THE DADFORDS

A vital ingredient in the construction of any canal was the appointment of an Engineer. One 'who has charge of the design and construction of great works', it was the Engineer's job to survey the land, choose the best route, design the canal and its engineering features – aqueducts, locks, tunnels etc. – prepare the plans, specifications and estimates, speak for the bill in Parliament, mark out the line, prepare contracts, supervise construction, approve payment, and generally act as the senior servant of the canal company.

No history of the Brecon & Abergavenny Canal would be complete without reference to Thomas Dadford Jr., the engineer appointed for the construction of the canal. However, he was not the only member of the Dadford family to be involved. His younger brother John had been 'de facto' engineer for two years before him, their brother James helped after Thomas' death and their father, Thomas Dadford Sr., helped with the initial survey work. These four Dadfords made a major contribution to the canals of South Wales and the English Midlands and their associated tramroads. The author has therefore thought it worthwhile to devote a complete chapter of this history of the B&A to these under-sung pioneers of the canal age.

Acknowledgement

I am grateful to the Institution of Civil Engineers for permission to include material from my article on the Dadfords included in the Institution's Biographical Dictionary of Civil Engineers published by Thomas Telford Publishing on behalf of the Institution, 2002.

Origins

The ancient origins of the Dadford family are at present unknown. Surnames began to be adopted in the thirteenth century and the name Dadford is a 'toponymic', one of the group of names denoting the place or district from which an individual came. There are three likely places from which the first bearers of the name may have sprung – Dadford in Buckinghamshire (Grid. Ref. SP 67 38), Dodford in Northamptonshire (SP 61 60) and the adjacent villages of Great and Little Dodford in Worcestershire (SO 93 73). Of these, Dadford in Buckinghamshire seems the most likely.

By the late 18th century there were Dadfords in London, in the Kidderminster area, and particularly in Northamptonshire. Migration from the Buckinghamshire village of Dadford outwards along the roads northwards towards Northampton and southwards towards Oxford no doubt gave rise to the sporadic incidence of probably unrelated individuals in villages and towns between those places. The Dadfords in Northampton itself could have stemmed from either the Buckinghamshire village of Dadford or the Northamptonshire Dodford. The latter may have been the original source of the Dadfords later present at Southam, Warwicks. Research by Dadford family historian Paul Dadford has established that the Kidderminster Dadfords stemmed from London Dadfords who were originally from Northamptonshire. It may be significant that a folk memory of connection with the canal Dadfords persists today amongst apparently unrelated Kidderminster Dadfords,

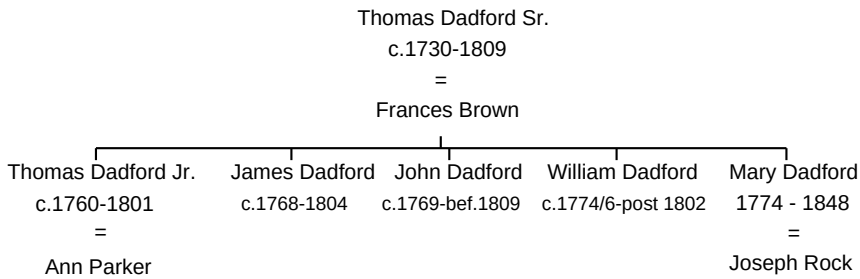
The fact that Thomas Sr. married in Wolverhampton in 1759 and returned there in retirement c.1800 could suggest that his own immediate roots lay in the area. However, the 1767 Return of Papists records his mother Priscilla as having lived in Wolverhampton for eight years. This raises the possibility that the family had moved to Wolverhampton from elsewhere c.1759.

Certainly Thomas Sr. was in Wolverhampton in November 1758, when he acted as a witness at the marriage of Elizabeth Dadford and Charles Alton at St. Peter's church. Elizabeth, presumably his sister, was aged 20. She married with the consent of her mother Priscilla, which suggests that Thomas and Elizabeth's father was already dead. His identity is at present unknown. Priscilla herself died in 1769, her burial being recorded in the Wolverhampton registers on 17 April 1769.

Thomas Sr. was himself married at St. Peter's church Wolverhampton a year later when, on 9 September 1759, he married Frances Brown. Like Elizabeth's marriage to Charles Alton, it was a marriage by licence rather than by banns and the licence bond records that Thomas Dadford was a joiner and carpenter, aged 29. Frances was 22, the daughter of Samuel Brown, a Wolverhampton toymaker (toy meaning small fashion article or trinket). Under the Hardwick Marriage Act of 1753 all marriages, other than those of Jews and Quakers, had to be solemnized in the Church of England. Marriage by licence was a common practice for Roman Catholics – to avoid having to have the banns called in the Anglican church – and it seems certain that both Frances and Thomas were Catholics. Frances' parents had married by licence, Thomas' mother Priscilla was a Catholic and Thomas himself was certainly a Catholic in later life.

Thomas' age at the time of his marriage indicates that he was born c.1730. No record of his baptism has been found and if he came of a Roman Catholic family this would not be too surprising. Even though Catholicism had a strong following in the West Midlands at the time, helped by the protection of powerful Catholic magnates like the Earl of Dudley, Catholics were not yet free from periodic discrimination and registers were carefully guarded.

It is alternatively just possible that Thomas was baptised in the Church of England and that he converted at the time of his marriage. In this case the baptism of a Thomas Dadford, son of John, at Bicester in 1730 might be relevant. However, this seems unlikely given his mother's Catholicism.



The Family

Thomas and Frances are known to have had at least six children: Thomas, James, John, Ann (who died in infancy), William and Mary. Because their baptisms as Roman Catholics have not so far been traced, their exact dates and places of birth are not known. The three elder boys would have been born while their father was working on the Staffordshire & Worcestershire Canal. William and Mary could have born either at Compton, where the canal company provided a house for Thomas and his family in 1774, or at Wordsley (Dudley) where Thomas leased a house in 1776, following his appointment as engineer and surveyor to the Stourbridge Canal.

Thomas was clearly a self-made man with limited formal education – his spelling remained idiosyncratic and Brindleyesque to the last – but he recognised the value of education. His eldest son was well educated somewhere and his three younger sons James, John and William attended the famous Roman Catholic school at Sedgley Park, near Wolverhampton (April 1777 to June 1781, May 1778 to June 1781 and August 1786 to May 1787 respectively). William at least was a boarder as he took with him "... two suits, & 2 waistcoats, 6 shirts, 7 pr. of stockings, 3 pr. of shoes, 2 hats, 4 poc. handk.fs Knife, combs &c. [and] a large box wch Mr. Prendergast has".[1] William was a slightly unusual name for a staunchly Roman Catholic family to choose, compared with the more Biblical names chosen for the other children. The choice of William possibly represented a desire to show loyalty to the English throne – Prince William the 3rd son of King George III had been born in 1767 – and there had, after all, been a Saint William in the thirteenth century. But if that was the desire why not choose George? It is tempting to wonder whether William and Mary Dadford might have been twins and their naming a reflection of the religious toleration introduced in 1688 under the joint monarchs William and Mary.

Thomas Jr., the eldest son, married Ann, daughter of James and Ann Parker of Bluntington Green, Chaddesley Corbett, Worcestershire at Belbroughton on 15th August 1797. Ann was aged 37 and, like Thomas, was a Roman Catholic. Thomas' sister Mary married Joseph Rock at St. Peter's Wolverhampton in 1800. Mary and Joseph have many descendants alive in the Midlands and elsewhere today. However, the longevity and fecundity enjoyed by Thomas Dadford Sr. seems not to have been passed to his male children. Thomas Jr. died on 2 April 1801, aged 40 and James died on 20 February 1804 aged 35. John had apparently died before 1809 as he is not mentioned in his father's will, drawn up in that year, and William was missing in America. So far as is known, none of them had any children.

To guess at their short life span is largely speculation. However, there are pointers. Thomas was certainly ill for some time as, several months before he died, he recommended his pupil John Davies to the B&A canal company to succeed him as their engineer.[2] An earlier bout of illness, in 1790, had delayed the start of work on the Glamorganshire Canal.[3] His marriage comparatively late in life may have been due solely to the pressures of his busy working life leaving little time for courting. However, the age of his bride and his subsequent illness suggest that perhaps he was already in need of looking after and they prompt the idea that he might have written to the RC priest at Chaddesley Corbett to enquire whether there was a suitable spinster in need of a husband. Thomas' brother James died after "a long and painful illness" borne "with the greatest fortitude and resignation".[4] Perhaps Thomas and James' deaths were due to no more than overwork and unpleasant working conditions – from an early age irregular living and eating, long hours spent outdoors in all weathers offset by long hours spent indoors in candle-lit inn rooms poring over plans, specifications and estimates. However, their father worked in similar conditions and died at the age of 79. It is tempting to surmise that both Thomas and James, and possibly John and William too, suffered from TB, perhaps contracted in the dormitories of Sedgley Park.

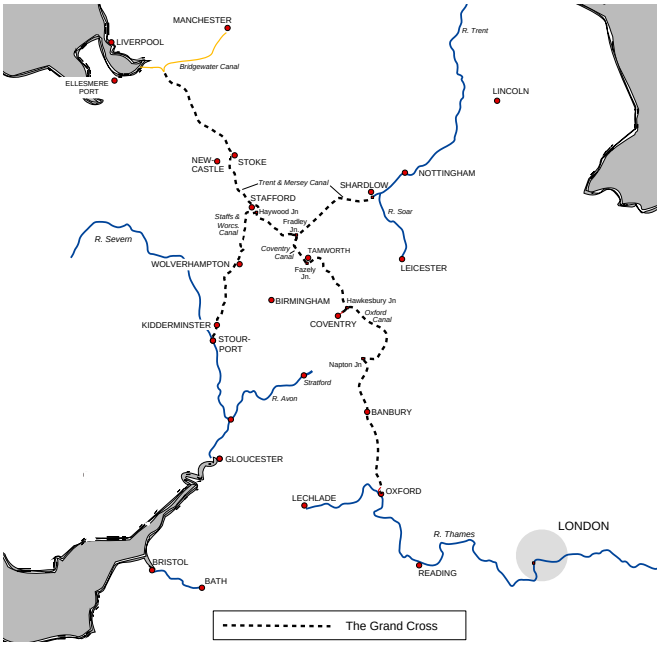
References

1. Information by Fr. Petroc Howell from list of boys at the school in the Birmingham Archdiocean Archives.
2. Maybery paper 817, National Library of Wales
3. Crawshay Letter Book, 5 June 1790, Gwent R.O.
4. *Berrow's Worcester Journal*, 1 March 1804.

Their Careers

THOMAS DADFORD Sr.

Thomas Dadford Sr's. known canal career started on 17 March 1767 when he was appointed Carpenter and Joiner to the Staffordshire and Worcestershire Canal Co. "to serve us in the way of his said Trades" at £70 a year.[1] The canal was part of James Brindley's grand plan to link the Trent, Mersey, Severn and Thames.



The Grand Cross; canals linking the Rivers Trent, Mersey, Severn and Thames

Dadford's post was rather more important than it might at first sound, carpenter being akin to the modern word builder, and ranked third in importance after James Brindley, Engineer, at £200 p.a. and John Baker, Clerk of Works, at £100 p.a. It seems likely that Dadford had an established reputation in his trade as he was "to provide the persons necessary to work under his Direction but to have no profit whatsoever from them."[2] His wide ranging duties including setting out locks and drawing up plans for buildings. The large canal basin at Stourport – "a bason that covers 3 acres" – and the locks down into the Severn, were

attributed to him – "great Works done in 5 years by Mr Datford (sic)."[3] He also acted as a contractor, constructing a substantial masonry aqueduct across the River Sow in 1771 for £756. Thomas Clifford, shareholder and local RC landowner, stood surety for the performance of his contract. The canal was open throughout by May 1772 and promotion came Dadford's way in September 1773 when he was appointed engineer (i.e. resident engineer) at £100 a year[4] – "by wich (sic) Baker is apparently much disgusted."[5]

Dadford Snr's. experience had made him something of an expert on locks and it seems quite likely that he was responsible for rearranging the locks at Bratch into their present form. Originally a staircase of three chambers, the top and bottom locks were moved away from the centre chamber by a few feet to allow for culverts and side ponds, thus reducing the amount of water needed to pass through the locks.[6]

In 1774, he (not his son Thomas, who was at most only fourteen years old at the time) surveyed the River Stroudwater for possible improvements, assisted by John Priddey.[7] Their scheme to make it navigable for nearly ten miles from a point near Stroud to the River Severn, recommended new cuts to avoid the many mills, and would have benefited the Staffs. & Worcs. from the tonnage on the additional coal traffic that could have travelled via the Staffs. & Worcs. to the Stroudwater Canal.

Two years later Dadford Sr. had evidently decided it was time to move on to fresh challenges and in April 1776 he gave his notice to the Staffs. & Worcs., simultaneously offering his services to the Stroudwater Navigation and the Stourbridge Navigation. To the latter company he stressed his expertise in lock design –

> "Experance as taught me every Imperfection of Locks; tharefore I should make your Locks mutch improved and to continue with little Repares or Indarance to your Canal ... "

In June 1776 the Stourbridge company duly appointed him, Thos. Dadford Sr., as their 'principal Engineer Surveyor and Supervisor' at £120 p.a.,[8] a position he held until he resigned in 1781.[9] The contract included the provision of a house to rent but in the event the company loaned Dadford money to purchase the lease of a house from the executors of Benjamin Winwood in 1776. The company paid the rent, Dadford agreeing "to furnish the Company ~~Gratis~~ on the said Premises with a Blacksmith & Carpenters Shop a Store House & Timber Yard and all other necessary Conveniences that may be wanted for the use of the Navigation."[10] It is possible that the present timber building known as 'Dadford's Shed' marks the spot.

From June 1776 Dadford Sr. was also engineer to the Stourbridge's companion the Dudley Canal, his contract with the Stourbridge allowing him to take this position.[11] His salary was £80, reduced to £40 when the three year contract was renewed in 1779.[12] From 1784 he was employed on an ad hoc but frequent basis.

The Dudley and Stourbridge canals were intended, inter alia, to provide a route for coal from mines around Dudley to Stourbridge and onwards to towns along the Severn via the Staffs. & Worcs. canal.[13] At Black Delph, near the Dudley's junction with the Stourbridge, Dadford constructed a flight of nine locks (rebuilt in 1858 along a different line because of mining subsidence). The flight included a double and triple 'pseudo staircase', i.e. slightly separated chambers with culvert access to sideponds between the chambers, similar to the modified arrangement at Bratch. Locks 9 and 10 on the Stourbridge '16' were similarly constructed.

Dadford's role with the Dudley Canal continued when the extension to join the Birmingham Canal received its Act in 1785 and he had overall responsibility for the 2942 yard long Dudley tunnel. John Wildgoose was appointed Surveyor under him to superintend the tunnel and other works.[14] Construction started early in 1786. John Pinkerton the contractor proved less than satisfactory and was released from his contract in 1787, the company taking over construction according to Dadford's plan but without his further services. The tunnel was eventually completed in 1792 under the direction of Josiah Clowes.[15] Dadford's reputation appears not to have suffered unduly as in 1798 he was called in, at £1.11.6 (1½ guineas) a day, to direct the repairs of the Leasowes embankment.[16]

In 1778 he surveyed and reported on the state of the Stroudwater Navigation but was too "engaged in sundry Navigations"[17] to take on the post of engineer to complete the navigation, recommending instead 'Mr. Clews' (Josiah Clowes).

From approx. 1780 to 1787 Dadford Sr. was engineer (i.e. resident engineer) for the Trent & Mersey Canal Co. In 1780, assisted by his son Thomas, he surveyed the River Trent for improvements, reporting to the Trent & Mersey Co. in November. In 1784, with Robert Whitworth, he advised the Coventry Canal Company on their proposed aqueduct over the River Tame.[18] Between 1785 and 1787 he surveyed the Fazeley to Fradley section of the Coventry Canal and supervised the construction of the part of it from Fradley-Whittington Brook for the Trent & Mersey Co.[19] It was possibly during this work that Dadford first met his future partner Thomas Sheasby Sr. of Tamworth, who was the contractor for the Whittington Brook to Fazeley Section section of the Coventry Canal from 1785-90 and for the Atherstone to Fazeley section from 1785-89.[20] In 1785 the railway from Caldon Low Quarries to Froghall Wharf on the Caldon branch of the Trent & Mersey was partially rebuilt along a new route, the canal being extended by 540 yds, including a short tunnel. It is not certain that Dadford supervised this but he, and presumably his son Thomas, would at least have been aware of what was going on. The railway, originally built in 1788, had been designed following Shropshire practice using flat cast iron cappings laid on the top of wooden rails, the waggons having flanged wheels. The cappings were three feet long, about 1¾" thick and weighed 42 lb, with a triangular projection at one end and a notch at the other. There were two fixing holes 18 inches apart, the rail being widened opposite the holes. Limestone was loaded into boats at Froghall wharf and there were also 4 lime kilns there from 1786, from which lime was loaded into boats.[21]

Dadford was evidently living at Cobridge during this period and was also honing his architectural skills. In the 1770s 'Mr. Dadford of Wolverhampton ... well known in Catholic circles in the West Midlands' had advised on the rebuilding of the parish church tower at Chaddesley Corbett.[22] In 1780 he was closely involved with the rebuilding of Stafford Gaol, though in what capacity is not clear.[23] In 1780/2 he contributed to the cost of building St. Peter's (R.C.) Chapel at Rushton Grange, Cobridge (demolished 1936) and may well have provided the designs.[24] His son James signed a deed in 1790 relating to the school at

Cobridge.[25] Dadford's address was still given as Cobridge in July 1790 when he entered into the contract to construct the Glamorganshire Canal.

In 1783 Thomas Dadford Sr. was elected a member of the Smeatonian Society of Civil Engineers. Founded in 1771 under the leadership of John Smeaton, the Smeatonian Society was the first professional body for the civil engineering profession. Dadford was one of just 42 members elected before 1800. Other canal engineers in the Society included William Jessop, John Rennie, Robert Whitworth and Robert Mylne.

In November 1789 Thomas Dadford and Thomas Sheasby Sr. were appointed contractors for the construction of the Cromford Canal in Derbyshire, William Jessop being the principal engineer and Benjamin Outram the 'canal superintendent', i.e. resident engineer. Dadford and Sheasby evidently underestimated the job for in November 1790 they were reported to be in financial difficulties and in January 1791 they declared their inability to proceed and withdrew. Outram completed the work for the company, employing direct labour.[26]

Late in 1789[27] Dadford surveyed the route of the proposed Glamorganshire Canal, which was to run from Merthyr Tydfil to Cardiff. He appeared as technical witness when the Bill for the canal was going through its committee stages in 1790.[28] The Act was passed on 9 June and on 15 July he, his son Thomas, and Thomas Sheasby Sr. signed an agreement with the proprietors to build the canal for £48,288-9-6.[29]

By November 1790 certainly – and probably as early as August – Dadford was already at work with his son Thomas and Thomas Sheasby Snr. as engineer-contractors for the Glamorganshire Canal.[30] They were thus simultaneously engaged on the construction of two different canals over a hundred miles apart for a period of some months. One wonders whether withdrawal from the Cromford had more to do with the prospect of greater earnings on the Glamorganshire than with real losses on the Cromford. Whatever the reason, Dadford seems to have escaped from the Cromford Canal works with little damage to his reputation and he was clearly held in high regard by Richard Crawshay, the ironmaster and principal proprietor of the Glamorganshire Canal. In April 1791 Crawshay wrote of his 'Surveyor & Navigation Maker' to Count de Reden in Berlin:-

> "On my return from Wales I found your Favour of 26th Febry. – when your Engineer appears here I will put him under the Tuition of the ablest Man who has promised me he will teach him all he knows I mean Dadford our Contractor he has made so great Progress that had I not lately been an Eye Witness of – any report would have fall'n far short of – in my belief he will I believe obtain both my gold Medals – and get 10,000*l* by his Contract ... ."[31]

It is not certain exactly how Thomas Dadford first came to the notice of Richard Crawshay. The links between industry in South Wales and the English Midlands were already strong in the 18th century. Most of the industrial entrepreneurs in Wales were from the Midlands, including Crawshay's fellow promoters and ironmasters at Merthyr Tydfil – Samuel Homfray at Penydarren, William Taitt at Dowlais and Richard Hill at Plymouth. Dadford might have been known to any of them. Certainly, he would have been known to Samuel Homfray since in 1776 Samuel's father Francis was Treasurer of the Stourbridge Canal, for which Thomas Dadford Sr. was the Engineer. Francis had an ironworks near Broseley in Shropshire and a forge at Stewponey, close by the Staffordshire & Worcestershire Canal. He would have been well aware of the value of water transport.

Crawshay himself had gathered some knowledge of canals. One of his early actions in 1790 was to ask Thomas Dadford Senior to 'ride over' to see the inclined plane on the Ketley Canal, which supplied William Reynolds' ironworks with coal. Crawshay considered that Dadford seemed to have "a very deficient idea of the utility of inclined planes". He was unsuccessful in his attempt to convert Dadford – perhaps unsurprisingly in view of the latter's self-proclaimed lock expertise – and wrote to Reynolds on 4 August 1790 that 'I was compel'd to give up my predeliction for inclining [sic] planes.[32]

By July 1791 Dadford was renting the Glamorganshire Canal Company's 'Navigation House' at Abercynon, which had been built for the company, probably to his plans, by William Prichard.[33] There the Dadfords may from time to time have entertained Crawshay himself – until his move from London to Cyfarthfa in 1792, Crawshay had fancied purchasing an inn where he could stay on his visits to the canal but on 6th July 1791 wrote to James Cockshutt, his partner, that:-

> ... I will concern myself no farther about an Inn on the Road but will furnish a Room at Dadfords for my own use & make that my Place of Residence occasionally till something better falls to my Choice – keep in your Eye a Situation on proprietors land at the tail of the first lock ..."

Dadford was also involved in the Dowlais railroad, built to connect Dowlais ironworks with the head of the canal. John Van Laun says Dadford was consulted on some aspects of the railroad;[34] Rowson & Wright refer to him as the engineer.[35] Certainly he advised on the route[36] and may well have applied his Caldon Low knowledge to the design of the Dowlais rails. These were of similar weight per yard, but with round tongue and socket ends rather than a simple triangle and notch.[37] Slightly thicker at 2" than the 1¾" cast iron cappings used at Caldon Low, they may well have been independent rails as Van Laun suggests[38] or may have been supported on longitudinal timber rails as Hadfield and Rowson & Wright suggest.[39] If the rails on the Dowlais railroad were indeed independent, then Dadford would have been involved with an early use of all-iron rails and flanged wheels but it would not have been the first use of flanged wheels. Flanged wheels on wooden rails had long been used in English coalfields.[40]

Crawshay's good opinion of Dadford deteriorated somewhat as the canal overran on both time and costs. The crunch came in December 1794 when the two Dadfords and Sheasby, who at that time were managing the canal pending the completion of outstanding works, refused to repair a breach without extra payment and withdrew their men. The canal company sued the Dadfords and Sheasby for £17,000 (which included the £10,000 bond they had entered into for the due discharge of their contract.[41] However, independent arbitration by the engineer Robert Whitworth was almost entirely in the contractors' favour, finding that they should repay just £1512.[42]

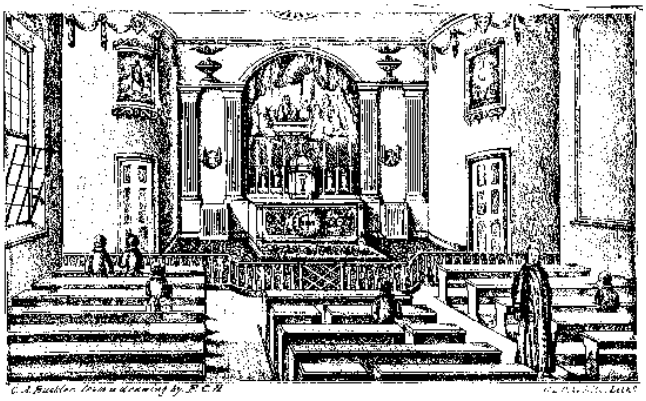
Despite the cost over-run – the final cost was £103,600[43] compared with the estimate of £48k and the authorised sum

of £90k, i.e. £60k plus a further £30k if necessary – it cannot be said that the company had a bad deal. The Glamorganshire Canal, 25½ miles long[44] from Merthyr to the sea at Cardiff, with 51 locks, was not only a great engineering achievement, it was also a conspicuous commercial success, embarrassing its proprietors for years with the problem of surplus revenues.

An interesting feature of the Glamorganshire Canal, and with relevance to other canals in South Wales, was Thomas Dadford's introduction of boat dimensions of 60 feet by 8 feet 9 inches. Slightly shorter and wider than canal boats of the English Midlands, the size was perhaps influenced by the hilly terrain. This is explored in more detail in the chapter/paper on Boats and Boat Builders.

Dadford may also have been responsible for introducing the 'oculus' decoration – the stylised diamond-shaped eye – on Welsh canal boats as this feature also appeared on some Midlands boats and would have been familiar to him.

In 1796, following the resignation of his son John, Thomas Dadford Sr. took over as engineer of the Montgomeryshire Canal, his son Thomas recommending his father "under whom they were bred, and who has had great experience in Canal works ... ."[45] He completed the section from the junction with the Ellesmere Canal at Carreghofa to Garthmyl south of Welshpool in 1797. This was his last major canal work, though he carried out a survey for a railway at Penrhyn slate-quarries, Gwynnedd c.1799.[46]



SEDGLEY PARK CHAPEL.

"Architect: Mr. Dadford, of Wolverhampton.
Builder and Carpenter: Mr. Tay"
(illustration from Husenbeth's History of Sedgley Park

In 1800-1 Thomas Dadford Sr. designed a chapel for the famous R.C. School at Sedgley Park, nr. Wolverhampton,[47] which three of his sons had earlier attended. Sedgley Park School was formed c.1765 'by the drafting of 12 scholars from Betley School near Newcastle on Tyne ...' and existed for a hundred years, closing in 1866. At its height it had over 200 pupils, a number of whom subsequently rose to high rank in the Catholic Church. It may not be coincidence that his work on the chapel took place during the last months of his eldest son's life.

In 1804, following the death of his second son, James, Thomas briefly returned to the Staffordshire & Worcestershire Canal as acting resident engineer.

Thomas Dadford Sr. died at Wolverhampton in October 1809 at the age of 79 and was buried at St. Peter's, church on 28th October. He outlived at least three of his sons and survived his wife Frances by just a few months, she having been buried there on June 14th. They had been married almost fifty years.

Unlike his sons, he left a will. His estate, falling in the under £3500 category) was apparently worth about £2000.

Thomas Dadford Sr. was clearly a man of ability and stature, possessed of considerable charm and a persuasive personality. If at times his jobs were under-estimated he seems to have been no worse than his contemporaries. However, his withdrawal from the Cromford contract in 1791 to take on the Glamorganshire canal and the later legal action against him by the Glamorganshire Canal Company to recover the cost of breach repair (albeit unsuccessful) raise just the suspicion that at times his business ethics were a little questionable.

References

1. Staffs. & Worcs. Canal Proprietors' Minutes, 17 March 1767.
2. Ibid, 17 March 1767.
3. Diary of Elizabeth Prowse, Sharp Papers, Gloucestershire Archives.
4. Staffs & Worcs Props Minutes, 21 Sept 1773, Mf79, Staffs. R.O.
5. Letter, John Davenport to Thomas Clifford, 22 Sept 1773, Staffs RO.,, Ref.DOCC 146/25 (orig. in East Riding of Yorkshire Council Archives)
6. Correspondence with Alan Smith, 2001.
7. Stroudwater Navigation A/C Bk, 27 June and 23 July 1774. GCRO D1180 2/17.
8. Stourbridge Canal Minutes, 24 June 1776, PRO RAIL812 Piece 3 and contract at Staffs & R.O. in Mf79/12.
9. Ibid, 30 Jan 1781.
10. Ibid, 13 Aug 1778
11. Dudley Canal Navigation Proprietors' Minutes, 6 June and 5 July 1776.
12. Ibid, 1/7/79.
13. Charles Hadfield, *Canals of the West Midlands* p.73
14. Dudley Comm Mins 25/4/1786.
15. Ibid, 8/6/ 1789.
16. Ibid, 17 Nov 1798.
17. Stroudwater Navigation Commissioners Minutes, 22 Jan 1779.
18. Charles Hadfield, *Canals of the East Midlands*, p.23].
19. Ibid, p.24 and information from Peter Cross-Rudkin.
20. *Canals of the West Midlands.* p.23, *Canals of South Wales*, p.17.
21. Peter Lead, *The Caldon Canal and Tramroads*, Oakwood 1990, pp.69,72).
22. John Roper, *A History of St. Cassian's Church, Chaddesley Corbett*, p.13
23. Letter, Thos Dadford to John Sparrow 13 Sept 1788, Staffs. R.O., Ref.DOCC 146/25 (orig. in East Riding of Yorkshire County Archives)
24. Howard Colvin, *Biographical Dictionary of British Architects*, pub. John Murray 1978, p.248, quoting *Catholic Mag*. v., 1834, 429 .
25. Peter Lead quoting P.W.L. Adams, *A History of the Adams Family in North Staffordshire*, London 1914, pp.155-7.
26. Newcomen Society Transactions, 1986
27. Stephen Rowson and Ian Wright, *The Glamorganshire & Aberdare Canals*, vol. 1, p.17
28. Ibid, p.19
29. Articles of Agreement, 15 July 1790, Glam.R.O., Ref B/C GCA 4/11-14.
30. Crawshay Letter Book, 16 July 1790, Gwent RO.
    In a letter to James Cockshutt, Richard Crawshay reported that he had promised Dadford & Co "a Gold Medal on their floating boats from the summit to the road near New Bridge before Mich[l] 1791 & another on Compleating [sic] the whole within 3 years."
31. Ibid, p.232, Richard Crawshay to James Cockshutt 16 July 1790.
32. Ibid, p.64, Richard Crawshay to Wm. Reynolds Esq. 9th April 1790.
33. *The Glamorganshire & Aberdare Canals*, vol. 1, p.33, quoting GCCo minute 22 November 1790.
34. John van Laun, *Early Limestone Railways*, p.17.
35. *The Glamorganshire & Aberdare Canals*, vol. 1, p.29.
36. Ibid, p.31.
37. Dowlais Letter Book, Glams R.O.,W.Taitt to Wm.Hawkes, 17 March 1791.
38. *Early Limestone Railways*, p.16.
39. Charles Hadfield and A.W. Skempton, *William Jessop, Engineer*, David & Charles 1979, p.171,
40. Ibid, pp.15-17 & p.204.
41. Charles Hadfield, *Canals of South Wales and the Border*, p.95 and *The Glamorganshire & Aberdare Canals*, vol. 1, p.36 quoting Glamorganshire Canal Co. minutes 13 & 16 Dec 1794.
42. Arbitration agreement by Robert Whitworth, Glam.RO., Ref B/C GCa 4/10.
43. *The Glamorganshire & Aberdare Canals*, vol. 1, p.35.
44. Ibid, pp.11 & 249.
45. Montgomeryshire Canal Committee Minutes, 24 Aug 1796, PRO RAIL852.
46. Stephen Hughes, *Brecon Forest Tramroads*, RCAHMW, p.313.
47. *Biographical Dictionary of British Architects*, p.47.

The 19th century canal network showing. dotted in green, canals on which the Dadfords worked.

THOMAS DADFORD Jr. c.1760-1801

Trained by his father[1], Thomas Dadford Jr's. known working life started in 1776 when he assisted his father in the construction of the Stourbridge Canal until in the November of the following year the committee decided that "his Service be discontinued."[2] Little is then known of him until in 1782 he assisted his father in a survey of the River Trent for improvements.

He presumably helped his father on the Fradley to Whittington Brook section of the Coventry Canal in 1785 and on the construction of the Cromford Canal in 1789, though he was not one of the partners in the contract for the latter.

In the autumn of 1789 he carried out what may well have been his first significant independent work – a survey for a canal from Leominster to the River Severn near Stourport, a survey he extended from Leominster to Kington the following spring. 46 miles in length, the line included significant tunnels at Putnal (¼ mile), Southnet (nearly a mile) and Pensax (2 miles). His plan and estimates were approved in January 1791[3] and in July 1791 he was appointed engineer for the canal, following the passing of the Leominster Act in that year.

In 1790 he was one of the partners in the contract to construct the Glamorganshire Canal, together with his father and Thomas Sheasby Sr. His illness in June 1790 may have delayed the start of work and been the reason why he did not sign the contract on the same date as his father and Thomas Sheasby.[4] His 'imprudent behaviour' caused some friction in December when he attempted to employ his own men to break ground on Lord Cardiff's land at Cardiff, where it had been agreed that Lord Cardiff's own men would be employed.[5]

Between July and September 1790 Dadford surveyed the route of the proposed Neath Canal, possibly assisted by his father and brother John, the general line on his Plan being approved on 13 September.[6] Perhaps this survey work was the real reason for the delay in starting work on the Glamorganshire. After the passing of the Neath Act in 1791[7] Thomas Jr. was appointed 'General Surveyor to superintend occasionally the Works'[8] and 'Head Surveyor and Superintendent') at a salary of 1½ gns per day plus expenses[9], leaving the completion of the contract for the Glamorganshire to his father and Thomas Sheasby Sr. Under Dadford on the Neath as engineer-contractor was Jonathan Gee.[10] Gee had earlier been a foreman on the Staffordshire & Worcestershire Canal.[11]

In July 1792 Thomas Dadford Jr. was appointed Engineer for the Monmouthshire Canal. The Act of Parliament had already been obtained and so far as is known Dadford did not carry out the initial pre-Act survey. His contract "to superintend and conduct the business of making the Canal and Rail Roads" stipulated that he was to give three quarters of his time to the Monmouthshire, for which his salary was to be £400 p.a.[12] This represented a similar daily rate to his Leominster appointment. He was to work nowhere else except on the Leominster and was not to undertake any contracts for cutting. Thomas Sheasby Sr. took over his work on the Neath Canal.[13]

The Monmouthshire was Thomas Dadford Jr's. masterpiece. As originally planned and constructed it comprised a main line a little over 11 miles in length from Newport (just below Newport Bridge) to Pontnewynydd, rising 447 feet through 42 locks.[14] From Crindau (Malpas), three quarters of a mile north of the Town Lock just above Newport Bridge, a branch nearly 11 miles in length rose approx. 350 feet through 32 locks to Crumlin.

Dadford's flight of fourteen locks at Rogerstone was a particularly fine engineering achievement. Interestingly,

here and elsewhere on the Monmouthshire he made use of the 'pseudo' staircase locks – slightly separated chambers with culvert access to sideponds between them – pioneered by his father on the Stourbridge and Dudley canals.

Construction of the Monmouthshire commenced in 1792 and the main line was completed in 1796. Dadford's work included six 'edge-rail' tramroads: the independent Trevil Rail Road and five for the canal company, connecting the canal with quarries, collieries and iron works, the latter including Beaufort, Blaenavon, Sirhowy and Blaendare. The rails were of cast iron, 4 ft. long, 3 in. deep, 2½" wide at the base and 2" wide at the top.[15] Each rail had one convex end and one concave end to locate with its neighbours. The gauge was 3'8".[16] The design was presumably developed by Dadford from the form used on the Dowlais Railroad and was considerably stronger.

On behalf of the Monmouthshire company he also surveyed the 'high level' or 'summit' line for the proposed Brecknock and Abergavenny Canal, by which the canal would be lock-free for the greater part of its length *[See Chapter 1, "Purpose and Promotion"]*. He remained engineer of the Monmouthshire until Christmas 1798, though from the end of 1796 his paid time was progressively reduced as the work neared completion. The Monmouthshire was officially declared finished in October 1798 and again in April 1799.[17]

Notwithstanding the provisions of his contract with the Monmouthshire, in July 1794 Thomas Dadford Jr. undertook to assist his brother John in the latter's work as engineer for the Montgomeryshire Canal.[18] With all his other work Thomas can have had little time to assist his brother and he was severely criticised for non-attendance by the Montgomeryshire committee in July 1795, though barely a month later the committee allowed him to take over a cutting contract on the canal from a contractor in financial difficulties![19] This seems at variance with the clause in his contract with the Monmouthshire prohibiting him having "any concern in any contract for cutting". Thomas would have found it even less convenient to assist after he had taken his leave of the relatively nearby Leominster Canal at the end of 1795. After John's departure for America in the summer of 1796, their father took over as Engineer of the Montgomeryshire. However, Thomas Jr. did assist his father with a report and inspection of the whole line of the canal the following year.[20]

The Leominster, in contrast with the Monmouthshire, was not a masterpiece. By the time Dadford left his post at the end of 1795, only the 12 miles between Marlbrook and Putnal Tunnel had been opened to navigation. Problems with the tunnels at Putnal and Southnet delayed further opening, though cutting had continued south of the Putnal tunnel and following completion of the tunnel the canal was opened to Leominster in 1796, 18½ miles in all).[21] John Rennie, reporting in December 1795, was critical of many aspects – work done badly, work incomplete, design defects in the aqueducts. The arch form of the tunnels was poor, leading to bulging and local failures, particularly at Southnet. Inadequate drainage at Putnal exacerbated problems with running sand. Rennie was critical of the system of management and observed "It is impossible one Agent or Resident can attend to everything. Such a work ... would require several ... ."

Dadford's appointment was for only a quarter of his time and much of the blame for the problems that arose must therefore lie with inadequate local supervision. Even so, what Rennie could see Dadford should have seen – and taken action to correct. Dadford therefore can't escape a substantial measure of blame.

In December 1795 he was engaged as Engineer for the execution of the 33 mile long Brecon and Abergavenny Canal, which he had earlier surveyed on behalf of the Monmouthshire company. His duties as Engineer included "marking out the line, giving Plans for the execution of the Work and superintending the same, attending to make Contracts measuring up the Works and all the business in the Line of an Engineer, ..."[22]

Perhaps because of the amount of work he already had in hand, he appears not to have been the Brecon and Abergavenny Company's first choice as Engineer. The post was advertised in January 1794 and George Fletcher of Cardiff.[23] George Pinkerton of the well known family of canal contractors[24] and James Chapman of Bristol[25] all applied. The committee went so far as to write to William Jessop for a reference as to Pinkerton's suitability, other applicants being informed that the committee were 'in treaty with an Engineer'. In the event none of the three was appointed. With the Clydach Railroad already under construction, the committee apparently felt the matter could be deferred, perhaps while the railroad generated some tonnage income for the company. Thomas acted as engineer on an 'ad hoc' basis, surveying the line of the Llammarch railroad from the collieries at Llammarch to the Clydach Ironworks,[26] marking out the line of the canal,[27] and preparing a plan and specification for the aqueduct over the River Clydach at Gilwern.[28] For laying out and superintending the aqueduct and embankment he was paid £2.12.6 (2½ gns) per day.[29]

The committee evidently returned to the matter in October 1795 as in a letter of 25 October to John Powell,[30] the canal company solicitor, Edward Kendall referred to a conversations that he had had with Powell and Dadford re the post of Engineer. Dadford himself wrote to Powell on 15 November 1795[31] regretting that proposals he had made to the Committee were thought too high and offering his services for the three months of the year not included in his engagement with the Monmouthshire at £140 per annum (equivalent to a full time salary of £560), with the possibility of more time after the first year. The existence of a much altered draft letter[32] from Dadford to the Committee, dated December 1795 and addressed from Crickhowell, indicates that he had discussed with Powell how he should word his offer. In the event the committee meeting on 17 December agreed with Dadford for three months in the year for two years from 1 January 1796 at the rate of £133.6.8, payable quarterly, "the Company finding a person to overlook the Workmen under his directions".[33]

His time increased to six months in the year from January 1797 and three quarters from July,[34] as his involvement with the Monmouthshire decreased. His Monmouthshire salary was to be reduced accordingly, by one third from 1st January, one third from 25th March and the remainder at Michaelmas.[35]

Work on the Brecon & Abergavenny started in April 1796 to the west of Gilwern and the 18 mile length from Gilwern to Brecon was open by Christmas 1800. This section included the massive embankment carrying the canal over the River Clydach at Gilwern, and the fine four-arched masonry aqueduct carrying the canal over the River Usk at

Brynich. It also included the 397 yard long tunnel at Ashford, where like the tunnels on the Leominster, there were difficulties.

Dadford died at Crickhowell on 2nd April 1801, reportedly of a "Fever on the brain" supposedly brought on by a cold caught during the wintry weather[36], leaving the remainder of the canal to be completed in later years by Thomas Cartwright and William Crosley.

Amongst numerous other minor works, Dadford assisted William Jessop in 1793 in reporting on alternatives lines and branches for the Ellesmere Canal,[37] surveyed the line of the proposed Brecon, Hay & Witney Canal, and surveyed a line from the Montgomeryshire Canal to the Leominster Canal via Montgomery, Bishop's Castle and Ludlow.[38] In 1797 he reported to the Commissioners of the Court of Sewers for the Levels of Caldicott & Wentlooge on a new catchwater drain. In 1798 he surveyed an extension of the Neath Canal to Giant's Grave[39] and in 1800 he re-surveyed the route of the Aberdare Canal.[40]

Thomas Dadford Jr. was buried at Llanarth, near Raglan, where John Jones, prominent Brecon & Abergavenny Canal shareholder and, like the Dadfords, a Roman Catholic lived at Llanarth Court. The churchyard at Llanarth was a popular spot for the burial of Roman Catholics from surrounding parishes.[41] Dadford's tombstone, survives under the low branches of a yew tree near the church tower. The tomb-stone, damaged in the early 2000s, was repaired in 2013, funded by an appeal hosted by the Monmouthsire, Brecon & Abergavenny Canals Trust and very generously supported by, among others, a lineal descendant of Thomas Dadford's sister Mary and other members of the extended Dadford family.

Thomas died intestate. His estate was valued at under £2000 and letters of administration for his 'goods, chattels and credits' were granted to his widow, Ann.

Canal company minutes occasionally record acts of compassion for widows or long serving or injured staff. Such feelings seem not to have been extended to their hired Engineers. No expressions of sadness or condolence at Thomas' passing will be found in the surviving records of either the Monmouthshire or the Brecon & Abergavenny canal companies. Indeed, although his death was reported in the *British Chronicle* on April 15th, 1801 it receives no mention in the minutes of the Brecon & Abergavenny's 'General Assembly' (the annual shareholders meeting), held on 30th April, less than a month after his death. (The B&A Committee minutes are missing for the period in question and cannot be checked)

Thomas Dadford's considerable engineering abilities, rivalled his father's but of Thomas, the man, we know little. His engineering abilities were complemented by the ability to write good English in a clear hand. There is some slight evidence that he may have spoken with a Black Country accent – he spells water 'wayter' in his report to the Court of Sewers, possibly a sub-conscious lapse into phonetic spelling with a typical Dudley accent. He could be obsequious when occasion demanded – "... I perfectly Agree with Mr. Golborn" (James Goulborn, 1746-1819, civil engineer and drainage and land reclamation expert) "in all his remarks which shew him to be a Man of Judgement & Experience"[42] He may have been somewhat headstrong and was certainly imprudent in 1791 when he used his men to cut ground on part of the Glamorganshire canal through Lord Cardiff's land, where it had been specifically agreed that Lord Cardiff's own workmen would be employed. There is the suspicion that at times he showed a readiness to distance himself from awkward problems for which he bore at least partial responsibility.

IHS
In Memory of
THOMAS DADFORD
late of *Crickhowell* in the
County of *Brecknock*
ENGINEER
who departed this life
April the 2nd 1801

Thomas Dadford Jr's grave in Llanarth churchyard

References

1. Montgomeryshire Canal Minutes, 24 Aug 1796
2. Stourbridge Canal Minutes, 10 Nov 1777, PRO RAIL 874
3. Charles Hadfield, *Index of Canal Engineers, Surveyors and Contractors*, London School of Economics
4. Crawshay Letter Book, Richard Crawshay to James Cockshutt 5 June, 6 July & 22 Dec 1790, Gwent R.O.
5. Ibid, Richard Crawshay to Thomas Dadford Sr, 4 Jan 1791; Richard Crawshay to James Cockshutt 22 & 23 Dec 1790, 1 Feb 1791.
6. Charles, Hadfield, *The Canals of South Wales and the Border*, p.62, quoting *British Chronicle & Hereford Journal* 28 July 1790.
7. 31 George III c.85.
8. *Canals of South Wales*, p.65.
9. undisclosed source.
10. *Canals of South Wales*, p.65
11. Information from Peter Cross-Rudkin, Dec 2001.
12. Monmouthshire Canal Committee Minutes, 10 July 1792.
13. *Canals of South Wales*, p.65
14. Thomas Dadford Jr's map of the Monmouthshire Canal, 1792, Gwent R.O.
15. Monmouthshire Canal Minutes 7 Aug 1792.
16. John van Laun, *Early Limestone Railways*, p.45.
17. Monmouthshire Canal Props Mins, 15 Oct 1798 and 27 May 1799.
18. Montgomery Canal Minutes, 18 July 1794.
19. Ibid, 17 July and 12 August 1795.
20. Ibid, 21 Sept 1797.
21. *Canals of South Wales*, p.193
22. Brecon & Abergavenny Canal Comm. Mins, 17 Dec 1795, PRO.RAIL812
23. Maybery paper 3038, NLW
24. Brecon & Abergavenny Canal Committee Minutes, 13 Mar 1794.
25. Maybery 497
26. Brecon & Abergavenny Canal Committee Minutes, 26 June 1794.
27. Brecon & Abergavenny Canal General Assembly Mins, 16 Oct 1794.
28. Brecon & Abergavenny Canal Committee Mins., 8 Dec 1794.
29. Brecon & Abergavenny Canal Committee Mins., 8 Dec 1794.
30. Maybery 3801.
31. Maybery 542.
32. Maybery 544.
33. Brecon & Abergavenny Canal Committee Mins., 17 Dec 1795.
34. Ibid, 26 April 1797 and 18 Oct 1797.
35. Monmouthshire Canal Committee Minutes, 20 Dec 1796.
36. The Revd. Henry Thomas Payne, *Parochial Notices of the Deanery of the Third Part of Brecknock*, p.219, NLW
37. Charles Hadfield and A.W. Skempton, *William Jessop, Engineer*, p.141 and Ellesmere Canal Committee Minutes 17 July 1793, PRO RAIL827.
38. *Canals of South Wales*, p.192.
39. Ibid, p.120.
40. Ibid, p.66
41. as evidenced, for example, by the presence of religious symbols such as IHS not then common on Anglican gravestones.
42. Court of Sewers, Gwent R.O.

JAMES DADFORD c.1768-1804

James Dadford had a rather lighter canal career than his immediate brothers and it is possible that canal engineering was not his first choice. John Upton, reporting on the state of the Gloucester and Sharpness Canal in 1815 wrote of James that "he served an apprenticeship to a different business and had no experience in such work or even common masonry or carpentry ... ".[1] He acted as a signatory on a number of occasions, including signing a deed in connection with a school at Cobridge in 1790[2] and witnessing a share transfer deed for Ann Dadford in 1803. He represented Thomas Sheasby in a dispute with the Neath Canal Company in 1795.[3] These actions could be clues to a different original choice of career.

James first appears in a canal context in 1791 during the construction of the Glamorganshire. He was not a partner to the construction contract but was presumably helping. Certainly he acted as a carrier on the canal during the period 1792-4, owning a fleet of boats which he sold in 1795, some to Taitt of Dowlais, after his father and Thomas Sheasby had withdrawn from the canal.[4] He was able to act independently – when Robert Thompson, Taitt's agent, called on the Dadfords in March 1792 to ask for two boat loads of iron to be transported it was James who agreed to take them while 'Old Dadford', presumably out of loyalty to Crawshay, Taitt's rival, 'shuffled without saying anything to the purpose'.[5] Pending completion of the canal Thompson and Taitt felt themselves to be in James' power and Thompson wrote[6] 'we must fight on as best we can with persuasion and fair words ... ', James may have had waggons as well.[7] He may also have managed the canal company's stone quarry – in a letter to Thompson[8] James refers to instructing the quarry man to take dimensions for any stone Thompson may want.

In June 1793 James was engaged by the Aberdare Canal Company as engineer for the survey and construction of an edge-rail tramroad from Aberdare via Hirwaun to Penderyn. He was to be be paid "at the same Sum by the Mile as Mr. John Dadford has from the proprietors of the Brecknock-shire Canal". The railroad was in two sections, one from Aberdare to join 'Mr. Glover's Rail Road upon Hirwain Common' near Bryngwyn and the other from a point further along Glover's railroad near Hirwaun to 'Penderin Lime Rock. The railroad was reported as finished in September 1795[9] and linked the limestone quarry with the Hirwaun Ironworks, leased by Glover, and with lime kilns and coal works at Bryngwyn.[10] How much was actually built from Bryngwyn towards Aberdare is uncertain. James apparently had the management of the quarry at Penderyn as he was instructed to take possession on 1 August 1794 and employ a man to raise the limestone.

In 1795 James was appointed resident engineer for the Gloucester and Berkeley Canal, for four years at £315 p.a.[11] under Robert Mylne as Principal Engineer. A distinguished architect and civil engineer, Mylne had considerably underestimated the costs – his estimate for an 18 mile long canal, 18 feet deep was just £121,329-10-4½ (approx. £6,800 per mile). This compares, for example, with an estimate of £60,000 and actual cost of £51,000 (approx. £3400 per mile) for the far narrower and shallower 15 mile long Swansea Canal by Thomas Sheasby. Mylne was dismissed in 1798 and Dadford, who clearly had the support of the canal committee, was placed in sole charge until he himself was dismissed in 1800 when funds became exhausted.

It was no doubt James that the displaced Mylne had in mind when he wrote irascibly to the Company Secretary in 1801, "He *(William Jessop, who had been consulted on the canal)* and Dadford are mere drudges ... . The Irish are advertising for a Resident Engineer, I think Dadford and they would fit one another to a T, for wrong heads and deficiency of knowledge."*[12]* For all Dadford's relative inexperience, this judgement seems unduly harsh. Still less is there any justification for the charge of corruption levelled at Dadford.[13]

James' canal-related career continued. In 1799 he had surveyed and reported with Charles Roberts on the need for strengthening the Dudley Canal and in 1800 he reported on a railroad from Windmill End to Cabbage Hall.[14] He briefly stood in as engineer for the Brecon & Abergavenny Canal following his brother Thomas' death in April 1801. In May he wrote to his former employer, the Gloucester & Berkeley Canal, seeking sixteen cast Iron Pipes for upgrading the feeder from the River Usk at Brecon[15] and in June, July and November 1801 he authorised various items of B&A expenditure .

James died at Stourport on 20 February 1804 after "a long and painful illness", his death "lamented by a large circle of friends and acquaintance".[16] The value of his estate was under £600. At the time of his death he was resident engineer of the Staffs. & Worcs. Canal.

To the Memory of
JAMES DADFORD
Engineer
He died 20 Feb 1804
Aged 36

James Dadford's iron headstone in Lower Mitton churchyard, Stourport.

References

1. Christopher Gotch, *The Gloucester & Sharpness Canal*, British Waterways, 1993 p.36.
2. P.W.L. Adams, *A History of the Adams Family in North Staffordshire*, London (1914], pp. 155-157.
3. Neath Canal Special Assembly Mins., 5 March 1795].
4. *The Glamorganshire & Aberdare Canals*, vol.1, p.43, quoting *DLB.*
5. Dowlais Letter Book, Glams R.O., Robert Thompson to William Taitt, 23 March 1792.
6. Ibid., *19 Dec 1792]*
7. Ibid. Robert Thompson in a letter to William Taitt, 6 March 1793, refers to James Dadford and suggests Taitt tries sending "3 Loads... (one by his Waggon)".
8. Ibid, 18 Feb 1794.
9. Aberdare Canal Companu Minutes, 17 Sept 1795.
10. *The Canals of South Wales and the Border*, p.119.
11. Charles Hadfield's Card Index, London School of Economics.
12. *The Gloucester & Sharpness Canal*, p.32.
13. Ibid, pp.43, 55, 68.
14. Charles Hadfield's Card Index, London School of Economics.
15. Maybery paper 767, NLW.
16. *Berrow's Worcester Journal*, 1 March 1804.

JOHN DADFORD c.1769-??

Trained by his father,[1] John was a competent surveyor and may, with his father, have assisted his brother Thomas in that latter's survey of the course of the proposed Neath Canal in 1790.[2] Certainly in 1792 he surveyed a route for a canal and tramroad link connecting the Glamorganshire and Neath canals, simultaneously surveying a road route up the Aberdare valley.[3] He appeared as a witness before the House of Lords Committee in 1793 when the Aberdare Bill was going through Parliament.[4] His bill for £100.2.6. was ordered to be paid by the first Aberdare General Assembly, meeting in May 1793.

He may well have helped in the construction of the Glamorganshire Canal 1790-1794 though he was not a partner to the contract. He certainly helped his brother James in the latter's cargo carrying operations on the Glamorganshire but whether he carried in his own right is uncertain.[5]

John was effectively the first engineer to the Brecknock and Abergavenny Canal. He surveyed several alternative lines for the canal in 1792 and the scheme as presented to Parliament in January 1793 was his, a modified version of his original line with the canal now joining the Monmouthshire Canal instead of the River Usk as first intended. He appeared as a technical witness before the House of Lords in February 1793 and the Bill had been read twice when a successful petition was entered for the alternative line favoured by the Monmouthshire Canal Company, surveyed by his brother Thomas. *[See Chapter 1, "Purpose and Promotion"]*. In 1793/5 John engineered the first sections of the edge-rail Clydach Rail Road, from Llangroiney to Gellifelen and from Gellifelen to Fossalog, near Nantyglo, totalling 5½ miles.[6] The Llangroiney to Gellifelen section included his wooden bridge carrying the railroad across the River Usk. This collapsed in the floods of February 1795. His failure to provide for flood relief culverts in the approach embankment was judged a contributory factor, though sympathy for the contractor who sought to avoid his contractual liability to rebuild the bridge may have influenced the judgement.

In July 1794, still relatively inexperienced, John was appointed engineer for the Montgomeryshire Canal, with his elder brother Thomas to assist him "with his opinion and advice as often as it shall be thought necessary by the Committee".[7] In the event he received little assistance, being often in demand himself to assist Thomas with the latter's projects. He resigned in July 1796, probably as a result of partial failures of aqueducts over the Vyrnwy and the Rhiw for which he felt responsible, and emigrated to America.[8] At that time the Montgomeryshire Canal comprised the length from Carreghofa, near Llanymynech, to Garthymyl, near Newtown. The section from Frankton to Carreghofa, now regarded as part of the Montgomeryshire, was then the Llanymynech branch of the Ellesmere Canal.

Confirmation that John Dadford did indeed go to America has been established by Paul Dadford, the indefatigable Dadford family historian, who tracked down information in the '*Autobiography of John Reynolds*' in '*Pen Pictures of Western Pennsylvania*' (University of Pittsburgh Press 1938) and '*In French Creek Valley*' by John E. Reynolds, (Meadville, Pa., 1938). From these we know that in December 1797 John Dadford and Thomas Wedgwood (son of Josiah Wedgwood's cousin Thomas Wedgwood) were in Venango County, Pennsylvania, where they were offered temporary accommodation in the log cabin of William Reynolds and family. Early in 1798 "smitten with the mania for possessing land in America" Dadford and Wedgwood built their own cabin, with assistance from William Reynolds and his son John. However, Dadford and Wedgwood became disillusioned with their new life, perhaps remembering a terrible night's experience trying to ford an icy river with their horses, and in May 1798 they abandoned their cabin and left the area. Wedgwood returned to New York, where he died of yellow fever in September 1798. Dadford was reported to have returned to England to tell of their experiences in America but this seems unlikely as there is no record of him in England after 1796 and he is not mentioned in his father's will, made in 1809. It seems more likely that he too died in America. No evidence has been found that he practised as a civil engineer there.

That John Dadford was highly regarded is indicated by a Monmouthshire Canal Committee minute that Thomas Dadford Jr. be requested "to send down a proper person to take up the Mason's and other Work on the different Lines of Canal And that the Committee wd. prefer Mr. John Dadford's coming down in preference to any other person ...".[9]

References

1 Montgomeryshire Canal Minutes, 24 Aug 1796.
2 *The Canals of South Wales and the Border*, p.63, (but John's involvement uncertain).
3 Ibid, p.119.
4 Charles Hadfield's Card Index, London School of Economics.
5 Charles Hadfield's Card Index and Dowlais Letter Book/s.
6 Maybery paper 530, NLW.
7 Montgomery Canal Minutes 18 July 1794.
8 Ibid, 24 Aug 1796
9 Monmouthshire Canal Company Co. Minutes. 28 April 1795.

WILLIAM DADFORD (c.1774/6-)

Little is known of William beyond the references to him in the register of Sedgley Park School and his father's will, drawn up in 1809. In the will he is explicitly referred to as "my Son William Dadford" and a clause stipulated that if he returned from America within seven years of his father's death, or evidence were produced that he was alive or had lawful children, he (or his children if he were dead), were to share with his sister Mary the bulk of his father's estate. The evidence of subsequent share transfers and death duties shows that he did not inherit.

Whether William's purpose in going to America was to find his brother, or to join him in his new life there, isn't known but evidently he did not return.

MARY DADFORD (1774-1848)

Thomas Dadford Sr's daughter Mary was born 24 May 1774 and died 26 July 1848. She married metalworker Joseph Rock at St Peter's Parish Church, Wolverhampton by Licence on 1st September 1800. A property-owning metal worker of some substance Joseph was the second son of a prosperous bucklemaker, Samuel Rock, of Windmill near Walsall. Mary and Joseph had six children and through their descendants, among them Mrs. Anne Walker, the Dadford line lives on. *[Information from Mrs Anne Walker 2013]*

SUMMARISING

The Dadfords were significant engineers of the first period of canal building in Britain. As well as Thomas Dadford Sr's work on the canals of the Black Country and the 'Grand Cross', the canals and associated tramroads constructed by the Dadfords and the Sheasbys down the Welsh valleys to Swansea, Neath, Cardiff and Newport made a major contribution to industrial growth in South Wales.

Sound canal engineers of the second rank, Thos. Dadford Sr. and his sons were well able to carry out demanding work according to contemporary custom and practice but perhaps showed limited innovative engineering ingenuity. They all purchased shares in the canals they helped to build.