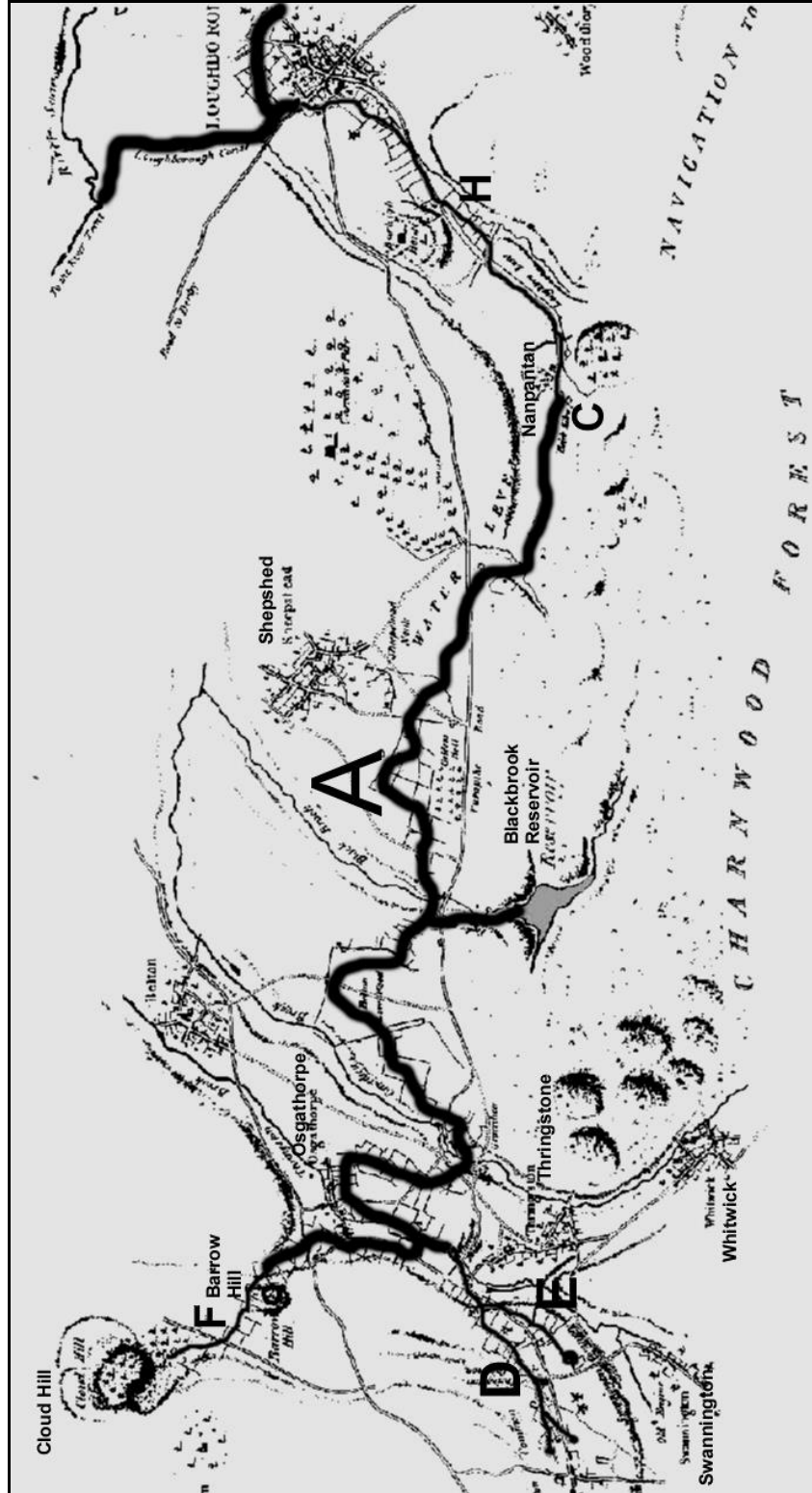


THE CHARNWOOD FOREST CANAL AND ITS TRAMWAYS

(INCLUDING SUPPLEMENTARY INFORMATION)



BY SAMUEL T STEWART

FRONT COVER MAP

A MAP OF THE CHARNWOOD FOREST CANAL ORIGINALLY DRAWN IN 1791 BY THE CANAL'S ENGINEER CHRISTOPHER STAVELY WHICH HAS BEEN ANNOTATED BY THE AUTHOR FOR FUTURE REFERENCE IN THIS PUBLICATION.

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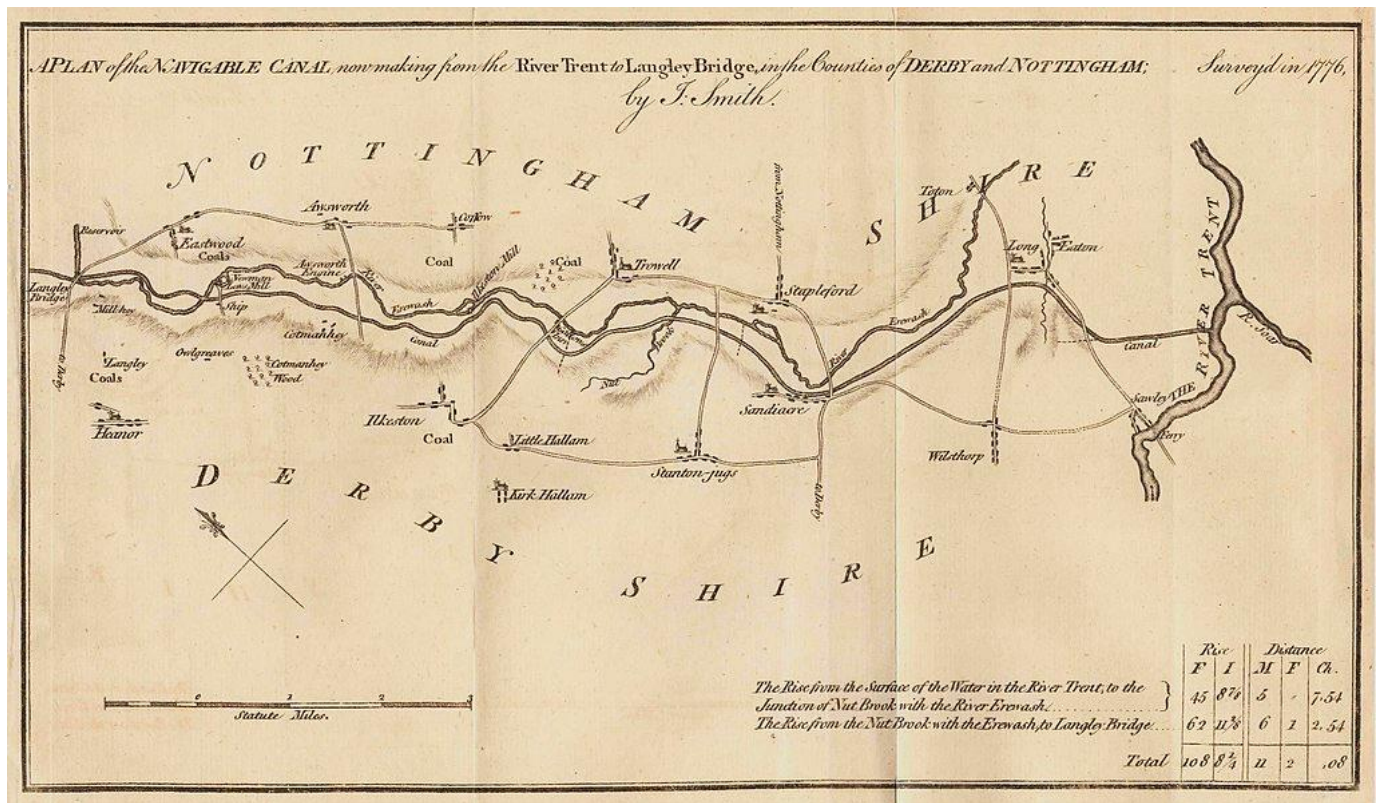
About the time that the Leicestershire and South Derbyshire turnpike system was becoming effective, business men and financiers applied themselves to a new concept of inland communication – the canal – which culminated in the notorious “canal mania” of 1791-3. Sponsors of the various canal projects believed this new form of transport would drastically cut costs, and open up new distant markets, particularly for bulky commodities such as coal and lime.

Following the successful completion of the Duke of Bridgewater’s canal, a new interest was awakened in the ill fated Soar Navigation project, with the desire in Leicester for cheaper Erewash Valley coal. The Erewash Valley Colliery owners had built their canal to the Trent by 1779, and the Soar Navigation had completed the section from the Trent to Loughborough the year before.

By 1779, the Erewash canal had opened from Trent Lock to Langley (Mill) Bridge and by May of that year, West Hallam coal was being transported in 30 ton barges to be delivered in 3 to 4 days at Loughborough Wharf at plus 9s 0d a ton. Denby coal sold for 6s 1d a ton soon afterwards.

This brought huge competition for the coal owners, as now those on the Derbyshire side of the River Erewash were able to sell their output in Nottingham at a reduced rate by transporting it by barge along the new canal and onto the River Trent. Canal boats carrying 30 tons of coal, manned by a crew of three, and pulled by one horse, could complete the voyage from Erewash pithead to Loughborough Wharf in three and a half days in calm weather.

At Loughborough, coal had to be transferred into carts to complete the journey to Leicester by road, and serious attention was again being given to extending the navigable waterway through to Leicester. The Leicester Navigation was proposed, but was met with violent opposition from Sir George Beaumont and other Leicestershire pit owners, whose interests had already been damaged by the Soar Navigation. The sponsors, however, of the proposed Navigation were able to buy over the Leicestershire coal-owners by agreeing to include them in their scheme, a proposed canal from the Soar, near Loughborough, to the Coleorton coalfield. This, on the face of it, should have given the Leicestershire pits a small advantage, and probably would have done so if the original proposals for a continuous waterway had been carried through.



COPY OF AN ORIGINAL PLAN OF THE NAVIGABLE CANAL FROM THE RIVER TRENT TO LANGLEY BRIDGE IN THE COUNTIES OF DERBY AND NOTTINGHAM. SURVEYED IN 1776 BY J SMITH.

The original Charnwood Forest Canal was to begin at Thringstone Bridge, close to the Coleorton and Swannington coal mines, and was to pass north of "Sheepshed" (Shepshed) and Loughborough to join the Leicester Navigation, via a series of locks, at Barrow-On-Soar.

The reader should note that the Charnwood Forest Canal was principally built for the transportation of coal, from the mines at Swannington and Coleorton. Burnt lime from Barrow Hill, Osgathorpe and Gracedieu lime quarries only formed a small percentage of the tonnage transhipped via the canal during its short life.

A prominent part in the negotiations which followed was played by the now wealthy Leicester banker, and coal mine proprietor Joseph Boulton, who was also a tenant of one of Beaumont's mines at Coleorton, adjacent to the George in at Coleorton and only a quarter of a mile from Godolphin Burslem's mine at Coleorton.

Various bills before Parliament between 1786 and 1789 were thrown out under pressure from landed interests, but the Bill finally gained assent in 1791, and the Leicester Navigation Company, of which Sir George Beaumont was a shareholder, was formed. There follows an extract and copy from the original petition made to Parliament in 1786:-

A petition of the several Noblemen, and the humble petition of the several Gentlemen, Clergy, merchants, Tradesmen, manufacturers, and others whose Names are thereunto subscribed, on Behalf of themselves and others, was presented to the House, and read; Setting forth, That by surveys lately made, it

appears, that a Canal, for the Navigation of Boats and other vessels with heavy Burdens, may be made from Thringstone Bridge, in the Parish of Whitwick, in the County of Leicester, to the Town of Leicester, to commence at near Thringstone Bridge aforesaid, and to proceed from thence through or near the several Parishes, Townships or hamlets, of Thringstone, Whitwick, Osgathorpe, Belton, Sheepshed, Garrendon, Thorpe Acre, and Loughborough, and there to cross the Loughborough Canal Navigation which communicates with the Trent Navigation, or instead thereof, if it thought to be more beneficial to the Public, to pass on the South Side of Loughborough aforesaid, and to proceed from thence, in either Case, through or near the several Parishes, Townships or Hamlets of Loughborough, Woodthorpe, and Quarndon, to or near Barrow upon Soar, there to communicate with River Soar, from whence a Navigation may be continued, by Means of widening, deepening, and cleansing the said River Soar, and making necessary Cuts and Deviations by the Sides thereof, to or near Lady's Bridge, in the Parish of Saint Margaret, in or near the said town of Leicester, or to or near West Bridge, in the Parish of Saint Mary in the said Town of Leicester, or to or near both these places; and also, that one or more Rail or Waggon Way or Ways for the conveyance of Coal, Stone, Lime, and other Goods, to or near the several Coal Pits and Lime Works opened, or to be opened, or worked, in the several Parishes, Townships, or places of Swannington, Coleorton, Thringstone, Staunton Harold, Osgathorpe, Breedon, and Grace Dieu, contiguous or near to Thringstone aforesaid, and the line of the said intended Canal, may be made and completed from the said Canal Navigation; and that from making the said above-mentioned Canal and Navigation, and Rail or Waggon Way or Ways, the Petitioners conceive that great public advantage may be derived, by extending the Intercourse of Trade and Commerce, as well as many local Benefits produced to several local Towns and Places, and particularly in the articles of Coal and Lime.....

Christopher Staveley was brought in to survey the area and came up with a seven and a half mile long contour canal between Thringstone and Nanpantan, near Loughborough (**see Staveley's map of the canal on the front page**).

The 1791 Act meant a major change to the original proposals, since the vexed question of water rights owned by watermills at Gracedieu, Sheepshed and Dishley, prevented the use of water for heading the lock system, so it was agreed to run a level canal along what is the 300 feet contour, so far as it would go, which was at Nanpantan near the Priory Hotel, 170ft. above the Soar. The final route of the canal began at Thringstone Bridge, running north as far as Osgathorpe, before turning sharply south again to pass behind Gracedieu Priory and skirted the edge of the lime quarry there. Here it turned east to run (roughly) along the line of the current Ashby Road, before passing under Tickow Lane and coming into Sheepshed. From here it continued south east under Ashby Road and the line of the present M1, and on across the site of Longcliffe Golf Course. The canal part of the line ended at Nanpantan, in an unloading wharf just behind "The Priory" pub.

This necessitated horse-drawn tramway connections at each end, one to Loughborough from Nanpantan (marked **H** on the front cover map), which was two and three quarter miles long with a section of 1 in 30 down-hill gradient. At the other end, between Swannington and Coleorton coal mines and Thringstone Wharf, two tramways marked **D** and **E** on the front cover map each about one mile long were built, with gradients in places of 1 in 24 and 1 in 26 which were in favour of the loaded wagons. [One leg ran to Burslem's and Boulton's collieries near to the George Inn, Coleorton and the other to Raper and Fenton's Thringstone Colliery.](#)

John Nichols, the Leicestershire historian, tells us c.1820 :-

A branch of ¼ of a mile proceeds almost S, and level, to Thringston-bridge Wharf and Warehouses; and thence Rail-way proceeds SSW ¾ m to Swannington-common Colliery; and another such branch SW, ¼ m. to Cole-Orton Colliery; and another branch from the last, of a ¼ m. to another colliery in Coleorton, was also provided for in the Act: and any other Rail-way branches are allowed to be made to Mines, &c. within 2000 yards: these Rail-way branches rise considerably from the Water-level, but I am unacquainted with the particulars: except that the descent is so considerable from Cole-Orton, that the Trams of coal descended without Horses, regulated by means of a clamp or logger, acting on the wheels, by a man who rode on each, and the empty trams were drawn up again by Horses.

The level canal was seven and a half miles long from Nanpanton to Junction House, south of Osgathorpe, from where a mile long branch arm took the canal north to Barrow Hill lime works basin, from where a 130 yard long tramway continued into the lime works. This was built in order to allow burnt lime (quick lime) to be transhipped onto the canal barges. Land was purchased in order to build a tramway to connect Barrow Hill lime works to Cloud Hill (marked **F** on the preceding map), but this never materialized. This would of course have enabled Cloud Hill lime works to tranship burnt lime onto the canal via Barrow Hill to Leicester, both lime works being owned by Earl Stamford at this time of course. When the tramway from Willesley basin to Cloud Hill limestone quarry was built in 1802, this allowed Cloud Hill to tranship lime to the national canal network via the Ashby Canal when it was opened in 1804, and later by the Coleorton Railway to Leicester.

John Farey described the edge rails and trams that were used on the branch lines as follows:-

The railways belonging to this company are single, have bars (rails) flat at the top, and the wheels cast with flanches, inside, for keeping the trams upon them. The bodies of the trams were made to lift off, or to be placed on their wheels, by cranes erected in the Forest-Lane and Thringstone Bridge wharfs, so that the bodies of the trams only, stowed close together could be carried in the boats on the water level.....It is not thought that this system was ever used, although the description he gives is not dissimilar to that used on the Little Eaton Gangway from the Derby Canal which was in use c.1795.

After delays and financial problems, which were to beset the project right through to the end, and although much work still needed to be completed, the Charnwood Forest Canal was declared open for the transportation of coal and lime on 24th October 1794, and with it the whole of the Leicester Navigation to Leicester.

In October 1791, Godolphin Burslem, full of optimism over the starting of the Charnwood Forest Canal, opened a new colliery at Coleorton which was leased from Sir George Howland Beaumont, 7th Baronet, and was able to raise thick coal of excellent quality. The colliery was situated just to the north of what is now the George Inn, on the Loughborough Road. It was drained by a new engine capable of raising 760 gallons of water per minute. It was said, that this, and Boulbees' new colliery just to the west of the George Inn, were capable of producing a lasting supply to the whole county.

Initially, the Derbyshire barges had to wait at Loughborough whilst Burslem's' coal was transferred, once at Thringstone Bridge from coal wagons into barges, then at Nanpanton Wharf back into wagons, and again at Loughborough Wharf back into barges. Goodness knows what degraded state the coal was in when it finally arrived at Leicester.

As a result of Burslem's dissatisfaction with the new canal when it was opened to traffic in October 1794, the Navigation Company agreed to buy £40 worth of his coal immediately, and up to £20 worth per week thereafter at a price of 8s per ton, and to carry it free of charge to Thringstone Wharf, on condition that Burslem would buy back any unsold coal once the canal had become effective. Three days later, two barges arrived simultaneously at Leicester – **one laden with coal from Godolphin Burslem's mine at Coleorton**, and the other with best Derbyshire house coal.

Burslem's immediate problems were now solved, and in June 1795, John Gildart, the manager of Thringstone Wharf, reported to the company that 330 tons of **Godolphin Burslem's coal** had arrived and was awaiting collection. Sir George Beaumont, however, carried on a lengthy dispute with the company over tonnage rates, maintaining that he could not deliver coal to Thringstone Wharf for less than 8s 4d per ton, and that when tonnages had been added, it was more expensive than the north Derbyshire coal when sold in Leicester. It was some time before the company reluctantly agreed to reduce the tonnage on coal between Thringstone and Loughborough from 1s 6d to 10d. During the three months of April to June 1796, only 195 tons of coal was sent along the Forest Canal, and the collector at Thringstone Wharf was shortly afterwards relieved of his post. It was claimed that the colliery proprietors were unable to produce coal at a competitive price.

Godolphin Burslem was apparently having "cash flow" problems owing to the inability of the Navigation Company to transport his coal, which was piling up at Thringstone Wharf. By July 3rd 1796, there was a stack of about 300 tons of coal, which the Navigation Company actually purchased and resold at cost.

At the end of 1796, Burslem probably decided that there was little point in continuing and he went out of business shortly afterwards, due to geological difficulties. A fully-equipped colliery, designed to work the Swannington coal and situated at Coleorton, was advertised to let in June of the following year, and it is likely that this was his new colliery opened in 1791. Early in 1802, Godolphin Burslem sold the contents of his home at Ravenstone Hall and moved to Hampshire, where he died in 1809. There is some mention of him being involved at a colliery in Peggs-Green which probably delayed his move to Hampshire.

It was soon found that more water was required for the canal resulting in the building of a new header reservoir at Blackbrook. Presumably, in order to reduce costs, the engineers decided to incorporate an earthwork dam using local materials. Work was postponed due to further financial difficulties, and exceptionally severe and prolonged frosts in the first 3 months of 1795 had seriously reduced income from the canal. The reservoir finally reached completion in 1796

In May and June 1796, tolls on the Canal were down to a few pounds, making it uneconomical to keep a collector there, and whatever hopes the Leicestershire coal-owners had entertained of the canal venture, they were bitterly disappointed, for although the reservoir was completed in 1796, the whole enterprise was vastly under-utilised and threatened to become a "white elephant". For two years, negotiations between Sir George Beaumont's' agent and the company failed to

establish an acceptable shipment charge, and it was not until 1798 that an agreement was reached, one of the conditions being that the company would help Beaumont extend the railway 200 to 300 yards from his pits to meet their own rail head at Thringstone. The tramway was extended to Boulthebes' mine near the George Inn at Coleorton. Surface evidence of the mine and tramway can still be seen today. Announcements were made in September 1798 that Coleorton coal would shortly be available at Loughborough, but in December, tolls of only five guineas were received for the conveyance of some 12 tons of coal.

Shortly afterwards, following heavy falls of snow and freezing rain, the great thaw in February brought massive quantities of water down the valley into the Blackbrook reservoir (see map of canal), which on February 20th 1799 at 11 o' clock in the morning, burst the dam and carried all before it, including a great section of the Canal Aqueduct, wreaking horrifying damage all the way down to Dishley Mill at Loughborough. Apparently, it took just eleven minutes for the reservoir to empty. In an article in the 'Leicester Mercury' dated 15.12.75. there featured a letter written on February 21st 1799, by Mr. Herrick of Beaumanor Hall, giving a vivid account of the tragic floods which swept through the Shepshed and Loughborough area at that time, devastating crops, farm animals and property. Mr. Herricks account was recorded as follows:-

When we got to within a mile of Garendon, it was like a sea which roared as if to be heard. It swept all before it – cattle, sheep, houses, hedges, cornfields – and large oak trees were torn up by their roots.

We saw cheeses, loaves of bread, furniture of all sorts, beds, tables, ridge tiles off houses, doors, window frames, etc., all brought down in the torrent.

People were up to their neck in water saving sheep of which vast numbers were drowned. Whole fields of turnips were washed away and wheat fields the same. A more dreadful sight I never beheld.

The Leicester Navigation spent over £6,000 on repairs, but the canal continued to be both a technical failure and an economic disaster, leaving the Leicestershire collieries at the mercy of their northern competitors. The Canal was eventually written off in 1804. This put an end to any hopes the Leicestershire coal-owners still entertained of competing with their Derbyshire rivals, and many of the foundations cut their losses and closed down. For a generation, until the dawn of the railway age, there was a depression in the Swannington / Coleorton coalfield, whilst Derbyshire and Nottinghamshire coal enjoyed a monopoly in Leicester and its neighbourhood. As the Charnwood Forest Canal closed, the Ashby Canal was opened to traffic in the same year. Even though the Ashby Canal Company had spent £184,000 on the canal, its late arrival undoubtedly retarded the economic development of the coalfield and limited the profitability of the canal itself.

The tramways laid to and from the Charnwood Forest Canal by William Jessop in 1793 were cast iron, fish belly, flat-headed edge-rails for use with flanged wheels, and there is an example in Leicester Museum. They were 3ft long and weighed 28-30lbs. The contract indicated that the gauge of the rails was between 4ft 8ins and 4ft 10ins. The rails were to be laid on 6 ft long oak sleepers with a pad at each end to which the rail was to be fastened with oak pins. This was a totally different system to that used on the Cloud Hill tramway where the rails were laid on stone sleeper blocks, many of which have survived unlike the oak sleepers. It has often been stated that these lines were the first edge-railways, but this is not so, since cast iron edge-rails were first made and used at Coalbrookdale foundries in the 1760's. However, this may have been the first time fish-belly rails were used. With the failure of the canal, Jessop's' railway lines were taken up and sold, bringing to an end any hopes of an alternative to the expensive and inefficient road transport system of the day.

SUPPLEMENTARY INFORMATION

An interesting commentary by John Farey, the respected geologist, on his visit to the area in 1807 reads as follows. **The reader should note that John Farey should have been talking in the past tense as the Canal had been closed for over seven years prior to him visiting:-**

.....From the Loughborough Basin to Forest-lane Wharf, is $2 \frac{3}{4}$ miles of Rail-way, with an ascent of 185 feet: thence to the foot of Barrow Hill, NW of the village of Osgathorpe is $8 \text{ and } \frac{5}{8}$ s miles, and level: and thence there is a Rail-way extension of 130 yards rising into the Barrow Hill limestone quarries; and a further extension of $\frac{7}{8}$ ths of a mile of Rail-way-way is provided for in the Act, to Clouds-Hill Limestone Quarry; where had this last extension been executed, junctions would have nearly been effected, with the Ashby-de-la-Zouch Rail-way, and also with the proposed Breedon Rail-way (the latter never materialized as explained earlier). From the SE of Osgathorpe Reservoir (must be referring to the canal itself as there was not a reservoir at Osgathorpe. Apparently, a small stream from the moat surrounding the long gone Stordon Grange ran into the canal as did Thringstone and Gracedieu Brooks) a branch of $\frac{1}{4}$ of a mile proceeds almost S, and level, to Thringston-bridge Wharf and Warehouses; and thence Rail-way proceeds SSW $\frac{3}{4}$ m to Swannington-common Colliery; and another such branch SW, $\frac{1}{4}$ m. to Cole-Orton Colliery; and another branch from the last, of a $\frac{1}{4}$ m. to another colliery in Coleorton, was also provided for in the Act: and any other Rail-way branches are allowed to be made to Mines, &c. within 2000 yards: these Rail-way branches rise considerably from the Water-level, but I am unacquainted with the particulars: except that the descent is so considerable from Cole-Orton, that the Trams of coal descended without Horses, regulated by means of a clamp or logger, acting on the wheels, by a man who rode on each, and the empty trams were drawn up again by Horses.

The Rail-ways belonging to this company are single, and have bars flat at top, and the wheels are cast with flanches, inside, for keeping the Trams upon them. The bodies of the Trams were made o lift off, or to be placed on their wheels, by means of Cranes erected on the Forest-lane and Thringstone-bridge Wharfs, so that bodies of the Trams only, stowed close together, could be carried in the Boats on the Water-level. The width of the side-cuts for avoiding the Mills, and the Locks, on the main line of this Canal, are adapted for the Barges that navigate the Trent river..... At a branching of the Black-brook vales, about $\frac{1}{4}$ of a mile above the Canal, there is a large reservoir for supplying the Water-level, the head of which gave way, soon after the works were completed, and occasioned such an inundation, that Mr. Jester's Farm-house and premises were destroyed, and a Hay-cock was borne down by it, and wedged in the Aqueduct Arch, by which means, the Valley above the Embankment became filled, and by the pressure, a breach in the same was effected, which emptied the whole Water-level, whereby such an enormous flood was occasioned in this Valley(which passes through the late Mr. Robert Bakewell's Farm at Dishley), that a great many sheep, &c. were drowned thereby, and other serious damages were done..... I believe when I viewed the Forest in 1807, the Canal was without any water in it, Cattle were rapidly treading in the banks, the Bridges were fast dilapidating by mischievous boys &c.

The canal was officially abandoned by an Act of Parliament in 1848.

A SCHEMATIC DIAGRAM (NOT TO SCALE) INCLUDING THE TRAMWAY BRANCH LINES FROM THE CHARNWOOD FOREST CANAL AT THRINGSTONE WHARF TO THE COAL MINES OF RAPER AND FENTON AT SWANNINGTON AND BURSLEM'S AND BOULTBEE'S COAL MINES AT COLEORTON. THESE ARE SHOWN IN RELATION TO THE ROUTE OF THE COLEORTON RAILWAY TO THE LEICESTER TO SWANNINGTON RAILWAY AT SWANNINGTON INCLINE FROM WORTHINGTON ROUGH & ITS VARIOUS TRAMWAY BRANCH LINES WHICH WERE OPENED THREE DECADES LATER.

