THE EREWASH VALLEY COAL CARTEL: CAPITALIST EXPLOITATION IN THE INDUSTRIAL REVOLUTION

By STANLEY D. CHAPMAN
([redacted])

BACKGROUND

Historical research has shown that in the eighteenth and nineteenth centuries the sinking of coal mines swallowed up more and more capital for which there was no guaranteed return. To reduce the high risks, mining entrepreneurs in almost all British regions organised themselves into associations to regulate output and to fix prices and wages. Most of these associations (more exactly, cartels) lasted many years for the owners' basic need for stability did not change. The southern end of the Nottinghamshire and Derbyshire coalfield, which occupied the southern borderland of the two counties known as the Erewash Valley, was no exception to the generalisation. The Erewash Colliery Owners' Association ran from 1798 to the end of the Victorian age, controlling the coal trade in the Vale of Trent at large and, more particularly, that in the Derby, Nottingham, Newark, and Leicester markets.

The basic question relating to the Erewash and other coal cartels is what effect they had on the various parties involved — on the colliery owners, the workers, the retail customers, and the industrial users of coal. To put the question more dramatically, was the cartel a capitalist conspiracy against labour, consumers and weaker entrepreneurs, or was it, as the colliery owners claimed, a reasonable way of bringing stability to their industry? Whatever the answer, it must be an important dimension of local and regional economic and social history. The Erewash Valley cartel was led for two or three generations by the leading coal mining company, Barber, Walker & Co., which in practice meant the Fletcher family of Heanor (Derbyshire) and the Barber dynasty based at Eastwood (Notts). The Barbers are already familiar to us as "muted" paternalists in business and politics in Nottinghamshire, and students of D. H. Lawrence and his local novels know a lot about them.[1] The cartel has not entirely escaped the attention of local historians in our area, but a lot more can be gleaned from diverse sources so as to present a more complete picture. We must take a quick view of the history of the coalfield before focussing on the origins and founding firms of the cartel, after which we can return to the basic questions about the impact of the cartel's policies.[2]

DEVELOPMENT OF THE EREWASH VALLEY COALFIELD[2]

Some of the more accessible parts of the Erewash and South Nottinghamshire coalfield were developed commercially as early as the sixteenth century. In particular, the coalpits at Wollaton, just to the west of Nottingham, were a major concern; Sir Francis Willoughby, 'a great coal magnate' (Pevsner) paid for building of the celebrated Elizabethan mansion, Wollaton Hall, out of profits from coal mined on his estates. At the end of the century, the

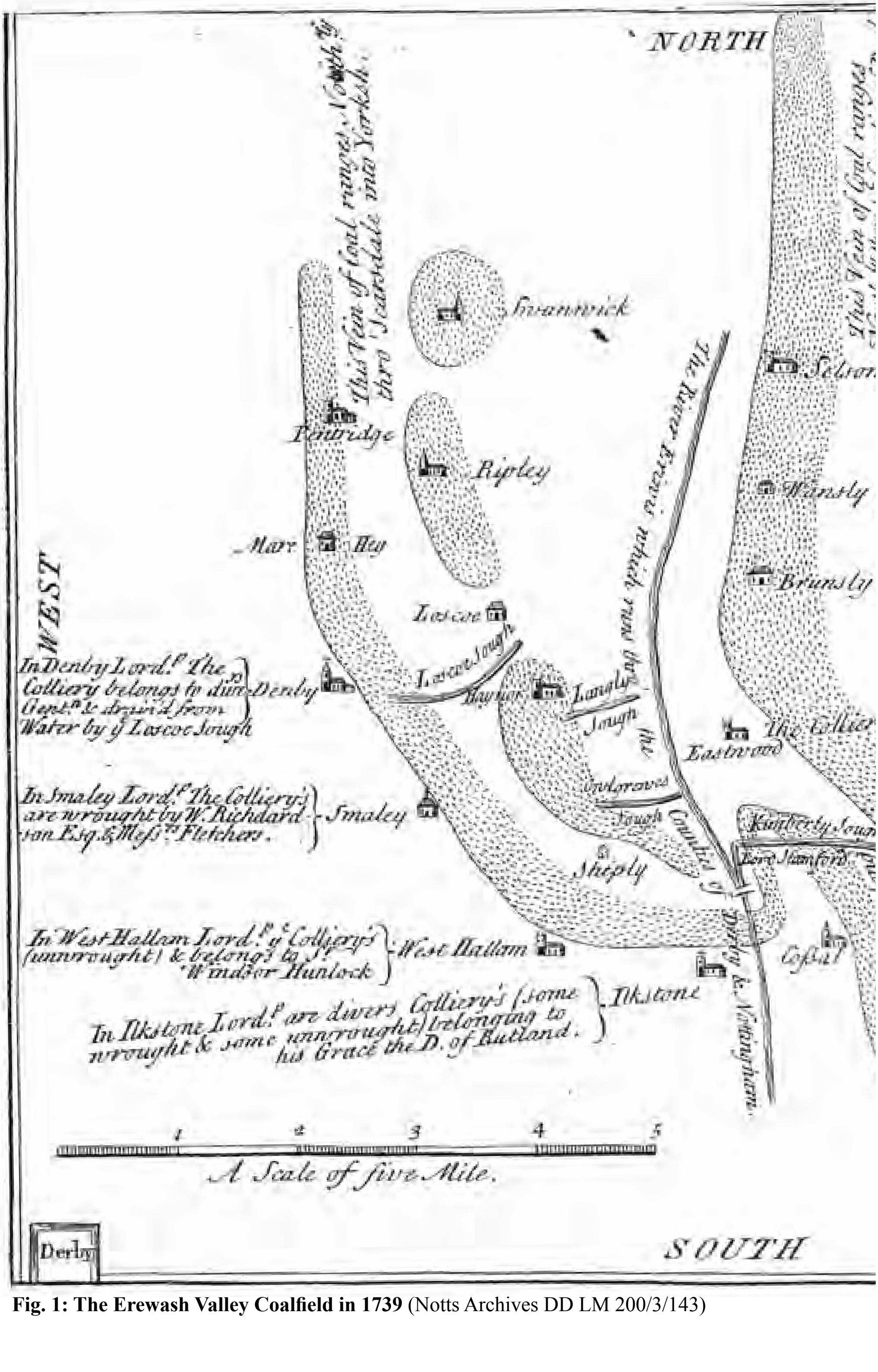
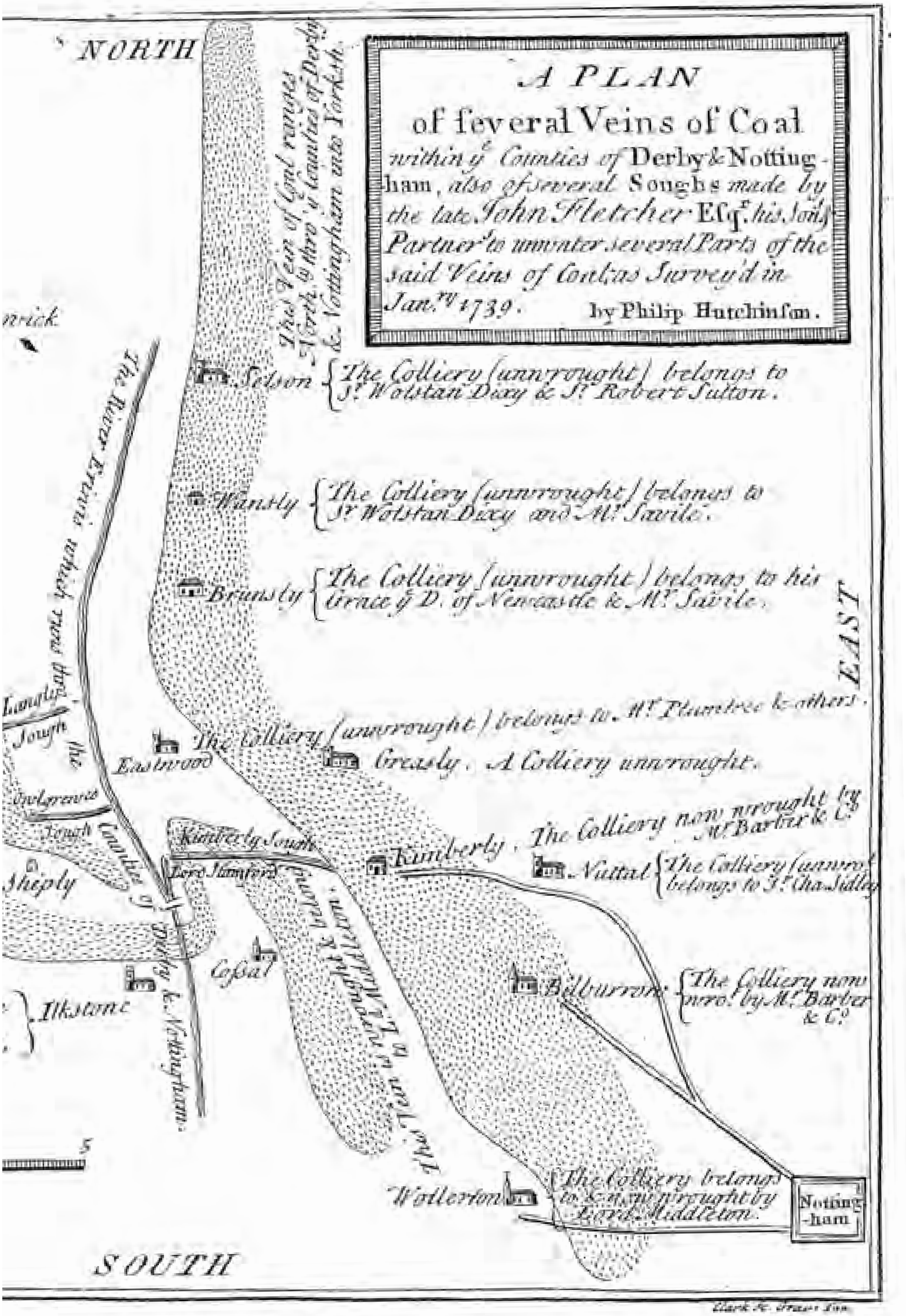


Fig. 1: The Erewash Valley Coalfield in 1739 (Notts Archives DD LM 200/3/143)


NORTH
A PLAN
of several Veins of Coal
within ye Counties of Derby & Nottingham, also of several Soughs made by the late John Fletcher Esqr. his Sons & Partners to unwater several Parts of the said Veins of Coal as Survey'd in Jan.ry 1739.
by Philip Hutchinson.
Selson
The Colliery (unwrought) belongs to Sr. Wolstan Dixy & Sr. Robert Sutton.
Wansly
The Colliery (unwrought) belongs to Sr. Wolstan Dixy and Mr. Savile.
Brinsly
The Colliery (unwrought) belongs to his Grace ye D. of Newcastle & Mr. Savile.
EAST
The Colliery (unwrought) belongs to Mr. Plumtree & others.
Eastwood
Greasly. A Colliery unwrought.
The Colliery now wrought by Mr. Barber & Co.
Kimberly
Nuttal
Kimberly Sough
Lord Stamford
Bilburrow
The Colliery now wro. by Mr. Barber & Co.
Cossal
Ilkstone
Shipley
Langly Sough
Owlgreaves Sough
Wollerton
The Colliery belongs to & is now wrought by Lord Middleton.
Nottingham
SOUTH

Willoughby family sponsored building of a pioneer railroad to convey coal wagons to the major transport artery, the River Trent, planning to sell more coal downstream. But already in the seventeenth century, mines were being worked as far away from Nottingham as Heanor and Langley (Derbyshire), ten or eleven miles distant.[3]

Output of the coalfield multiplied in the seventeenth century, but then fell away sharply in the eighteenth (Table 1), apparently because the most accessible (outcrop) seams were worked out and the others were too isolated to be economical to work. In 1730, Sir Robert Sutton owned the Manors of Greasley and Selston and lands in Bulwell, together covering a large part of the coalfield beyond Wollaton and Ilkeston; the farms generated £1405 rent p.a. but the 'coal works' only about £100 a year.[4]

Table 1: Erewash Valley Coal production before the Railway Age

c.1600	30-50,000 tons p.a.
c.1700	100-150,000 tons p.a.
c.1764	19,500 tons
c.1792	40,000 tons
1803-5 (3 years average)	247,000 tons
1810-14 (5 years average)	287,000 tons
1815-19 (5 years average)	264,000 tons
1820-24 (5 years average)	313,000 tons
1825-29 (5 years average)	298,000 tons
1830-34 (5 years average)	284,000 tons
1835-39 (5 years average)	370,000 tons
1840-44 (5 years average)	382,000 tons

Sources for output:
1764: P. Stevenson, *The Nottingham & Ilkeston Turnpike Trust 1764-1874* (Ilkeston L.H.S., 1972) p.31.
1792: National Archives RAIL 879/4, John Smith's Report on the Trent navigation. Reference kindly supplied by Philip Riden.
1803-1844: *Royal Commission on Coal,* Parl. Papers, 1871, XVIII, Appendix 26.
c.1600, c.1700: J. U. Nef, *The Rise of the British Coal Industry 1550-1700* (1932) I, p.60.

A map drawn in connection with a 1739 court case shows only three of Nottinghamshire's nine sites were being worked and six of the eight sites in Derbyshire (Fig. 1; Table 2). In 1764 it was reported that the Wollaton coalpits were 'put out by water' while those at nearby Bilborough were 'worked out'. The upper edge of the coal seam was 'already got [worked out] throughout the whole country'.[5] Mining the deeper seams of coal was more expensive because it required drainage soughs or steam pumps; four soughs excavated by John Fletcher and his partners are shown in the 1739 map of the Erewash Valley coalfield and the first of several Newcomen-type pumping engines was erected in 1735. In 1739 Fletcher & Barber claimed to have spent £20,000 on such improvements at various mines across the coalfield, a plausible figure in view of the high cost of such investments at this early period.[6]

Table 2: Erewash Collieries in 1739 and 1764

Derbyshire	Miles to Nott'm	1739	1764	Owner/Contractor
Ilkeston	6	W		Duke of Rutland
Awsworth	6	O	W	Duke of Rutland
Shipley (Ilkeston)	7	W	W	Miller-Mundy
West Hallam	8	O		Sir Henry Hunlock
Smalley	10	W		Fletcher
Denby	11	W		Lowe
Langley	11	W	W	Fletcher
Heanor	10	W	W	Fletcher

Nottinghamshire	Miles to Nottm	1739	1764	Owner/Contractor
Wollaton	2	W	O	Lord Middleton
Bilborough	3	W	O	Barber
Nuthall	3.5	O	O	Sir Charles Sedley
Kimberley	5	W		Barber
Greasley	7	O		Barber
Brinsley	9.5	O		Wilkes
Wansley	10	O		Dixy, Savile
Selston	11	O?		Sutton
Eastwood	8	O	W	'Mr Plumtree and others', then Barber

KEY O = unworked, W = working

Sources: 1739 – Notts Archives DD LM 200/3/143.
1764: P. Stevenson, *The Nottingham & Ilkeston Turnpike Trust* (Ilkeston 1972), pp 10-12.
For the Barber partnerships, see the main text.

There were two obvious problems for the entrepreneurs involved in these developments. One was that the price of coal at the pit-head rose steeply, and at their more distant markets (such as Newark and the Vale of Belvoir) more than doubled. A witness to the government inquiry into the proposed Ilkeston-Nottingham turnpike in 1764 maintained that the price of coals [sic.] was 'far too great for the Poor to pay for them' in such localities. The other was that the cost of development at different sites in the valley varied greatly, by as much as three to one. The cheapest coal was at Langley and Heanor, while Eastwood, Awsworth, Shipley, Hallam, Wollaton, Bilborough, and Nuthall were the most expensive, according to John Barber in 1764.[7] In other words, by the middle of the eighteenth century, coal mining in the Erewash Valley had already become extensive, costly and risky, so that the entrepreneurs involved had to earnestly seek means of protecting their capital and maintaining their profits. This was the starting point that led to establishment of the colliery owners' cartel at the end of the century. Co-operation grew with the building of the Nottingham and Ilkeston turnpike (1764) and the cutting of the Erewash Canal.[8]

Examining Table 2, it will occasion no surprise that the most important colliery owners on the Erewash coalfield in the eighteenth century were the related Fletchers and the Barbers. The former owned or leased several pits in Derbyshire, Nottinghamshire and Warwickshire, the latter in Nottinghamshire.

Early in the century, the Fletchers operated at Smalley, Heanor, Denby, Shipley (Ilkeston), Langley and Ripley, all in Derbyshire, and the Barbers at Bilborough and Kimberley in Nottinghamshire. Little is known of the origins of the two families but it appears that they rose from the ranks of farmers that exploited the mineral resources of their tenant holdings. In 1727 the two families became connected when Francis Barber of Greasley Castle lent John Fletcher of Horsley and Robert Fletcher of Smalley £400 in return for a third of the Owlgreaves (Heanor) collieries. The connection grew when Barber married Fletcher's daughter (1731), and their eldest son John inherited most of the Fletcher coal estates in 1765.[9] This was the John Barber (1734-1793) who appears in the *Oxford Dictionary of National Biography* as an inventor of drainage systems for coal mines. One account says that he spent a fortune of £50,000 before falling into bankruptcy in 1780. However that may be, the Barber family fortune, augmented by new partnerships, lived on and continued to take the lead in the Erewash coal industry for several generations. The nineteenth century partnership, Barber, Walker & Co., will be seen as most prominent in the annals of the Erewash cartel.[10]

THE EREWASH COLLIERY OWNERS' CARTEL

The cutting of river navigations and canals was invariably followed, as the promoters intended, by dramatic falls in freight rates, especially for heavy and bulky cargoes like coal. The Erewash Canal (1779), joining a string of collieries to the Trent, 'greatly reduced the price of coals' in six counties it was declared in 1781. The *Newark Herald*, announcing the opening of the Nottingham Canal in 1793, predicted it would bring 'the greatest blessing to a populous town, a water communication by which the price of coals…will be considerably lessened'.[11] Surprisingly, this did not prove to be the case with the regional waterways — indeed, the opposite proved to be true. Control was effectively exercised by a secret cartel, the Erewash Valley Coal Proprietors' Association, from the 1790s, by fixing the pit-head prices. The evidence for this is quite clear. An anonymous correspondent of the *Newark Mercury* wrote from Nottingham in 1829 that

> It has long been a matter of enquiry for many, why the public should be imposed upon in the price of coal, and on investigating the business, I find tonnage and freight are the same as they were forty or fifty years ago. In 1788, I find some of the best Nottinghamshire and Derbyshire hard coals were selling for 5s 4d per ton at the Pits, allowing about 30 cwt to the ton, from that time till about 1802, they gradually increased the price to 7s 6d or 8s per ton, which was about the time when the Coal Proprietors formed into a body, and at that time they reduced the weight to 20 cwt to the ton, which has continued ever since and which deduction of weight actually raised coal one third in price. In December, 1804, I find the same sort of coal advanced to 10s 6d per ton. Thus, Sir, from 1788 to 1804, you find coal nearly double in price, and raised one third by taking off the weight.[12]

There is a variety of other evidence to support this record. Robert Lowe's *Agriculture of*

Nottinghamshire (1798) insisted that, from the opening of the canals, the price of coal has 'become much dearer to all places, within a certain distance of the pits, the price having been greatly raised at the pits themselves'. This was of course exactly the opposite to what readers would have expected and very different from the consequence of improved transport in most other parts of the country. The economies of the new system (the Trent Navigation, connected canals, and colliery railroads) are on contemporary record: Ilkeston and Eastwood coal was advertised at 10s ton in 1783 but when the Castle coal wharf was opened in Nottingham in 1799, anthracite from Brinsley Colliery was advertised at 8s 9d (9s 9d delivered) in the local press, fully vindicating the 1829 complainant.[13]

Lowe refers to the price of coal along the Trent Valley rising from 10s to 15s a ton in the period 1794-8. Working class budgets published in the Nottingham newspapers bear this out for the later period (1811-1837).[14] The opening of the Leicester & Swannington Railway (1832) ended the Erewash coal monopoly in Leicester, but the Erewash Association replied by inducing the Midland Railway to take its northern route through the valley, subscribing £47,000 out of the £145,000 cost. This initiative proved sufficient to save the Erewash industry, and to cement the owners' Association for another 40 years or more.[15]

Colliery owners and lessees on the Erewash and Cromford canals were already working together in the early 1790s. In the financial crisis of 1793, seven of them headed by Barber & Walker advertised in the *Nottingham Journal* that they were only selling to coal dealers for cash (2 November 1793). However, the earliest evidence for the existence of the Erewash Valley Coal Association is provided by John Farey's *Agriculture and Minerals of Derbyshire* (3 vols. 1811-17). In 1798 the principal colliery owners met representatives of the Cromford, Derby, Erewash, Grantham, Leicester, Melton Mowbray, Nottingham, Nutbrook, and Trent Navigation companies and agreed to establish weigh houses at the canal wharves at which all coal for transhipment would be accurately gauged and recorded by clerks appointed by the coal owners jointly. The clerks were to take money from the boatmen in payment for coal at rates fixed 'by each individual coal-master or his coals at the previous stated meeting of the coalmasters'. This system ensured that the quantities sold and prices charged by each colliery owner were known to all the others. A quota system was established for apportioning the agreed total sale by canal, leaving aside the question of local landsales, which were a small part of the total due to the high cost of transport by land.[16]

The consequence was, as Farey explained, that 'Thomas Walker Esq. of Bilborough, Notts [a partner in Barber, Walker & Co.] was selected by the canal committee and other coal masters to digest and carry into effect the building of the necessary weighing houses and offices…a task for which his great mathematical knowledge and extensive practice as a coal master and coal viewer eminently fitted him'.[17] This standardisation was no doubt very beneficial to the inland waterways companies (who were regularly defrauded) but the fixing of 20 cwt (smaller than 24, 30 or other number) to the ton without lowering the price conferred the greatest benefit on the mine owners at the expense of their customers, who had often enjoyed more generous measures.

In 1802 a contract was signed by 17 mine owners representing 27 collieries in the Erewash Valley, giving legal effect to the agreed standard weights (Table 3). At first sight the document looks innocuous enough, but in fact it established a powerful regulatory system, with an 'Overseer Superintendent' and clerks to record all cargoes on the Erewash, Nottingham, Cromford and Derby canals for all present and any future collieries. This meant that the output and prices of all the regional coal mines were recorded and circulated to members

TABLE 3: MEMBERSHIP OF THE EREWASH VALLEY COAL MASTERS' ASSOCIATION IN 1802

Derbyshire	
Owner	*Collieries*
James Potter	Ilkeston
E.M. Mundy Esq.	Shipley, Heanor
William Drury Lowe	Denby, Simonfield
Revd. Henry Morewood	Swanwick, Somercotes
Revd. D'Ewes Coke	Pinxton
Henry Hunter	Ripley, Hartshay
B. Outram & Co.	Butterley, Codnor Park
John Sutton	West Hallam
James Fletcher & Henry Moore	Ripley
Thomas Hodgkinson	South Normanton
Samuel Hodgkinson	Pinxton Mill
Thomas Pearson & Humphrey Goodwin	Pentrich
(12)	(17)

Nottinghamshire	
Owner	*Collieries*
Lord Middleton	Wollaton, Cossall
Barber, Walker & Co.	Bilborough, Beggarlea, Newthorp
Joseph Wilkes	Brinsley
William Fenton	Brinsley New
John Bourne & Luke Jackson	Greasley, Eastwood (+ Ilkeston)
(5)	(10)

Source: Derbyshire Record Office, Butterley Co. mss. D503/2/16A, 14 June 1802.
Total output in 1803 was recorded as 254,268 tons. The initial agreement was for seven years. The 1816 return suggests that several owners withdrew in 1809, notably Lord Middleton and Edward Lowe of Denby – J. Farey. *Agriculture of Derbys I* (1811) p.187.

every quarter, and reviewed by the committee. Owners who breached the regulations were fined £1,000, and those that transgressed the rules made at quarterly meetings £2,000, which was more than a year's profit for all but the biggest firms. It was not long before outputs were being regulated to support the cartel's price-fixing policies. The power of Barber, Walker & Co. in the cartel is indicated by the share being fixed at 24 per cent of the total output of the cartel (1808-1818).[18]

The Association shortly (1808) appointed a strong man to conduct the administration. George Pickering (1793-1860), a very methodical and assiduous bureaucrat, devoted his long career to the Association. He was busy much of the week at the Eastwood or Nottingham offices of the organisation, but also acted as colliery agent (sales director) to Barber, Walker & Co. (Plate 1). He no doubt worked closely with Robert Barber & Sons, the Eastwood lawyers and relatives of the mine owners, who kept the records of the Association. Sundays found Pickering doing his duty in the Established Church, a church warden in Eastwood for many years and hence (by tradition) an undoubted establishment man.[19]

Plate 1: Brinsley colliery headstock. The mine was acquired by Barber, Walker & Co. of Eastwood in 1813. (Courtesy of Notts WI Calendar, July 2011)

THE CARTEL'S MARKET

The market for Erewash Valley coal is being researched and analysed by Philip Riden so it is only necessary here to identify features of the distribution system that contributed to support of the colliery owners' cartel. The cartel's office generated a flow of statistical information, some of which survives, so that from this time a fairly complete picture can be assembled.

The distribution of sales at the end of the canal era (1845) and early years of the railway age (1867) is set out in Table 4, based on Pickering's figures. At first focussed on Leicester and Nottingham, markets had extended with the growth of river navigations and canals. The Trent, Soar and Derwent navigations, and the Grand Junction, Grantham, Oakham, and Cromford canals all offered more accessible outlets. The only serious setback was the opening of the Leicester & Swannington Railway in 1832, which reduced Leicester sales by half, from 160,000 to 80,000 tons a year. This made Nottingham and the Trent Valley as far as Newark much the most important market for the cartel, taking a third of the total output, with all other routes except Cromford trailing behind (Plate 2 and Table 4).

The high price exacted by the Erewash Colliery owners was, as we have seen, well known to contemporaries, so it is important to ask why there was no rebellion against the exploitation of consumers. One answer must be connected with the structure of the distributive system. The coal was sold at the pit-head to a large number of barge owners based in ten or more towns and a much larger number of river and canal-side villages throughout the midland network. A contemporary estimate suggested more than 150 carriers, but recourse to the directories of the period indicates this must have been the low side of reality.

Plate 2: Erewash Valley coal barges moored in the Newark Navigation in the nineteenth century

There were a handful of big operators like the Barnsdale of Shardlow and the Wheatcrofts of Whatstandwell (Derbyshire). More typical were the numerous small operators along the Soar (where there were 11 village wharves in 1797) and the Trent (where there were 18 such wharves in 1845).[20]

A small number of these men have found their way into the work of local historians. Thus William Huskinson (1779-1847) of Epperstone was a carrier and wharfinger who used to bring grain to Gunthorpe in a bull cart and take coal back to the villages. In the next generation, Thomas Spick (1827-1919) of Farndon and Newark spent his life on the river despite growing competition from the railways, more latterly shipping cattle cake rather than coal. Such small entrepreneurs were a dispersed army with neither the money nor organisational power to challenge the powerful colliery owners.[21]

Another reason for the lack of challenge must be the colliery owners' control of the Erewash Canal, which was the main feeder to the other waterways of the midland system. The Canal company's minute books disclose the vast profits made for most of the nineteenth century (Appendix C). For half the century or more, the canal was the most commercially successful in the whole country. The £100 shares paid dividends exceeding 40 per cent for most years between 1788 and 1847, peaking at 73 per cent in 1825, an incredible record by any standards. They did not fall below ten per cent until after 1870. From this position of financial strength, the owners were able to overcome all challenges, including a railway company takeover.[22]

The success of the Erewash Canal soon prompted the formation of a rival concern, the Nottingham Canal Co., hoping to benefit from the lucrative coal trade. The Erewash Proprietors considered a reduction of their tolls to meet the competition in 1792 and 1797, but in 1799 came to a secret agreement with the Nottingham Canal Proprietors on freight rates, so that competition effectively ended.[23] The Nottingham Company did not benefit as their shares stood at 8 per cent as fixed by the private act. When the Leicester & Swannington Railway

Table 4: Principal Markets for Erewash Valley Coal, 1845 and 1867 (tons per annum)

	end of the canal age 1845.	*early railway age 1867.*
Nottingham, Newark, and the Trent village wharves	145,518	73,013
Leicester, Loughborough and the R. Soar village wharves	80,269	35,059
Grantham and Grantham Canal village wharves (Lincs.)	51,669	18,028
Grand Junction and Grand Union canal wharves (routes to London)	47,110	30,462
Cromford Canal wharves	24,719	28,009
Oakham Canal wharves	29,176	2,828
Wreak Navigation	14,023	3,102
Derby Canal wharves and Shardlow	19,377	18,754
Other markets (residual outlets)	71,620	25,736
All markets	483,481	235,131
Percentage distribution		
Nottinghamshire	33.6	31.0
Leicestershire	16.6	14.9
Derbyshire	13.8	26.4
Lincolnshire	10.7	7.7
Grand Junction and Grand Union (routes to London)	9.7	13.0
Other markets	15.6	7.0
	100.0	100.0

Sources: House of Lords Record Office, minutes of the Ambergate, Nottingham & Boston Railway bill, 1846, ev. of George Pickering. *Royal Commission on Coal,* Parl. Papers, 1871, III, appendix 91. I owe the first reference to the E.S.R.C. research of Philip Riden.

was opened in 1832, the Erewash Canal Proprietors, like the colliery owners, were again confronted with a major challenge, and both dropped their prices to maintain an interest in the Leicester and Soar valley markets. The owners lost a third of the retail price, the proprietors half the toll. But such was the strength of both groups that the canal dividend was scarcely dented for another 15 years.[24] It might easily be supposed that the opening of the Midland Counties railway Erewash Valley branch line would compel the local canals to capitulate, but once again the Erewash canal proprietors proved remarkably resilient. In 1841 they made a secret agreement with the Midland Railway reminiscent of that with the Nottingham Canal Co. 50 years earlier. While other canal companies surrendered to the railways, the Erewash retained its independence until 1932. This record is sufficient to show that small rival interests were likely to be no match for the determination and resources of the cartel and the canal owners.[25]

The cartel's gritty resolve looks impressive at first sight, but with more sober reflection we may question its long-term independent strategy. The main conclusion to be drawn from Table 3 is that from 1845 (roughly the end of the canal age) to 1867 (the early railway age), its total market fell by more than half (to 48.6% to be precise), and that at a period when several other coalfields were expanding rapidly.[26] Of course, the Erewash coalfield was disadvantaged by its inland situation, but it is very possible that more militant competition could have met the railways' challenge more effectively. At any rate, the colliery owners all suffered a major shrinkage of their businesses in this period, and must be counted major losers.

CRACKS IN THE CARTEL

There was never a complete consensus among the cartel members. In particular, Edward Miller Mundy (1774-1834) of Shipley Hall estate (Plate 3; between Ilkeston and Heanor) was ready to fight for a larger share of total output. His three collieries produced rather less than those of Barber, Walker & Co., but his social standing as a Derbyshire Member of Parliament for 39 years was higher than the Eastwood partners, and he was advised from 1826 by J.A. Twigg, a land and mineral surveyor based in Chesterfield who was agent to the Duke of Devonshire and also (as he wrote) to 'several Gentlemen's estates in various counties', including the South Staffordshire ('Black Country') coalfield. Miller Mundy was often away in London and the day-to-day management was diligently conducted by a faithful local man called William Beardsley who combined mining supervision with some farming in the old way.[27]

Plate 3: Shipley Hall, near Ilkeston, the home of the Miller Mundy family. It was built on the profits of the Erewash coal trade. (Courtesy of Ruth Sharpe, Ilkeston Public Library)

When the colliery owners met at the beginning of 1828 to apportion outputs and fix prices, Twigg wrote to Miller Mundy from Eastwood advising that:

> I have only to request that you will not yield to another such a year of bondage in point of selling coal as the last has been. I can assure you that it had been very vexatious to be driven to the necessity of raising the price of coals in order to drive the sale away, and at the same time your colliery was not working more than 1½ days per week. This has been the case but I hope never to see it so again. It is almost needless to say that it is morally impossible to realize any considerable profit from any colliery with such a small portion of working time allotted for getting coal.[28]

The following year, an angry Miller Mundy warned the Coal Association meeting at Eastwood that

> There being no apportionment to the Waterloo Colliery, the Coal of which is a yard thick, obtained throughout the Shipley property and which had been commenced getting during the life-time of my father and is liked in the market, I should be contented with a fair share for that Colliery in addition to what is already allotted for the other collieries here. Should that be declined by the Meeting, I again assert that it shall not be my fault if present principles regarding Weight, Price and Drawbacks are not strictly adhered to and preserved.[29]

Meanwhile, Thomas Barber of Barber, Walker & Co., chairman of the cartel, wrote from Eastwood to express the viewpoint of the large majority of Erewash colliery owners:

> The gentlemen present at the April 1829 cartel meeting beg to express their sense of the candour and kind expressions of your letter, and the feelings with which you purpose carrying on the Trade in case your proposal be not accepted, but they cannot shut their eyes to the conviction that, immediately on the abandonment of the present regulations, the most lamentable conclusion, depreciation and loss must forthwith ensue to all the parties engaged in the Trade in this district, reducing it in fact to the same deplorable state as the Coal Trade of the North is at this moment plunged into, in consequence of an ill-judged departure from similar prudent regulations as have up to this period prevailed amongst them here. In the Newcastle district the diminution of receipts within the last year has been nearly half a million sterling, many of the proprietors are totally ruined and the remainder are carrying on the Trade to an actual loss. With this fact before their eyes the Gentlemen present cannot but hope that you may be induced by a sense of justice to yourself, as well as consideration for others, to reconsider your proposition and thereby avert the calamities which are otherwise inevitable.[30]

Barber could have added that the apportionment system was not inflexible. John Sherbrooke

Gell of Hopton (Derbyshire) wrote supporting Barber by referring to 'all the evils which were so severely felt prior to 1802'; evidently the hereditary leadership of the coal industry had a long memory of earlier losses.[31]

It seems that the will of the majority prevailed as diverse records show continuing membership in the Erewash Valley, extending into Leicestershire and North Derbyshire in the railway age. In particular, data for 1860-63 disclose eleven colliery companies in the Erewash valley, still led by Barber, Walker & Co., now linked to seven in Leicestershire, and four in North Derbyshire, dominated by George Stephenson's Clay Cross Coal & Iron Co.[32] A report of 1861 exposes George Pickering still labouring to retain 'a measure calculated to keep in check the spirit of competition which [has] had to a great extent defeated the attempt to obtain and secure a reasonable return of profits to the parties engaged in the [coal] trade'. By this time, most of the endeavour was directed to negotiation with the railway companies. Pickering and his committee managed to persuade the Midland Railway Co (in which they were major shareholders) to reduce their coal freight rate to ½d per ton per mile, but the Directors of the Great Northern Railway Co. were hostile, charging 'excessive tolls upon all coals from the Midland Collieries in order to exclude them from the markets on their line'. A memorial to the Railway Commissioners was of no avail: they declined to interfere.[33] It appears that the north-east colliery cartel, that continued active into the railway age, was the main challenge to the Erewash cartel by this period. The problem of freight charges was still being fought at the end of the century.[34]

WORKERS' INCOMES AND STATUS

The consequences of the cartel for mine workers' incomes were spelt out in William Howitt's *Rural Life of England (1838)*. Howitt was the son of a colliery manager at Heanor so knew what he was talking about. He wrote of

> a most subtle and consummate slavery. I have seen the effect of this system in the Derbyshire and Nottinghamshire collieries. There, amongst the master colliers a combination was entered into, and for aught I know still exists, to regulate the price of coal, and the quantity each master should relatively get. This rule, that no man should be employed except he brought a character [letter] from his last master was adopted; and what was the consequence? That every man was the bounden slave of him in whose employment he was; and that soon the price of coals was raised to three times their actual value, and the labour of the men restricted to about three half days, or a day and a half per week. Let any one imagine a body of men bound by one common interest, holding in their possession all the population of several counties, and subjecting their men to this rule. Can there be a more positive despotism? [35]

In other words, the cartel's restriction of output could lead to drastic reductions in their employees' working week and hence incomes, and the unity of the colliery owners meant there was no way of breaking out of the system. The indictment is very persuasive when placed alongside Miller Mundy's complaints about his losses resulting from imposed short-time working, noticed above.

We do not know exactly when the colliery proprietors began to work together to fix mining wage rates, but a document in the Miller Mundy mss. gives a strong indication. It is a matrix dated January 1826 listing payments to 24 types of workers at 15 collieries in the Erewash Valley; it is unsigned but very much in the style of George Pickering. At this date, wage payments were by no means uniform; coal face workers ('hammermen') for instance varied from 3s 6d to 4s 6d a day. Miller Mundy paid his hammermen 3s 9d a day at the old workings at Shipley (Ilkeston) and 4s 2d at his new colliery, while neighbouring Cotmanhay paid the top 4s 6d a day. Could the working conditions there have been more difficult? The best paid workers included the whimsey men (who operated the winding gear) from 12s 6d to 20s daily, and the engine men (who maintained the steam engine) 16s to 20s a day. At the bottom of the pay hierarchy were the youngsters that helped the corf (coal container) men and the waggoners; these 'lads' earned 1s to 2s a day as against 3s 6d for the older men.[36]

If the miners could work three days a week or more, their pay was at least equal to the other main occupational groups in the region, agricultural labourers and framework knitters at 12s or so weekly. If the miners could manage a five-or six-day week, it could be more than twice as much. But Howitt's point must caution us about proclaiming colliery workers as standing at the pinnacle of working class pay. If the output restriction imposed by the cartel proved as severe as Howitt maintained (and Miller Mundy's experience showed it could) miners could earn as little as 6s a week, which would make them among the poorest of all workers. J.E. Williams indicated that the establishment of trade unionism in the mining industry, which took place in Derbyshire and Nottinghamshire from 1844, increasingly resolved into a bitter struggle between the owners' and the unions.[37] The only way in which the cartel could be supposed to support the miners was by shielding the owners from bankruptcy and consequent mine closures; such disasters were not unknown but very rare

CONCLUSION: THE CONSEQUENCES OF THE CARTEL

There are several ways of examining the economic and social consequences of the Erewash cartel. One is to look at the profits generated by the colliery owners, another the incomes of their workers. Most important of all, we should try to assess the effect on the growth of the regional economy in which the coal companies operated.

A simple way of measuring the distribution of benefits of the new waterways system is to compare the incomes (profits) of leading entrepreneurs in a market area (say Newark) with those in the Erewash valley. The 1807 tax returns are fortunately available for Newark and a few telling figures have survived for colliery magnates. Much the most successful business in Newark in the Industrial Revolution was the diversified Handley partnership (merchants, brewers, cotton spinners, bankers) with an income of £2,300 built up over four generations.[38] In the Erewash valley, the profits of Edward Miller Mundy M.P. of Shipley Hall estate (Ilkeston), the second largest producer at this period, rose from £807 (1795) to £6650 (1803), with a return of around 50 to 200 per cent on his capital. This tumbled to £2000 p.a. in 1832, when the Leicester & Swannington railway opened (Appendix B). A document recording the profits of Barber & Cheslyn, part of the Barber & Walker partnership, the largest colliery owners, points to a similar conclusion (Appendix A). In 1807, the partners' mining income was £4,665, and rose during the next few years, peaking at £5,750 in 1816. The partnership, Barber, Walker & Co., may have owned as many as ten more pits, several of them no doubt small and old, but others (notably Brinsley) new and very productive. Barber & Cheslyn's income was two to three times that of Handley's, and if we could add that of Barber, Walker

& Co. it might easily be five times. The capital investment in mining was also several times larger. It seems that the leading coal enterprise was in a different league of wealth and income to the Newark one, and consequently more powerful.

The high price of coal fixed by the cartel inevitably had a deleterious effect on the industries of the region. Arkwright's inauguration of the factory system in textiles began in Nottingham, and for a few short years the town appeared as a leader of the new enterprise until it capitulated to Lancashire. Explanations have often been offered in terms of the dampness of the Lancashire climate or (more perceptively) the proximity of Liverpool, but early Nottingham factory owners had a more profound view. They maintained, in a report on the Nottingham Canal (1810), that it was the high cost of Erewash coal that was impeding the new steam-powered cotton mills in the town.[39] In Leicester, a local cotton merchant declared that until the railway to their nearest coalfield was built, the town had been 'entirely at the mercy' of the Erewash colliery owners who had 'exacted a high price'. The opening of the Leicester & Swannington line reduced the price of coal in the town from 15s to 10s ton, a major encouragement to the faster development of the town.[40]

Fortunately for Derby, Nottingham and Leicester, their main industries, hosiery and lace, were not much interested in steam power before the middle of the nineteenth century. Newark was less fortunate. Its main industry from the middle of the eighteenth century was malting, which required large supplies of fuel in the fermenting process. Competitive growth of the industry called for cheap supplies of coal, which were not forthcoming under the cartel restrictions. Reasonably reliable data show that Newark's coal consumption scarcely increased between 1810 and 1845 (Table 5). Meanwhile, milling capacity in the town increased more than five times in the first half of the nineteenth century, all exploiting wind and water power.[41] This impressive increase may be seen as an indicator of the unrealised potential of malting in the town. In 1845, John Thorpe, head of Newark's largest malting house, complained to a Parliamentary committee that the value of malting offices in the town had fallen by a half, and

Table 5: The Coal Trade of Newark and the Trent Villages, 1791-1867

Annual totals in tons		*Population of Newark*
1791	23,000	6,730 (1801)
1810-15	27,000 (average for 6 years)	7,230 (1811)
1825-30	27,000 (average for 6 years)	8,084 (1821)
1845	29,000	10,220 (1841)
1866-67	39,000	11,515 (1861)

The Trent villages referred to are those on the river between Nottingham and Newark.
Sources: S. Chapman. 'The Newark Navigation 1740-c.1850', *Trans, Thoroton Society* CXVII (2013) p.122, plus census data from local directories.

he longed for a railway to connect the town with the Yorkshire coalfield.[42]

The impact on the ordinary domestic consumer was no less severe. The failure of coal consumption to rise before the railway age (Table 5) while the population and malting industry continued to grow must indicate an increasing deprivation, particularly of the poorest classes. Family budgets published in the Nottingham newspapers in 1811, 1825, and 1837 show the price of coal stuck at 15s ton, while it was reliably reported to be 5s to 7s ton in the manufacturing districts of Yorkshire (Leeds and Bradford).[43] In periods of commercial crisis and high local unemployment, the first recourse of the benevolent was often to distribute free coal to the poor and needy. The colliery owners maintained their huge incomes at the expense of the poorest classes of the local population.[44]

The underlying anger of the local population is reflected in a letter sent to John Coke, high sheriff of Nottinghamshire, colliery owner, and a trustee of the Mansfield to Alfreton turnpike road. His trustees wanted to take additional toll as coal carts and other heavy vehicles were cutting up the road. Mansfield people were ‘given great offence’ for they believed that this charge would inevitably raise the price of coal. The letter was taken as a serious threat:

> Sir — If you do not abandon your villainous attempts upon advancing the coal at this place, your house and everything belonging to you will be burned to the ground.
>
> Yours SWING.
>
> Manfd. Jan 31 1830.
>
> No further notice to be given.

Suspicion fell on Revd William Bowerbank, headmaster of Mansfield Grammar School, who was a well known sympathiser with the complainants’ cause, but the Assizes were unable to convict him.[45]

The overall conclusion must therefore be that the Erewash cartel greatly enriched those it was intended to benefit, namely the colliery owners, but even they were not long-term beneficiaries, for their market shrank by half in the early railway age. The other three parties involved in the trade, the industrial users, the retail consumers, and the colliery workers all lost out; for them the system was a long-term disaster. The benefits of unregulated capitalist competition were evidently greatly circumscribed.

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APPENDIX A

PROFITS OF BARBER, WALKER & Co., 1797-1820

	collieries	*profits*		*collieries*	*profits*
1797	a, b	£1,607	1809	a, c, d	£4,072
1798	a, b	£1,368	1810	a, c, d	£3,366
1799	a, b	£1,626	1811	a, c, d	£4,750
1800	a, b	£1,512	1812	a, c, d	£3,050
1801	a, b	£758	1813	c, d	£3,500
1802	a, b, c	£1,961	1814	c, d	£4,810
1803	a, b, c	£3,546	1815	c, d	£4,500
1804	a, b	£3,353	1816	c, d	£5,750
1805	a, b	£3,550	1817	c, d	£4,750
1806	a, c, d	£3,925	1818	c, d	£4,700
1807	a, c, d	£4,645	1819	c, d	£2,350
1808	a, c, d	£5,000	1820	c, d	£4,430

Key to collieries: a = Bilborough c = Beggarlea (Eastwood)
b = Awsworth d = Strelley

Brinsley Colliery (Eastwood), acquired in 1813 from Joseph Wilkes' executors, was not included in this calculation.

Source: 'Abstract of Colliery Profits made by Mr James Walker September 1821' in Records of Erewash Valley Coal Proprietors' Association (private collection). Column heads refer to 'Mr Barber's share' and, from 1803, 'Mr Cheslyn's share' (son-in-law) though the partnership was Barber, Walker & Co.

APPENDIX B

PROFITS OF EDWARD MILLER MUNDY'S COLLIERIES AT SHIPLEY (DERBYS.), 1780-1803

Year to 31 Dec	*profits*	*% return*
1780	£379	n.d.
1781	913	"
1782	78	"
1783	1609	"
1784	1053	"
1785	1055	"
1786	1240	"
1787	1542	"
1788	1447	"
1789	1013	"

(new colliery sunk, 1789)	*profits*	*% return*
1790	£2097	152%
1791	2402	174%
1792	1202	87%
1793	1602	116%
1794	1051	76%
1795	807	58%
1796	1240	90%
1797	3016	219%
1798	2097	152%
1799	2409	175%
1800	3001	218%

(new steam pumps, 1801)	*profits*	*% return*
1801	£2339	669%
1802	3881	114%
1803	c.6650	c.196%
1793	1602	116%
1794	1051	76%
1795	807	58%
1796	1240	90%
1797	3016	219%
1798	2097	152%
1799	2409	175%
1800	3001	218%

(annualised)		
1815 \		
1816-£9,038 p.a. on average		
1817 /		
(1818-20 new pit sunk)		
1820	£11,330	52%
1821	c.£12,000	55%
1834	£2,000	9%

Source: Derbyshire Record Office, D517 Miller Mundy mss., boxes II (Beardsley report, 1826), XII (mortgage case, 1820) and XIX (probate inventory, 1834). The new colliery sinking cost £1379 in 1789, £21,660 in 1818-20, from which percentage returns have been calculated by the author.

APPENDIX C

EREWASH CANAL DIVIDENDS

From National Archives RAIL 828/1+2

Minute books transcribed by Guy Hemingway c.1978

1783-1812	%	1813-1842	%
Oct 1783	6	Apr + Oct 1813	45
Sept 1784	10	" 1814	48
Sept 1785	15	" 1815	56
Mar 1786	16	" 1816	47
Sept 1787	20	" 1817	45
Apr + Oct 1788	40	" 1818	49
Mar + Sept 1789	40	" 1819	58
Mar + Oct 1790	40	" 1820	56
Apr + Oct 1791	40	" 1821	59
Sept 1792	25	" 1822	48
Mar + Sept 1793	60	" 1823	60
Mar + Sept 1794	60	" 1824	64
Apr + Oct 1795	60	" 1825	73
Sept 1796	20	" 1826	72
Apr + Sept 1797	40	" 1827	70
Apr + Oct 1798	40	" 1828	64
Apr + Oct 1799	40	" 1829	65
Mar + Oct 1800	45	" 1830	57
Apr + Oct 1801	34.4	" 1831	56
Feb + Oct 1802	37.5	" 1832	51
Oct 1803	12.5	" 1833	43
Mar + Oct 1804	25	" 1834	36
Apr + Oct 1805	18.1	" 1835	30
Apr + Oct 1806	31.5	" 1836	46
Apr + Oct 1807	31.5	" 1837	61
Apr + Oct 1808	37.5	" 1838	31 (?)
Apr + Oct 1809	37.5	" 1839	61

(continued on p. 180)

Apr + Oct 1810	38.7	“ 1840	57
Apr + Oct 1811	43	“ 1841	44
Apr + Oct 1812	46	“ 1842	41

1843-1856	%	1857-1870	%
Mar + Oct 1843	37	1857	13
1844	32	1858	12
1845	31	1859	14
1846	36	1860	12
1847	40	1861	11
1848	37	1862	13
1849	28	1863	13
1850	28	1864	15
1851	23	1865	11
1852	22	1866	12
1853	23	1867	10
1854	25	1868	12
1855	21	1869	12
1856	14	1870	11

£100 shares sold for £650 as late as 1833 and £710 in the early railway age in 1844 (Nott’m Journal 15 Mar 1833, 9 Feb 1844). The decline in share values did not reach single digits until 1878 when it dropped from 10 to 8%, remaining there to 1884.

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[29] DRO D517, bundle 9/14, 15 April 1829.
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