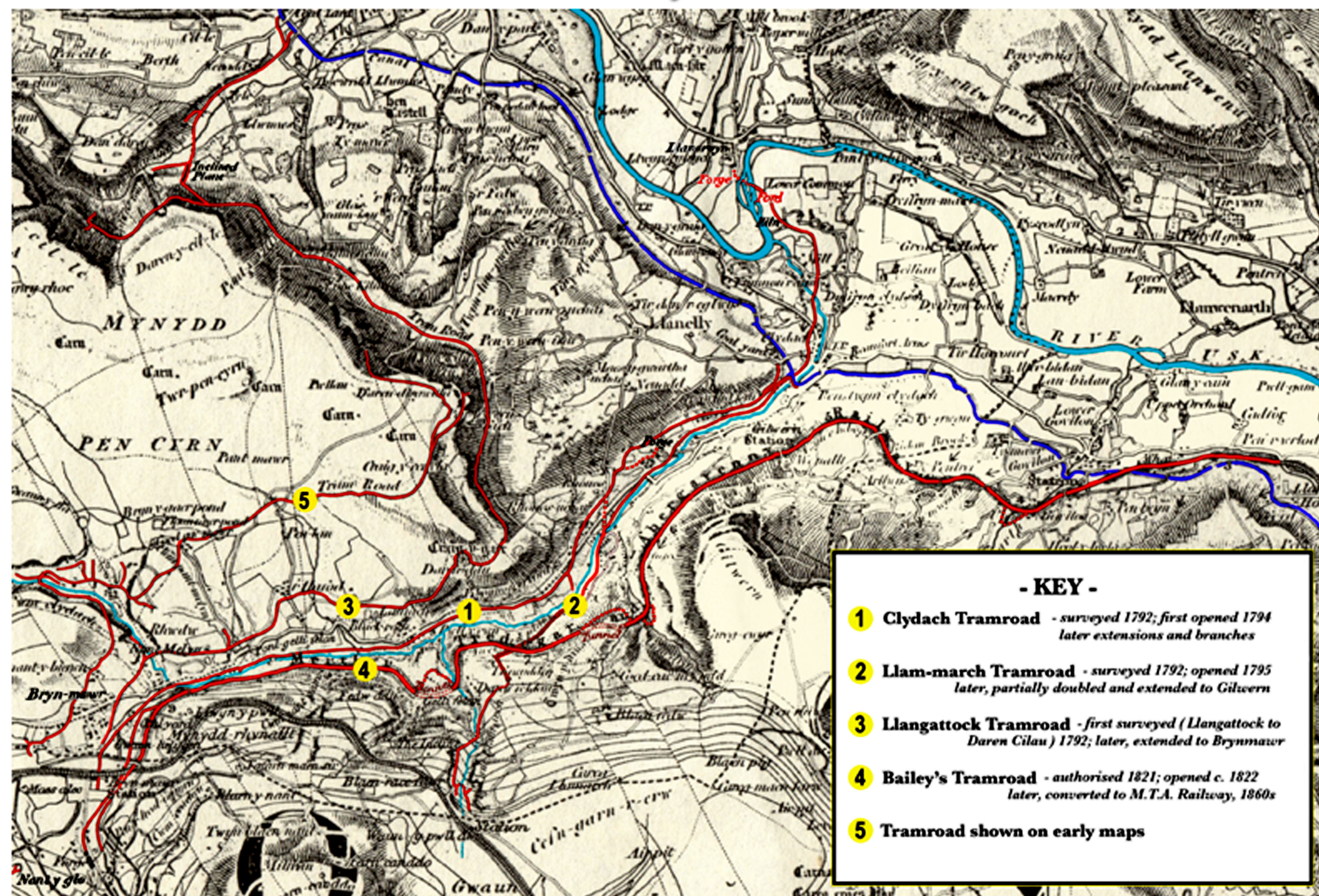
Sir Rich^d Hoare Bart^l del.

W. Byrne sculp.

IRON WORKS AT BLANEAVON.

Published March 1.1800 by Cadell & Davies, Strand.

Canal and Tramways ... in the Nineteenth Century



CHAPTER 24.

*Excursion from Abergavenny to Blaenavon.—Rise and Progress of the Iron Works.—
Route through the Valley of Avon Lwyd to Pont y Pool.*

IN the course of my expeditions I three times visited the iron works of Blaenavon, recently established in the vicinity of Abergavenny, which form a new and interesting object in the tour of Monmouthshire.

From Abergavenny, in company with sir Richard Hoare, I passed over the stone bridge of the Usk, along the plain between the river and the Bloreng, and went up the steep sides of the mountain, in a hollow way inclosed between high hedges, with occasional openings, which admit different views of Abergavenny and the circumjacent country. Emerging from the thickets of wood which clothe the lower and middle parts, we ascended a common, strewed with vast masses of rock, from whence a dreary moor leads to the summit, overlooking the works of Blaenavon, situated in the hollow of the mountain, near the source of the Avon Lwyd, from which the place derives its appellation.

At some distance, the works have the appearance of a small town, surrounded with heaps of ore, coal, and limestone, and enlivened with all the bustle and activity of an opulent and increasing establishment. The view of the buildings, which are constructed in the excavations of the rocks, is extremely picturesque, and heightened by the volumes of black smoke emitted by the furnaces. While my friend sir Richard Hoare was engaged in sketching a view of this singular scene, of which an engraving is annexed, I employed myself in examining the mines and works.

This spot and its vicinity produce abundance of iron, with coal and limestone,

G g 2

and

and every article necessary for smelting the ore: the veins lie in the adjacent rocks, under strata of coal, and are from three and a half to seven or eight inches in thickness; they differ in richness, but yield, upon an average, not less than forty-four pounds of pig iron to one hundred weight of ore. The principal part of the iron, after being formed into pigs, is conveyed by means of the rail road and canal to Newport, from whence it is exported.

The shafts of the mines are horizontal, penetrating one below the other, and under the coal shafts; iron rail roads are constructed to convey the coal and ore; which are pushed as far as the shafts are worked, and gradually carried on as the excavations are extended; the longest of these subterraneous passages penetrates not less than three quarters of a mile. The coal is so abundant as not only to supply the fuel necessary for the works, but large quantities are sent to Abergavenny, Pont y Pool, and Ufk.

Although these works were only finished in 1789, three hundred and fifty men are employed, and the population of the district exceeds a thousand souls. The hollows of the rocks and sides of the hills are strewed with numerous habitations, and the heathy grounds converted into fields of corn and pasture. Such are the wonderworking powers of industry when directed by judgment!

The want of habitations for the increasing number of families, has occasioned an ingenious contrivance: a bridge being thrown across a deep dingle for the support of a rail road leading into a mine, the arches, which are ten in number, have been walled up, and formed into dwellings; the bridge is covered with a penthouse roof, and backed by perpendicular rocks, in which the mines are excavated. Numerous workmen continually pass and repass, and low cars, laden with coal or iron ore, roll along with their broad and grooved wheels; these objects, losing themselves under the roof of the bridge, again emerging, and then disappearing in the subterraneous passages of the rock, form a singular and animated picture, not unlike the moving figures in a camera obscura.

The mountainous district which contains these mineral treasures, is held by the earl of Abergavenny, under a lease from the crown. It was formerly let to the family of Hanbury, of Pont y Pool, for less than £.100 a year; and as the value
of

of the mines was not sufficiently appreciated, no works were constructed; but the masses of ore found near the surface were conveyed to the forges of Pont y Pool. Soon after the expiration of the term, the district was granted by another lease to Hill and company, who began these works in 1788, and expended forty thousand pounds before any return was made; this expence, however, has been amply repaid by the produce.

On considering the rise and rapid progress of the iron manufactories in this district, as well as in the neighbouring mountains of Monmouthshire and Glamorganhire, it is a matter of wonder that these mineral treasures should have been so long neglected. This wonder will increase, when it is known that iron was manufactured in this country at a period beyond the reach of tradition or history. Large heaps of slug or cinder have been repeatedly discovered, some of which are evidently the product of bloomeries, the most ancient method of fusing iron; in other places are traced the sites of furnaces long disused, of which no account of their foundation can be collected. The appearance of these iron cinders, and the vestiges of ancient furnaces, indicate that many parts of this mountainous district, now wholly bare, were formerly covered with large tracts of wood; charcoal being the only species of fuel originally used in the operation of smelting, both in the bloomeries and furnaces. This conjecture is corroborated by numerous names, alluding to woods and forests, in places which have never been known to produce trees; and is still farther ascertained by the discovery of trunks and branches, with their leaves, under the boggy soil in the vicinity of Blaenavon, and on the neighbouring hills.

The lands being cleared, and the forests neglected, their destruction was hastened by numerous herds of goats, maintained in these mountainous regions; the want of fuel occasioned the gradual decline of the bloomeries and furnaces, and for a considerable period little or no iron was manufactured.

About forty years ago the iron works suddenly revived, from the beneficial discovery of making pig iron with pit coal, instead of charcoal, which was soon afterwards followed by the improvement of manufacturing even bar iron by means of pit coal: hence a district, which contained such extensive

tensive mines of ore and coal, prodigious quantities of limestone, and numerous streams of water, could not fail of becoming the seat of many flourishing establishments. Besides these local advantages, the progress of the manufactories has been powerfully aided by the application of mechanics; particularly by the use of the steam engine, and the great improvement of water machines; but in no instance have they derived more advantage than from the adoption of rollers, instead of forge hammers, now used for the formation of bar-iron, with a degree of dispatch, as well as exactness, before unknown. From this concurrence of circumstances, the success has been no less rapid than extraordinary: fifteen years ago the weekly quantity of pig iron made in this part of Monmouthshire, and in the contiguous district of Glamorganshire, did not exceed 60 tons; at present it scarcely falls short of 600; at that period no bar iron was manufactured; but now the quantity amounts weekly to more than 300 tons. The works are still rapidly increasing in extent and importance, and appear likely to surpass the other iron manufactories throughout the kingdom*.

In the vicinity of Blaenavon we observed the process of making a rail road, so called because it is formed by a kind of frame with iron rails, or bars, laid lengthways, and fastened or cramped by means of cross bars. The ground being excavated, about six feet in breadth, and two in depth, is strewed over with broken pieces of stone, and the frame laid down; it is composed of rails, sleepers, or cross bars, and under sleepers. The rail is a bar of cast iron, four feet in length, three inches thick, and one and a half broad; its extremities are respectively concave and convex, or in other words are morticed and tenanted into each other, and fastened at the ends by two wooden pegs to a cross bar called the sleeper. This sleeper was originally of iron, but experience having shown that iron was liable to snap or bend, it is now made of wood, which is considerably cheaper, and requires less repair. Under each extremity of the sleeper is a square piece of wood, called the under sleeper, to which it is attached by a peg. The frame being thus laid down and filled with stones, gravel, and earth, the iron rails form a ridge above the surface, over which the wheels of the cars glide by means of iron grooved rims three inches and a half broad.

This

* For these observations I am principally indebted to Mr. Cockshutt.

This is the general structure of the road when carried in a strait line; at the junction of two roads, and to facilitate the passage of two cars in opposite directions, moveable rails, called turn rails, are occasionally used, which are fastened with screws instead of pegs, and may be pushed sideways.

The level of the ground is taken with great exactness, and the declivity is in general so gentle as to be almost imperceptible* : the road, sometimes conveyed in a strait line, sometimes winding round the sides of precipices, is a picturesque object, and the cars filled with coals or iron, and gliding along occasionally without horses, impress the traveller, who is unaccustomed to such spectacles, with pleasing astonishment. The expence of forming these roads is very considerable, varying according to the nature of the ground, and the difficulty or facility of procuring proper materials; it is seldom less than a thousand pounds per mile, and sometimes exceeds that sum.

The cars, from the solidity of their structure, and the quantity of iron used in the axle tree and wheels, when loaded weigh not less than three tons and a half; they are drawn by a single horse, and the driver stands on a kind of footboard behind, and can instantaneously stop the car by means of a lever and a drop, which falls between the wheels, and suspends their motion. In places where the declivity is more rapid than usual, the horse is taken out, and the car impelled forward by its own weight.

On our return to Abergavenny, I rode to the summit, and walked from thence to the turnpike, at the foot of the Blorenge, which I found a much more agreeable way than along the hollow road I had before traversed. As I descended, the views were no less pleasing than diversified; the principal features of the shifting landscape, were the rich vale watered by the Ufk; the mountains above and round Abergavenny; the town, which here formed a sweep under the undulating Derry, crowned by the Sugar Loaf, and there appeared standing on a gentle rise, with its towers and ruined castle backed by the majestic Skyrrid.

Near a castellated farm house belonging to Mr. Hanbury Williams, I left the
hollow

* The perpendicular fall of the ground is commonly no more than an inch in a yard, and scarcely ever more than three inches.

High-level Tramroad . . . near the Pant-draenog quarries leading to Brynmawr and Nantyglo



En route for Brynmawr. Geologists will probably notice a looming change of terrain as Carboniferous Limestone gives way to the boggy Millstone Grit, much like Coxe's 'dreary moor' in the distance. Industrial historians will certainly note the drilled stone sleeper blocks - indicative of a plateway!



Clydach Gorge . . . an ironstone nodule

As reported by Coxe, the ironstone was once plentiful, but is now very depleted by quarrying, mining, and the major roadworks in the gorge area - plus extensive post-industrial landscaping in many other places.

A Clydach Gorge Chronology . . . *the early years*

- 1773** Charcoal fuelled furnaces and forges at Clydach and Llanelly amongst the few reputedly then extant in Brecknockshire.
- 1793** **Brecknock & Abergavenny Canal** authorised, opening in 1812. The original intention was to build a canal from the Glangrwyney ironworks so as to join the Usk tideway at Newbridge above Caerleon, but pressures from Brecon and the **Monmouthshire Canal Company** led to an expanded scheme. Unusually, the canal company built several feeder tramroads before starting work upon the canal itself; three of these tramroad routes were surveyed in 1792 by an engineer designate, **Thomas Dadford junior**. Dadford junior was already building the Monmouthshire Canal as well as the more distant Leominster Canal - a situation that would cause him to desert the Leominster project before its completion.
- 1794** **Clydach Tramroad** was the first to be built. Engineered by his brother, **John Dadford**, it ran from **Edward Kendall's** Gelli-felen Collieries to the Glangrwyney Forge via Gilwern, with a bridge across the river Usk - that soon reverted to a ford following the immensely destructive 'Great Flood' of February 1795. Edward Kendall of Beaufort was one of the most influential shareholders in both the Monmouthshire and the Brecon canals, a group that also included the land-owning **Duke of Beaufort**. Amongst the iron-masters were the **Hanburys** of Pontypool, **Richard Hill** of the Plymouth Ironworks at Merthyr, and two of the **Homfray** family. Kendall's kinsmen hailed from as far afield as Lancashire, Cheshire, Shropshire and Gloucestershire and were prominent owners of charcoal fired iron furnaces throughout the midlands and the Lake District. Four members of the family leased land from the Duke of Beaufort and founded the eponymous ironworks in 1779.
- The tramroad construction seems similar to the Blaenavon tramroads described by **William Coxe** - entailing edge rails with, at first, cast iron sleepers that were too brittle in usage, being soon replaced by wood. Likewise, the rails also proved incapable of supporting the original three-ton wagon loading which was therefore reduced (1799) to two tons. The canal company almost immediately contemplated various tramroad extensions; the first, authorised in March 1794, would continue up the gorge to Brynmawr - with an intended branch thence to Nant-y-glo.
- Edward Frere and Thomas Cooke**, both formerly managers at Cyfarthfa Iron Works, built **Clydach Ironworks** about this time. Abundant waterpower was the main attraction at an otherwise cramped site. They also acquired the neighbouring **Llanelly Ironworks** since it already contained a forge although this, in the long term, proved to be too distant from the furnaces for economic viability. Clydach Iron Works started as a single, coke-fuelled blast furnace; a second furnace was added early next century when the Llanelly forge site was also modernised.
- Llam-march Tramroad** was a separate route of less than a mile and a half directly from a colliery owned by Frere, Cooke and Kendall to the Clydach Ironworks. Thomas Dadford junior and **Hugh Henshall** surveyed the route which opened in June 1795 with construction costs met by the canal company, but the proprietors to contribute (8%) and pay for the upkeep. Originally, its only function was to import coal and ore, being useless for export purposes because of its location relative to the terrain and to the other transport links - as they existed at that date.
- 1795** **The Clydach Tramroad** was by now extant along the north side of the gorge to Brynmawr, with the branches to Llwydcoed Colliery and to Nant-y-glo in hand - although the latter was initially built as a 'stoneroad' since, owing to a proprietorial dispute, the Nant-y-glo works was relatively inactive until such time that it was acquired by **Joseph Bailey** and **Matthew Wayne** in 1811. **Crawshaw Bailey** would subsequently join his brother, replacing Wayne at Nant-y-glo in 1820.
- Further extensions were authorised from Brynmawr to Beaufort and Rhyd-y-blew (above Ebbw Vale) thus facilitating a connection with the Monmouthshire Canal Company's tramroad system; Kendall now had access from Beaufort Ironworks via both routes! The completed tramroad from Beaufort to Glangrwyney was 7.25 miles in length and was mainly used to carry the Kendall pig iron and coal to the forge. The ensuing allegations of a conflict of interests between the operating canal companies, the iron-masters, colliery owners, landowners and Brecon banking interests now seems almost inevitable!
- Late in the year, Thomas Dadford junior was seconded to the Brecon Canal (on a part-time basis) from the discontented Monmouthshire Canal Company following agitation by that concern who had paid a £3,000 subscription in 1794, but so far with little or nothing to show for it.
- 1796** **Brecknock Boat Company** formed by a group of canal shareholders (somewhat in anticipation of having an actual canal!), its main purpose being to acquire, transport and distribute limestone and Clydach coal. A near contemporary historian (Theophilus Jones, 1805) states that they started the cutting in April 1796 - apparently unrecorded in the canal minute book.
- 1797** **The Clydach Ironworks** still had no outlet for their produce, other than the Monmouthshire Canal Company tramroads via Pontypool, so the canal company now permitted a remittance of tolls in order to fund the building of a road from the works to the head of their existing tramroad at Blaenavon - the tramroad described in detail by Coxe.
- Brecon Canal** From the company records, cutting is known to have commenced near Gilwern in February 1797, with substantial engineering work required to cross the gorge by a high-level embankment, which included the Clydach Tramroad underpass. Llangynidr was reached by November 1797 and Tal-y-bont in February 1798.
- 1798** **Llam-march Tramroad** the track was now doubled - and would later be extended down to a wharf at Gilwern in 1803.
- 1799** **Benjamin Outram's** influential report led to a bout of local track conversion from edge-rails to plateways.
- 1800** **Brecknock & Abergavenny Canal** reached Brecon, with some local traffic opening on 24th December 1800.

- FURTHER DEVELOPMENTS . . . *in the nineteenth century* -

- 1811** **Llanfihangel Railway** A plateway exporting coal from Llanfoist wharf via Abergavenny to Llanfihangel. This replaced an earlier (rejected) proposal for a branch canal that was intended to link the Brecknock and Abergavenny Canal with Hereford - as actually surveyed by Thomas Dadford junior in 1793.
- Hay Railway** A plateway with coal from the canal wharf at Brecon to Hay-on-Wye via Talgarth and Glasbury.
- 1812** **Grosmont Railway** a continuation from Llanfihangel carrying coal, mostly intended for Hereford, to Monmouth Cap.
- 1818** **Kington Railway** a continuation from Hay via Eardisley, supplying coal to Kington.
- 1821** **Bailey's Tramroad** from Nantyglo and Brynmawr to Govilon, later, the **Merthyr, Tredegar & Abergavenny Railway**.
- 1825** **Hill's Tramroad** from Blaenavon - with a tunnel and several inclined planes - to the canal at Llanfoist.
- 1826** **Hereford Railway** completed a 'triple plateway' route, thus linking the Clydach district collieries with Hereford by 1829.
- 1854** Newport, Abergavenny & Hereford Railway mostly replaced the 'triple plateway' route. . . . (© J.G.Calderbank 2003)