

Egerton, Gilbert & Brindley

Francis Egerton, 3rd Duke of Bridgewater

Francis Egerton inherited the title and estates in 1748, aged 11. After he left school he was trained in estate management by his brother in law Earl Gower of Trentham in Staffordshire. The Earl's agent, Thomas Gilbert, helped to manage the Worsley estates until Francis could take over.

Like most wealthy young men of the time, he went on the Grand Tour of Europe and visited the newly built Canal du Midi in southern France, shown below. This linked the Atlantic to the Mediterranean and used complex and innovative engineering solutions to cross the high land. The Duke was already showing great interest in such engineering projects.

Francis also spent time with his uncle Samuel Egerton at Tatton Hall where life was happier than at home with his mother and stepfather.



John Gilbert

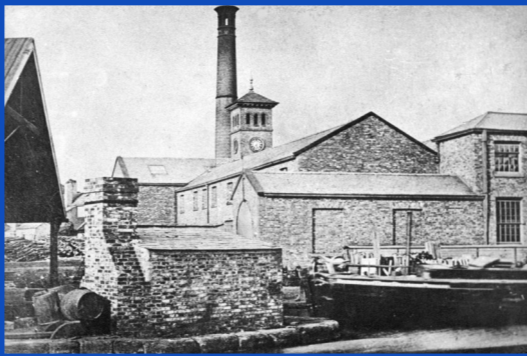
Gilbert, a trained engineer, was born and raised in Staffordshire and was apprenticed as a boy at the famous Boulton Engineering works in Birmingham. He became a life-long friend of Matthew Boulton, son of his boss and maker with James Watt of the first viable steam engine. Gilbert became Land Agent to the Worsley estate – in effect its general manager - and began increasing the profitability of the coal mines by ensuring they worked efficiently.

The Worsley coal mine workings extended north eastwards to Little Hulton. Drainage of water from the mines was vital and a network of 'soughs' carried the excess water away. Gilbert soon realised that the soughs could be linked to form a system of 'Navigable Levels' - an underground canal along which coal could be transported to reach the surface at Worsley Delph. This also provided an ample water supply for the Bridgewater Canal, so that diversion of surface streams was not required.

Perhaps his greatest achievement was the novel idea of using an inclined plane in the underground levels to enable barges to be transferred from one level to another - this still exists below ground to the north of the Tesco store at Walkden.

Gilbert also owned shares in a graphite mine in Borrowdale and set up a black lead factory in Worsley. He built a lime kiln, needed for making mortar, set about draining the Duke's part of Chat Moss and modernised the estate farms. He was involved in many other projects including the draining of Martin Mere.

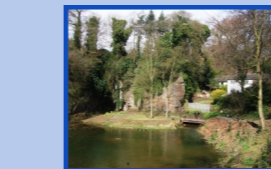
John Gilbert lived at Worsley Old Hall from 1759 until his death at the age of 71 in 1795. As a respected friend and colleague of the Duke, he was buried in the Egerton vault at Eccles Parish Church and was described as a man of uncommon ability, of rare talent and of vast genius, whose contribution to the Bridgewater Story has often been underestimated.



Worsley Foundry, from the canal



Typical miners' cottages in Little Hulton



James Brindley

Brindley is often thought to have been illiterate. He has been regarded as the main designer and builder of the Bridgewater Canal. Both ideas are incorrect - surviving letters, plans and notes prove that he was literate, but was a practical man rather than a draughtsman as his one surviving map shows. Some of his ideas were immediately successful while others were complete failures.

Like John Gilbert, he was born in Staffordshire, where he set up as a millwright and earned a reputation for problem solving. 'Schemer' Brindley had been working in the Worsley area at Wet Earth Colliery near Clifton, where he engineered an innovative method of draining excess water from the workings, by using water from the river Irwell.

Work had already started on the canal when John Gilbert invited Brindley to be the consultant engineer to the project. Both Gilbert and the Duke played far larger roles than Brindley, who appears to have been brilliant at 'seeing' the lie of the land so that the canal route could be made at a constant height above sea level, avoiding the need for locks.

His greatest achievement at Worsley was, without doubt, the design for the innovative Barton Aqueduct. This structure was needed to take the canal over the river Irwell and into Castlefield at Manchester. His project was lampooned in the London Illustrated News, which said of Manchester, 'And pigs might fly when waters meet in to Market Street.' - this is thought to be the origin of the saying 'pigs might fly'.



At Worsley, Francis was keen to market his coal and to provide employment for his tenants. He took an active part in plans to improve the coal mines and realised that the coal needed to reach its market in Manchester, so he and John Gilbert devised a plan to build a canal.

John Gilbert was also keen to use technology to solve mine and transport problems and the two men became close friends, collaborating on several schemes including the Navigable Levels and the Bridgewater Canal.

The Duke quickly made a name for himself in Parliament as he struggled to get his plans for the canal past the concerted opposition of older and more powerful people.

Only 22 years old when the canal was begun, he was keen to see it start to earn money. Schemes to extend the canal and to provide both cargo and passenger carrying services kept him busy for many years. He also pioneered tourism in the area, welcoming important guests from Britain and Europe, who came to see his innovations.

The Duke was a good and caring employer as is evidenced by many tales of generosity to his workers and their families. He certainly instigated a building programme, ensuring that his workers were properly housed near to their work places.

Despite romantic attachments in his youth and two broken engagements, the Duke never married. He lived a long and productive life and died in 1803, more than 50 years after the opening of the canal. He left a vast fortune and a complex will so that titles were inherited by other members of the family, but the Dukedom died with him. Several members of the extended family inherited enormous wealth plus a legacy in great works of art which the Duke had collected in his later years and which has been preserved to the present day, largely at the National Gallery of Scotland in Edinburgh.