The case of the proprietors of the Birmingham canal navigation relative to Charles Colmore Esquire, 21st January 1771

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"The Case Of The Proprietors Of The Birmingham Canal Navigation, Relative To Charles Colmore Esquire, 21st January 1771"

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Introduction

On 21st January 1771, sixty years before the public meetings of the Birmingham Political Union were rallied by Thomas Attwood to Newhall Hill, prompting the Great Reform Act of May 1832, the social, industrial, and geographical landscape of Birmingham was reshaped by a parliamentary tussle between the town's established landowning gentry and its industrious company of newly wealthy 'Proprietors'. The Case Of The Proprietors Of The Birmingham Canal Navigation, Relative To Charles Colmore Esquire directly affected the way in which Matthew Boulton, the 'Father of Birmingham', developed his famous Soho Manufactory and engineered the opportunity that made him a key player in the Industrial Revolution. It also led to the rapid expansion of Birmingham to the northwest along Newhall Street, where Elkington, Mason & Company set up in business as Boulton's successors as the town's leading metalware manufacturers, and led to the development of the famous Jewellery Quarter.

The Estate of Charles Colmore Esquire

"Birmingham cut, fairly wrought, For the cut of all cuts is a Birmingham cut!"

In 1771-72, Charles Colmore (Fig. 1), a London-based merchant, and absentee landowner of his family's old manor of New Hall near Birmingham, became involved in a major building project that hastened the development of his 100-acre estate, and greatly extended the north-western reaches of the town. On 24th January 1787, a group of the town's leading businessmen had held a public meeting in the White Swan on the High Street to propose building a canal to link Birmingham to the Black Country and Staffordshire coalfields, and the Staffordshire and Worcestershire Canal near Wolverhampton. A new company was formed, called the Birmingham Canal Navigations (BCN), and the renowned canal engineer James Brindley was commissioned to survey a route (Fig. 2).

As with his previous engineering works on the Bridgewater, Trent and Mersey, and Staffordshire and Worcestershire canals the route that James Brindley proposed aimed to minimize the amount of laborious groundwork involved by contouring the canal through the landscape on a level. Brindley's serpentine route aimed to avoid building too many embankments and locks, which were time-consuming and costly because of the laborious manual methods then available for cutting and removing earth. Locks also slowed the progress of commercial traffic.

Nevertheless, Charles Colmore was quick to realize the potential revenue he could obtain if the Birmingham Canal extended onto his land, and he urged the company's shareholders into an agreement to cut a branch canal that would end on his Newhall estate (Fig. 3). The intention was to build two termini on the outskirts of Birmingham at Paradise Wharf, later called Old Wharf, near what is now the Gas Street Basin, and at Newhall Wharf in a field on Colmore's land known as Newhall Ring.

On 24th February 1768, an Act of Parliament was given Royal Assent by George III that granted permission to "The Company of Proprietors of the Birmingham Canal Navigation," to raise the sum of £55,000 by the issue of 550 shares worth £100 each, and allowed them to raise the further sum of £15,000 if it was required. The Act was entitled: "An Act for making and maintaining a navigable Cut, or Canal, from Birmingham to Blistshe, and from thence to Atherley, there to communicate with the Canal now making between the Rivers Severn and Trent, and for making collateral Cuts up to several Coal Mines. Work began almost immediately under Brindley's supervision. On 21st September 1772, the canal, which later became known as the Main Line to distinguish it from the numerous branches later built or acquired by the BCN, was joined to the Staffordshire and Worcestershire Canal via a flight of 20 locks. It was just over 22 miles long, and followed the contours with a few deviations to coal mines and manufactories, including a collateral cut to Matthew Boulton's new Soho Manufactory.

The Intention of the said Act

"Of what we invent each partakes of a share. For the best of wrought metals is Birmingham ware."

However, as work on the canal had progressed, Matthew Boulton (Fig. 4) decided that extending the canal onto the Newhall estate would be too costly and, more importantly, risked reducing the supply of water to his new manufactory at Soho. As Jenny Uglow points out, "Only when the work started did it dawn on him that..."
the planned extension to New Hall, the old Colmore estate whose lands ran down towards Soho, posed a real danger to his own water supplies..."[8] Boulton was a major shareholder in the BCN and along with another BCN committee member, Dr. William Small, he set about preventing the extension to Newhall Ring. Besides being his physician, William Small, often acted as an unofficial factor in Boulton's business affairs. He was sociable and diplomatic, and, as a doctor, affected an air of being above commercial ambition. He appeared to have no personal interest in the Newhall branch canal other than ascertaining whether or not it served the best commercial interests of the BCN. In truth, William Small was one of Boulton's closest confidants and, as a BCN committee member, he was able to discreetly represent Boulton's concerns about the supply of water to Soho as though it were a broad, egalitarian concern for all the BCN shareholders and the wider community.

Small's opinion among his fellow BCN committee members was influential, and so the plans for the canal to extend to the field on Charles Colmore's estate were quietly dropped. "Acting as Boulton's lieutenant, William Small negotiated behind the scenes. The New Hall extension mysteriously disappeared from the plans, due to 'an unforeseen difficulty'."[9] Colmore was outraged, not just at the breaking of his gentleman's agreement with James Brindley and the BCN committee members and shareholders, but because he felt legally aggrieved, since the termination of the waterway on his land had been specified in the Act authorising the building of the canal. Colmore complained, first to the King's Bench, and then to Parliament:

"That the Canal, for which an Act passed in 1787, (now in part executed, and particularly into a Field belonging to the Free School of Birmingham, not far distant from that Town) was by the said Act intended to proceed to Newhall Ring, which is the estate of Mr. Colmore; and that as all the intermediate Land belongs to Mr. Colmore, if the Canal should not be continued thither, according to the Intention of the said Act, he would be very materially injured in his property: Wherefore he prays for a Bill, to oblige the Company of Proprietors to complete the said Canal to Newhall Ring; and within a Time to be limited, or that he may be allowed to complete the same at his own Expenese."[10]

Seizing on the offer by Charles Colmore "to complete the same at his own Expenese", Boulton and his fellow proprietors invited him to extend the canal to Newhall Ring himself "on very equitable terms". In truth, the proprietors' terms were far from "very equitable," and, as Jenny Uglow has shown, William Small took great pains to conceal that Boulton was the primary instigator and obstacle to the Newhall extension. "Small worked even harder, dashingly to London, sending weekly - even daily - express letters, while carefully keeping Boulton's name out of it, telling their lawyer, 'you are allowed to read Mr. Boulton's letter but not speak of it.'[11]"

As the dispute escalated, engineers were called upon as expert witnesses by both sides. William Small pressed James Brindley forward to represent the BCN's argument, emphasizing the unnecessary cost implications of extending the canal to Newhall, and the further strains it would place on the water supply along the canal generally, without citing Soho specifically. Charles Colmore called upon another reputable engineer, John Smeaton (Fig. 5), to demonstrate that, in truth, there really were no insurmountable engineering obstacles or prohibitively expensive costs to the Newhall cutting. Smeaton was the first self-proclaimed civil engineer; and he argued that if there was a problem with the water supply along the twenty-two miles and five furlongs of the Main Line it was at the Smethwick summit where the level rose by 19½ feet for about a mile, and then dropped again by the same amount, before continuing level from Oldbury to Wolverhampton. There were also problems with the water supply at Atherley where the canal drops down 132 feet to join the Staffordshire and Worcestershire Canal, and in 1784, another lock was added to the original flight of 20 to save water.

James Brindley and John Smeaton were the two foremost engineers of their day, and their involvement is an indication of how the judicial and parliamentary system in eighteenth-century England had begun listening to scientific evidence by expert witnesses to settle personal and commercial disputes. Jenny Uglow however, delightfully draws attention to the fact that despite employing James Brindley's technical reputation to surreptitiously support his own interests, Boulton was actually scornful about the expert evidence
of this "whole tribe of Jobbing ditches." In 1771, whilst surveying a new branch of the Trent and Mersey Canal, Brindley was caught in a severe rainstorm, which was something of an occupational hazard for a canal engineer. Afterwards, he was unable to get dry and caught a chill. He became seriously ill, and whilst convalescing at his home in Staffordshire his physician, Erasmus Darwin, attended to him and discovered that he was suffering from diabetes. On 27th September 1772, less than a week after the Main Line was completed, James Brindley died.

Colmore was determined, and clearly confident of his legal case. He resisted all attempts by Small and the BCN committee to compromise the original plan of "the said Act intended to proceed to Newhall Ring". Colmore was most affronted that the "very equitable terms" that Small (Boulton) and the BCN committee were proposing stated that even if the canal were to be completed to Newhall Ring it would be "without any improper Diminution of the Company's present Powers". By finishing the cut at Paradise Wharf, the canal promoters felt that their primary aim and obligation under the Act would be achieved, which was simply to create better access to the Staffordshire coalfields for their increasingly populous and industrious town, coal being, "an Article most essential to its Manufactures and for which an enormous Price had long been paid, by Land Carriage".

The Company of Proprietors

"Not Europe can match us for traffic, America, Asia and Africa." The Birmingham Canal was built to bring vast amounts of bulky raw materials, especially coal and metal ores, into the town more cheaply, rather than to carry manufactured artifacts out of town. The actual effect of the canal network across the West Midlands eventually established by the end of the century, was, however, to facilitate cheaper transport of heavy goods and raw materials, rather than to carry the output of Birmingham's workshops. Industrial growth in the town was accelerated rather than created by, its canals. Finished articles could be more quickly and easily transported overland, either to the home market, or more often to London, Bristol, and Liverpool for export to foreign markets, particularly Europe, and the British colonies in the West Indies and America.

By the end of the 19th century Birmingham metalworkers had established a growing export trade. By 1700, metalwares were the second largest category of manufactured goods exported, although they only accounted for about 3% of the total export. In 1722-4 metal wares accounted for 7% of manufactured goods exported; by 1752-4 this had risen to 9% and again by 1772-4 to 14%. Before 1775, and the outbreak of the American War of Independence (1775-1783), the population of the thirteen British colonies on the Atlantic coast of North America and the colonies in the British West Indies rapidly increased, and transatlantic trade became an important market for the town's metalware manufacturers.

Colmore knew that if he could bring cheap coal and ore along the canal to the heart of his Newhall estate he could intensively develop the land, and the town's metalware manufacturers and merchants, artisans and mechanics would move there. He applied to the Court of the King's Bench for a Mandamus, but was refused, and so he reported to a private petition to the House of Commons. This was what prompted The Case Of The Proprietors Of The Birmingham Canal Navigation, Relative To Charles Colmore Esquire. In answer whereof, the Proprietors of the Birmingham Canal Navigation do in general say "That they cannot comprehend or admit of the Above Assertion of Mr Colmore's being very materially injured by them in his Property," for that the Newhall Ring was never intended by them to be a certain and necessary Termination of their Canal - Nor did they ever certainly understand that Parliament intended it should be so - And if in the above Respects Mr Colmore's Allegations should be found deficient, they flatter themselves that his Prayers, to have the Proprietors compelled to continue their Canal to Newhall Ring at all, will be judged unreasonable. The Proprietors go on to blame the lateness in the parliamentary season for the abridged imperfection of their original petition of 1767, claiming that several terminations for the canal were marked out as "possible and practicable but that it was impossible to ascertain at that juncture where the canal could be bought with the best Security of its Success". With a subtle allusion to their famed and respected engineer, James Brindley, they claimed that they were informed by "Persons experienced in canals" that they would not be required to bring the Canal to any Precise spot of Ground. They go on to portray themselves as naive and unwitting victims of Charles Colmore's unreasonable demands. Little then did they imagine, that by the unsuspicous mention of Newhall Ring, they were forging any shackles for themselves.

The Proprietors', and especially Matthew Boulton's problem was one of simple fluid mechanics; the termination of the canal at Newhall Ring required either a tunnel, or an equally costly succession of locks to be built to carry the canal over the hill. Bringing the canal to Newhall Ring was dependent on the provision of sufficient water because the high level of the proposed canal had no current, unless a stream was diverted some distance from its course, and "at very great Expense (greater perhaps than the whole profits of the Canal)", and, most importantly of all, "on which the most considerable Manufactury of this Neighbourhood depends, as also an Iron Furnace, and some other important Works." The considerable Manufactury, italicized for emphasis, was Matthew Boulton's new manufactory at Soho (Figs. 6-7).
The BCN committee demanded that even if Colmore were to complete the canal onto his land, he must do so not only at his own expense, but also agree to pay in perpetuity for the maintenance of the branch canal without profiting solely or directly from it. Moreover, they demanded that he should financially offset any effect the Newhall branch canal may have on the recently completed Main Line, as well as compensate any businesses affected by the diminution of the shared water supply.

It was clear to all involved that Matthew Boulton meant his own silver manufactory at Soho. Boulton and his fellow Proprietors argued that “coming to Newhall Ring is altogether incommodeous and unnecessary both in respect to the Community and themselves” because “it will endanger the Success of the whole Undertaking in a public View.” Nevertheless, Colmore won the case.

The Stream of Water

“Birmingham ware, none so fair, For the best of wrought metals is Birmingham ware.”

The water supply on Handsworth Heath, Monsebank Hill, and Crabtree Bank where Boulton had built his factory had been problematic ever since John Wysley, the lord of the manor of Handsworth, had inclosed the land and leased it to Edward Ruston and John Eaves in 1757. Water was diverted from Hockley Brook to make a pool 350m long and 50m wide, which generated enough power to drive a small water mill used in their modest toymaking business. Boulton purchased the lease from them in 1762, and transplanted his manufactory from Snow Hill to Soho. He partially rebuilt and enlarged the premises, and replaced the watermill despite the fact it was only four years old. Despite these additional, his business quickly outgrew the buildings and in 1764 he began building the famous Soho manufactory, which was finished the following year.

One contemporary chronicler of the development of Birmingham, the Rev. Stelling Shaw, noted, “From that period he began to turn his attention to the different branches of manufactory; and, in conjunction with Mr. Fothergill, then his partner, established a mercantile correspondence throughout Europe; by which means the produce of their various articles was greatly extended, and the manufacturer, by becoming is own merchant, eventually enjoyed a double profit. Impelled by an ardent attachment to the arts, and by the patriotic ambition of bringing his favourite Soho to the highest degree of perfection, the ingenious proprietor soon established a seminary of artists for drawing and modelling; and men of genius were now sought for and liberally patronised, which shortly led to a successful imitation of the Or Mou. These metallic ornaments, consisting of vases, tripods, candelabras, &c. by the superior skill and taste bestowed upon them here, soon found their way, not only to the admiration of his majesty, and to the chimney-piece and cabinets, &c. of the nobility and curious of this kingdom; but likewise to France, and almost to every part of Europe. From this elegant branch of the business the superior skill of Mr. Boulton led his artists by a natural and easy transition, to that of the wrought silver; upon which he soon found the necessity of applying to parliament for, and establishing, in 1773, an assay office at Birmingham.”

The growth of production and new branches of manufactory at Soho soon far exceeded the water supplied by Hockley Brook. The power of the new mill was never sufficient to run laths (polishing machines) or grinding machines on the scale of production required by the new manufactory. For twelve years the water mill
was the sole source of power at Soho, and Boulton was forced, like many smaller manufacturers, to use Holford Mill for rolling metal. In dry summer months, water was in particular short supply.

So Boulton's concerns over any further diminution of his water supply caused by the proposed extension of the Birmingham Canal to Newhall Ring were understandable. Losing the parliamentary ruling to Charles Colmore in 1771 placed further limits on existing operations, and severely inhibited the potential for expansion at Soho.

However, losing the case to Colmore prompted Boulton to explore other solutions to raising sufficient groundwater to keep the 'Or Molu' and other articles flowing out of his considerable Manufactory. The solution he eventually found proved truly groundbreaking, and was a fulcrum in the development of the Industrial Revolution.

Chaw states the story: "Mr. Boulton finding from experience that the stream of water which had induced him to build a mill and transplant his manufactory to Soho, was insufficient for its purpose, he applied himself in conjunction with his water-mill; but finding that both troublesome, irregular, and expensive, in 1767 he made a steam-engine, on Savery's plan, with the intention of returning, and raising his water about 24 feet high; but this proving unsatisfactory to him, he obtained from the help of others was first applied in 1810. 170 to draw the water, and he continued after formed an acquaintance with his present partner and friend, Mr. James Watt of Glasgow, who in 1765 had invented several valuable improvements upon the steam-engine, which in fact made it a new machine. For these improvements Mr. Watt had obtained a patent in January 1769, and afterwards came to settle at Soho, where in that year, he erected one of his improved engines, which he had brought from Scotland; and, after full proof of its utility, obtained from parliament in 1775 a prolongation of the term of his patent for 25 years from that date."

With the low levels of water in the summer months, and increasing demands being made of Hockley Brook upstream, the Newhall branch canal led Boulton to install a steam engine to pump recycled water back into the pool at Soho (Figs. 8-9). The "full proof of its utility" convinced Boulton to enter into a partnership with James Watt (Fig. 10) to supply similar steam engines to other manufactories and mines. In 1775, they formed a partnership in the firm of Boulton and Watt to exploit Watt's patent for his new design, which had a separate condenser, making it much more fuel-efficient than the existing Newcomen engines.

"He then entered into partnership with Mr. Boulton, and established a very extensive manufactury of these engines at Soho, whence most of the great mines and manufactories of England are supplied; they being now applied to almost every mechanical purpose where great power is requisite. The application of this improved steam-engine at Soho to raise and return the water, extended the powers of the water-mill; which induced Mr. Boulton to rebuild it a second time upon a much larger scale, and several engines were afterwards erected at Soho for other purposes, by which the manufactory was greatly extended, the source of mechanical power being thus unlimited."

The Manufactures and Shops

"With pride every heart must be glowing, Stamps, presses and lathes shall be going…"

When the Birmingham Canal was opened in 1769, the price of coal in the town halved overnight. However, despite the success of the Old Main Line there was always a problem supplying sufficient water to the six locks on either side of Smethwick Summit, and to the branch canal that served the Soho manufactory. Boulton and Watt constructed steam engines on either side of the Smethwick Summit to pump water from the locks back to the summit. The famous Smethwick Engine (which was once displayed in the Birmingham Museum of Science and Industry on Newhall Street) began pumping water on 5th June 1779 from the Birmingham side.

The Sporn Lane Engine began pumping water from the Wolverhampton side in April 1778. In the 1780s, John Smeaton constructed a cutting, which replaced three of the six locks on each side. In the 1820s, Thomas Telford built a new canal parallel to the Old Main Line in an even deeper cutting, which were then the largest canal man-made waterways in the world. Despite these cuttings, the Boulton and Watt engines were still needed.

Initially Boulton and Watt steam engines were assembled at the Soho Manufactory. However, most of the major parts, such as the cylinders, had to be manufactured elsewhere, and it was not until 1785 that sufficient was produced to open a foundry or rolling mill. In 1785, Boulton and Watt moved production of their steam engines to their new Soho Foundry in Smethwick. The Smethwick Engine, in fact, described by historian C. F. R. W. de Wart of 1805, describes how the demand for Watt's new machines were fuelled by Boulton's reputation: "When it became known that Boulton had taken an interest in a new engine for pumping water, he had many inquiries about it from the mining districts. The need of a more effective engine than any then in use was every year becoming more urgent. The powers of Newcomen's engine had been tried to the utmost."

Within the first few years of the 1780s, Boulton and Watt's engines had replaced all of the seventy-five Newcomen engines that had been operating in mines in Cornwall. "Applications for terms, followed by orders, shortly came in from the mining districts; and for long the works at Soho were resounding with the clang of hammers and machinery employed in manufacturing steam-engines for all parts of the civilized world."

By 1800, Boulton & Watt had manufactured 496 engines, 164 of which were used for (reciprocating) water pumps, 24 for blast furnaces, and 306 for powering mill machinery. After 1800, Boulton and Watt's sons continued the partnership, and the firm continued manufacturing steam engines until 1895.

However, a survey of "The Steam-power of Birmingham", published in the Transactions of the Royal Statistical Society in 1840, reveals the number of steam-engines at work in the town, the dates they were erected, and the uses to which they were applied. Surprisingly, "From 1780 to 1815, a period of 35 years, there were only 42 engines set to work." Clearly, the main market for Boulton and Watt's steam engines was not the mechanization of the metalworking trades of Birmingham and the Midlands, but pumping water in the metal mines of Cornwall and Wales, and the coal mines of the Midlands, the north and northeast, and parts of Scotland. The application of steam power was quicker in more labour-intensive, unskilled trades, such as the mills and looms of Lancashire.

Even so, by 1840 the metal trades of Birmingham did account for 62.7% (2155 out of 3436 horsepower) of the steam engines at work in the town. By the time of the Royal Statistical Society survey in 1840, 198 more engines had been added since the end of the Napoleonic Wars in 1815, 120 of which had been erected after 1830, making the total number at work 2345. Interestingly, the survey states that only 65 of those erected were "high-pressure", which refers to Watt's design. By 1840, far and away the greatest use of steam in the metal trades, 650 out of 2155 for rolling mills, 240 for steam pumping mills, to which it was first applied in 1790, 210 horse-power out of 2155 was applied by iron founders, engineers and smiths, to which it first applied in 1788. 201 by iron forges and wrought iron mills, to which it was first applied in 1790. Out of the 198 more engines erected since 1815, 191 to which it was first applied in 1808. By 1813, it had been applied to nail cutting, which by 1840 was consuming 78 horsepower, and by 1819 to wood screw making, which consumed 122 horsepower.

Boulton & Watt's improved steam engine further increased the demand for coal. In the early years of the Industrial Revolution, because coal was so bulky and expensive to transport, industrial towns and cities grew up close to the coal mining areas, but there was also a great demand for canals to transport bulk materials, especially coal and metal ores, to the established manufacturing towns from the mining districts.

The Newhall branch ran just to the north and parallel of Great Charles Street, to the main coal wharf, which was just below what is now the corner of Newhall Street and Queen'sway. Unlike the later Birmingham and
Fazeley Canal, which descends through the impressive Farmer's Bridge flight of locks, and crosses Newhall Street lower down the hill, the original Newhall branch was kept on a level. Following the termination of the branch canal at Newhall Ring, Charles Colmore developed the land on his estate either side of the canal for industry and housing, or 'mixed use' to use the opened-ended term currently favoured by developers on planning applications.

The new canal corridor created prime waterside locations for wharves, rolling mills, foundries, manufacturers, and, above all, shops. The common 18th- and 19th-century slang for artisanal work in Birmingham and the Black Country was 'shopping', with factories and workshops usually referred to as 'shops'. Charles Dickens in 'A Poor Man's Tale Of A Patent' in his weekly magazine, Household Words, 19th October 1850, has a working man from Birmingham say, "what you would call Manufactories, we call Shops." Newhall Wharf was the primary coal and timber wharf for the town. Many of the town's metalware manufacturers and merchants, artisans and mechanics moved there. The principal canal-side trade was always metalwork, and the canal prompted the development of a whole new area to the northwest of the town, which quickly became the toymakers' quarter.

An Act of Parliament obtained in 1784, authorized the building of the Birmingham and Fazeley Canal, which stretched 15 miles, through 38 locks, from the Main Line at Old Turn Junction, through the Newhall estate, past the site where the famous Elkington, Mason and Co. manufactory was later built. It was completed in August 1788, joining the Coventry Canal at Fazeley, just outside Tamworth. The Birmingham Canal Company merged with the Birmingham and Fazeley Canal Company to form what was briefly called the Birmingham and Birmingham and Fazeley Canal Company. In 1794, the cumbersome combined company became simply, Birmingham Canal Navigations.

The Toymakers' Quarter

"Birmingham toys, all men praise, And riches spring daily from Birmingham toys." By the time the New Hall estate was fully developed, toymaking had been an established and important industry in Birmingham for over a hundred years. The term toy refers to a very wide variety of small, often highly intricate artifacts made in a variety of metals. James Sketchley's Birmingham Directory (the 3rd edition of 1767) gives an idea of the diversity of the toymakers' wares:

"An infinite variety of articles come under this denomination and it would be useless to attempt to give an account of the whole, but for the information of strangers we shall here observe that these articles are divided into several branches as the Gold and Silver Toy-makers, who make trinkets, seals, tweezers, toothpick cases, smelling bottles, snuff boxes, and Phialgree work such as toiles, tea chests, inktstands etc., etc. The Tortoisheshell toy maker makes a beautiful variety of the above and other articles; as does the steel toy maker, who makes corkscrews, buckles, buttons, draw and other boxes, snuffers, watch chains, stay hooks, sugar nippers etc., etc; and almost all these are likewise made in various metals, and for cheapness, beauty, and elegance no place in the world can vie with them" (Fig. 11).

It is interesting to note that Sketchley does not categorize toymakers by the kind of toy that they make but by the material with which they make them. Sketchley's descriptive division of Birmingham's trades sees the function and ornamental form of the product as less important than the artistry and skills required in working with a particular material. By the 1840s, the toymakers' quarter had consumed the Newhall estate and roads extended across Colmore's land to the Inge and Vyse family estates. By 1846, Richard Howard-Vyse had created a large area of building plots across his estate along Vyse Street, with Hylton Street leading north. The jeweller trades congregated along Vyse Street, Warstone Lane, and the adjoining area to form what later became known as The Jewellery Quarter (Fig. 12).

In a final twist of fate, in the late 1780s, Matthew Boulton briefly used the Colmore's Newhall mansion as a canal-side warehouse. By then, the large house and its outbuildings had become an obstacle to the extension of Newhall Street, and Boulton, perhaps to spite Charles Colmore, initially objected to its demolition. The house was finally demolished in 1787, although Boulton retained the barn until he had constructed a new purpose-built warehouse on Livery Street in 1789.

By 1901, the Newhall branch was largely disused (Fig. 13). In 1937, it was acquired by the Birmingham Corporation, and it was drained, filled-in, and built over to pave the way for redevelopment. The basin adjacent to the footbridge by Cambrian Wharf is all that now remains of the Newhall branch (Fig. 14).
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Alastair Grant is an artist and historian who is researching the history of electro-metallurgy and its application to the arts for an AHRC Collaborative Doctoral Award at the University of Sussex and the Victoria and Albert Museum. His thesis is titled Elington Mason & Co and the Art of Electro-Metallurgy: A Social History Since circa 1840. Between 2006-2009, Alastair was historian/artist-in-residence on the redevelopment of the former Birmingham Museum of Science and Industry and Elington Mason & Co electroplating works on Newhall Street in Birmingham's Jewellery Quarter Conservation Area. His artworks have included site-specific arts, heritage, and environmental commissions for the public realm.

Notes:
1. John Freeth, "The Birmingham Lode" in Arts Birmingham Gazette, 6th November 1769. "The Birmingham Lode" was a popular ballad written by John Freeth (1731-1808) a well-known local literateur, poet and balladist to commemorate the opening of the Birmingham Canal. From circa 1769 until he died in 1808, Freeth was landlord of the Leicester Arms tavern on the corner of 1st Street and Leicester Lane in Birmingham. John Freeth's Coffee House, as it was popularly known, became one of the most celebrated local coffee houses in England. To entertain his patrons, and disseminate his radical views, Freeth wrote ballads about topical events of local or national interest, renting them to popular tones, and singing them nightly at his coffee house. His musical news bulletins proved popular and profitable, drawing in regular local patrons, and attracting important visitors from around the country. Even before the French Revolution of 1789-1793, Freeth's ballads made the Leicester Arms a political meeting-place for radical, Jacobin, and nonconformist. Freeth published almost 400 songs in the popular press and in over a dozen collections between 1768 and 1825, some under the pseudonym John Free.

2. Immersion about the common tanner comes from MS 3537 (Papers relating to the Colmore Estate) from the archives of Smythe Etchings Co. later Lee Crowder and Co. solicitors in Birmingham in Birmingham Archives & Heritage Services, 6th Floor, Central Library, Chamberlain Square, Birmingham B3 3HQ, most notably: Doles, leases, estate and family papers of the Colmore family, including deeds and leases of property in Birmingham Colmore Row/Newhall Street area, Copy of will and codicils of Charles Colmore of London, 1765; Copy of will of Mary Colmore of London, 1798, and the pedigrees of the Colmore family of Birmingham, 1674-1837, and the Cragoe and Cragoe-Colmore families of Devon and Cornwall, 1775-1953.

3. G Evelyn III, Cap. 38, Royal Assent 24th February 1758. This was the first of ten Acts of Parliament that King George III gave Royal Assent to during his 60-year reign before the completion of the Birmingham Canal and its many branches and collateral cutways were completed.


10. Ray Shill, Birmingham's Canal, 2002

11. The first Act was obtained on 24th February 1768 forming the Company of Proprietors of Birmingham Canal Navigation. By an Act dated 24th June 1790, a new company was incorporated and called Company of Proprietors of Birmingham and Fazeley Canal Navigation. Under an Act dated 1794 the two companies were incorporated by the snappily named Company of Proprietors of Birmingham and Fazeley Canal Navgation. By virtue of an Act dated 1795 the company was incorporated almost under the original name Company of Proprietors of Birmingham Canal Navigation. That company was dissolved by an Act of 17th June 1835. The 594 files and volumes, including the Minutes of the Birmingham Canal Navigation Company (1763-1948) are held in The National Archives at Kew, Reference RAIL 810 (formerly BCN)


19. Thomas Sayre (1600-1716) patented his "fire engine", as the first steam engines were called, in 1698. The patent describes the purpose of "Severy's plan"; to "a grant to Thomas Savory of the sole exercise of a new invention by him invented, for raising of water, and occasioning motion at all sorts of mill works, by the important forces of fire, which will be of great use for drawing mines, serving towns with water, and for the working of all sorts of mills, when they have a benefit of water or other distant winds; to hold for 14 years; with usual clauses". "Severy also published a pamphlet entitled, The Miner's Friend; Or, A Description of an Engine to raise Water by Fire described, and the manner of fixing it in 3 times, with an account of the several cases it is applicable to, and an Answer to the Objections against it" by C. Souch, London, 1702. See Robert H. Thurston, A History of the Growth of the Steam Engine, 1878


22. Malcolm D. Freeman, Streetwell and the BCN Sandwell MBC and Smethwick Heritage Carline Trust, 2003


24. ibid., p. 213


28. The Farmer's Bridge fight was named after James Farmer, a partner in the Birmingham gunmaker Farmer and Galton. The firm, founded by James Farmer and Samuel Galton, the elder, was best known for their musket-loading flintlock muskets. The Galton family had been ironmongers in Birmingham since the early 1750s. Samuel Galton entered into a gunmaking partnership with the Farmer family, but brought them out when their fortune was ruined by the Lichfield earthquake of 1775. Their fortune was founded on trading guns for African slaves, who were transported to work on cotton and sugar plantations in America and the West Indies. As Quakers, the Galton family was eventually persuaded by the Society of Friends and abolitionist movement to stop slave trading. He handed the business on to his son Samuel "Jr" in 1765. Samuel John had invested the family business in 1775, and through his scientific interests became a member of the Royal Society, and member of the famous 'Lunar Society' with Matthew Boulton, Erasmus Darwin, Joseph Priestley, James Watt, and Josiah Wedgwood. In 1818, after a decline in demand following the Napoleonic wars, Samuel Tertius Galton, the son of Samuel "Jr", abandoned gunmaking to concentrate on banking.

29. Household Words, 15th October 1850


31. James Stallybrass's Birmingham Directory was first published in 1763. His 3rd directory, published in 1767, was a classified directory of professions and trades. Accessed in the Birmingham Archives & Heritage Service, 6th Floor, Central Library, Chamberlain Square, Birmingham B3 3HQ