COAL MINING AT NEWTON ST. LOE

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The modern motorist passing through the parish of Newton St Loe on the stretch of dual carriageway on the A4 between Bath and Bristol and noting the rich pastureland of the Avon Valley, might be surprised to learn that once coal was mined on either side of this road. There is very little visible evidence left of an industry that, by its nature, inevitably scarred its immediate environment. In the autumn, when the fields have been newly ploughed, several dark coal patches are clearly seen on Pig's Moor and Othill, fields adjacent to and opposite the Globe inn.¹ The Great Western Railway line, which travels high across Newton Mead, suggests that most likely the spoil and rubbish, extracted from the pits, were used to build the embankment above the flood level of the Avon. The site of the old turnpike pits has been obscured by changes in the road system in recent years.² These old industrial sites have been intelligently cleared. In the process, the historian has lost the physical remains that could have supported the fragments of information gathered from maps and documents.

The written evidence points to coal mining at Newton continuing for over one hundred years. The area of the sites occupied by the coalworks was between two and three acres. Land leased for the exploration of coal amounted to something like eighty acres. Formerly in the possession of the Harrington family, it was bought by Joseph Langton, the man who built Newton Park, in 1772. Several parcels of land were leased out for coalmining to groups of men, who each invested a portion of the necessary capital, and who took a corresponding share of the profit or loss resulting from the enterprise. This was a familiar Somerset pattern.³ Landowners leased out land suitable for the mining of coal, but also other minerals, to companies of small entrepreneurs of various commercial backgrounds, who shared the considerable risks involved. Col William Gore Langton's

lessees in 1802 were five in number - Zachary Bayly, and his son Nathaniel, gentlemen of Bath, Edward Spencer, the leading tenant farmer in Newton, Moses Reynolds of Bedminster, Bristol, and Robert Bryant, a Bath maltster.⁴ All were local men, which was characteristic of the Somerset coalfield, where the capital was raised by men who knew the area. The failure to attract outside capital was in fact a barrier to the adoption of technical improvements in the Somerset coal mines. Yet, the local involvement of petty capitalists in financing coal enterprises prevented the establishment of clearly distinguished groups of masters and men. Both were dependent on the successful mining of coal, but also they were mutually dependent on each other, probably more so than was the case in the larger coalfields. The masters needed the coal for a return on their investments, which had no other outlet on land they did not own. The men were paid on piecework rates, according to the quantity of coal landed. In the continuing search for new seams, the masters looked to the skill and experience of their local colliers for success. And as late as 1801, it was thought possible for a group of colliers themselves to invest in machinery, and dig for coal on their own behalf.⁵ The clear division between capital and labour, a characteristic of the mining industry in the later nineteenth century, was less of a feature of the Somerset coalfield in the early 1800 s.

If masters and men shared the risks, whether in terms of financial speculation or physical danger, the landowner was able to ensure that his interests were protected. The 1802 Gore Langton coal lease was for thirty one years. He was to receive one eighth of the value of the sale of coal from the pits, every month. In addition, he claimed the receipt and delivery of one hundred quarters of coal, for his own personal use, to be delivered, when, where and in what amounts he should choose, or in default of that, the sum of £20, paid in half yearly amounts. A full set of weekly accounts of all such coals was further demanded. Finally, when the company ceased coal-mining, all rubbish had to be carried away, the ground levelled off, and returned to its former state. All ways and roads damaged by the carrying of coals had to be made good at the risk of severe financial penalties. The Langton family's long experience of leasing land for coalmining in the Bristol and South Gloucestershire coalfields had taught them that landowners could enjoy a share of the profits, without having to endure the losses which characterized small-scale coalmining.

The Somerset coalfield, in particular, was well known for its thin seams of coal, which could prove unprofitable to work, as well as causing difficulty in extracting the coal. And as in any coalfield, the continuous production of coal was subject to all kinds of obstacles - seams running out, flooding, explosions or falls of rock, in addition to the vagaries of the market for coal - resulting in losses for the masters, short time working and unemployment for the men. It was a hazardous business. Coal might never be found on land leased for coalmining. In 1797, William Gore Langton leased to Thomas Collins 'all those two closes of meadow or pasture ground called the Mill meads between the turnpike road and Newton Mill, containing by estimation 9 acres'.6 Now coal had already been found in Hound acres and Coalpit ground, close by the tollgate, and a short distance from the Mill ground. In 1841, a new pit as opened at Pennyquick, on the other side of the brook just in Twerton parish, but very close to the Mill ground.

The changing fortunes of coal companies in operation can be traced over two generations with the experiences of the Bayly family. In the summer of 1792, there was widespread strike action, and some disorder throughout the Somerset coalfield. Two thousand men were reported on strike at a time of rising demand for coal. The colliers returned to work, having won an increase in wages. Zachary Bayly was chairman of a meeting of the Proprietors of Coal Works, held at Old Down Inn on 22nd August, in which a vote of thanks was given to the High Sheriff of Somerset 'for his public spirit, activity and readiness, in taking the steps he has to subdue the riotous conduct of the numerous colliers assembled on the late alarming occasion'.⁷ In the spring of 1793, the Bayly family, along with its business associates in Cross Bayly & Co., is declared bankrupt. As a result, Mr Bayly's house, 18 Portland Place, was put up for sale in August 1793. Six years later, in 1799, Edmund Griffiths Esq and Zachary Bayly surrendered their coaling lease to Col William Gore Langton, accompanied by the following statement:

"On examination by experienced colliers, it has been found that the coal is exhausted underneath the premises where the Coalwork hath been carryed on."⁸

Then in 1802, as recorded earlier, Zachary Bayly the elder and Nathaniel Bayly, with their three other partners took out a new coal lease with Col. Gore Langton for a period of thirty one years. In 1826, Nathaniel Bayly married Helena Becher Hayes, and in the terms of the marriage settlement, the Newton Coalworks and the Camerton coalworks were brought under joint occupation.⁹ Profits and losses appear to have followed each other in the annual accounts of the Camerton pits in the 1830s.¹⁰ Finally, in 1845, the Newton Coalworks closed down for good.¹¹ All of which would appear to indicate that coal mining on a small scale was fraught with difficulties, and subject to alarming fluctuations. But equally, these did not deter men of enterprise who responded to the challenge and excitement of extracting wealth from beneath the ground.

During its century or more of working life, from the 1730 s to the 1840 s, the Newton coal mines were able to provide a variety of consumers, both industrial and domestic. They were well placed, close to the river Avon, for transporting the coal 3 to 4 miles to the main market for the Somerset coalfield at Bath. The expansion of Bath in the century 1740 to 1840 provided a ready market to hand for Somerset coal, not only for household purposes, but also in the early 1800 s to fuel the cloth industries of Lyncombe and Widcombe, and in Twerton.¹² Other industrial consumers could have been the brass mills, dotted along the Avon valley at Bath, Saltford and Keynsham. We know that Newton coal was used as fuel for the heating of Twerton church.¹³ In Newton St Loe itself, ordinary householders could obtain their coal at the pit-head and occasionally the poor received coal at the expense of the poor rates. The mansion house at Newton Park was supplied with coal, which probably amounted to nearly a week's output. Other Newton consumers would have been the two smithies, one of which was part of the Coalworks, and the Globe Inn.

It was the Globe Inn, which gave its name to the Globe Colliery, and the close proximity of the pub and the pit was not without its value. The coking coal of the Newton pits, and the coking ovens adjacent to the Globe Inn, were most likely used for the purpose of drying malt, as part of the brewing process.¹⁴ As late as the early part of this century 4 hogsheads (210 pints) of strong home brew were made every day in the brewhouse attached to the Globe.¹⁵

Coalmining before the mid-nineteenth century was largely an unmechanised industry. In this period, we can trace some of the technical changes in the Newton pits, which were characteristic of the Somerset coalfield in general. The earliest and strangest description is that of the celebrated architect John Wood in his essay on Bath, in which he was inspired to write -

"These Coal-Works are the Property of Mr Harrington of Coston [Corston], a descendant of the famous Sir John Harrington who flourished in the Reign of Queen Elizabeth; and they are situated on each Side of the chief Road leading from Bath to Bristol.

"The Hovel for working one of the Pits is exceeding remarkable, as it lately represented a covered Monopterick Temple, with a Porticoe before it. The former shelters with Windlass, the latter sheltered the Mouth of the Pit; and one was raised upon a Quadrangular Basis, while the other appears elevated upon a circular Foundation; a Figure naturally described by the Revolution of the Windlass. The Diameter of this Figure is just four and thirty Feet, and the Periphery is composed of six and twenty sinulate Posts, of about seven Feet six Inches high, sustaining a Conical Roof terminating in a Point and covered with Thatch: Mere Accident produced the whole Structure; and if the Convenience for which it was built was of a more eminent

Kind, the Edifice would most undoubtedly excite the Curiosity of Multitudes to go to the Place where it stands to view and amire it, as a Perfect Copy of one of Zoroaster's Fire Temples; as a Structure of the same Kind with the Delphick Temple after it was covered with a spherical Roof by Theodorus, the Phocean Architect; and as a Structure of the same Kind with the Temple of Minerva wherein Bladud kept his perpetual Fires."¹⁶

Apart from the amusing condescension the architect pays to vulgar economic acitvity, and the exaggerated tone of the references to classical antiquity, some useful details remain. The presence of the windlass, housed in a rectangular shaped hut, which was covered with a thatched conical roof, was common to Somerset mining. Bulley informs us that until about 1790 the windlass and the drum were the only apparatus used for winding. The latter was commonly worked by two horses and two boys; the horses, not the boys were changed every two hours.

On the surrender of the coaling lease, mentioned above, in 1799, the equipment of the coalworks was taken over by Col Gore Langton, presumably until he could obtain another occupier for the premises. It records "William Gore Langton taking to and paying for the fire engine, implements, Drums, carts, Horses and other materials belonging to the said Coalworks at a fair valuation by two indifferent persons." The drums for winding were still in use at the end of the century, but a fire engine was now in use for pumping water out of the pit. The first recorded use of an atmospheric steam engine in the Somerset Coalfield was in 1736, but only after 1780 that steam pumping engines came into general use. The Newton Fire engine, a fairly primitive one, is described in a newspaper advertisement which appeared in the Bath and Bristol newspapers in October 1801:

Newton St Loe, near Bath

To be Sold

A Complete Fire Engine, with a Copper Boiler, in good repair, 6 feet 6 inches deep, 10 feet bulge, 7 feet 8 inches bottom; the Cylinder is 33 inches diameter; and 41 fathom of Iron Slides, 8¹/₄ inches bore, with Working Barrels, Nuts Screws, and Rods; and many other articles belonging to a Coal Work, fit for working.¹⁷

A Waggon, Card and Two Draught Horses to be also disposed of.

A Company of Miners purchasing the above might find veins of Coal near the Engine, as Coals have been found, and the Pits worked there for many years.

Applications may be made to Mr. Rose, the late Bailiff, near Newton Turnpike.

The close proximity of the Newton pits to the river meant that there was a problem of coping with water in the workings, especially with the depth of seams below the river. Flooding may well have been responsible for the ultimate closure of the Newton pits. Hardwick's sketch of the Globe Colliery at Newton features what appears to be wooden shutes propped up by posts, which run from the pumping house to what could be the ' brook.¹⁸ Bulley records that at Cornish's Mill the water was carried away by means of 'shutes of elm board stood upon trees about ten feet high as the ground was'.¹⁹ Something very similar probably operated at Newton Coalworks in the early nineteenth century.

There were two fire engines at the Newton Pits, one at the Globe pits, the other at the turnpike pit.²⁰ The three engine men recorded in the 1841 census schedules would have been employed at the Globe pits. The two draught horses listed above suggests they were for surface work, hauling the coal carts. The underground haulage was the work of young boys along narrow ways, too small for pit ponies.

The extent and depth of working at the Newton pits is described in three nineteenth century sources. Joseph Sutcliffe, writing in 1822, refers to the Newton Pits near the Gobe Inn.

"The pit nearest the river descends to the depth of 84 fathoms, penetrates a black vein of coal at the depth of 54 fathoms, which is only 14 inches thick. Six fathoms below they find the coke veins; and penetrating twenty four fathoms more through shale and then a strong rock of greys, they find the main bed of coal immediately under the grey or red sandstone rock, Veins of iron ore occur in the strata, as appears from detached nodules seen on the pit-hill; but their geological situations have not been n0ticed."²¹

Messrs Buckland and Conybeare, writing in 1824, recorded the underground workings in lower coal-shale at Newton St Loe as communicated by Richard Harver, the underground bailiff. They clearly refer again to the Gobe pits, and the seams "said to be the same as those worked in the Golden Valley."²²

	Dip N.W. 1 in 3			
Descending order		Fath.	Ft.	In.
	grey rock	35	0	0
1.	Coal seam	0	2	Ő
	Cliff	16	0	0
2.	Coal seam	0	0	10
	Cliff	10	0	0
3.	Coal seam	0	3	0
	Cliff	16	0	0
	Ring stones?	0	0	6
4.	Coal seam	0	3	0
	Cliff and duns	4	0	0
5.	Coal seam	0	2	0

John Anstie, writing in 1873, adds the following information

"Between the village of Corston and the Great Western Railway, the grits of the middle or Pennant series are very clear, and half a mile to the east of Corston was situated the once well known 'Globe' colliery of Newton St Loe. At this colliery the following coals were proved (from a miner who worked in the pit):

Ι	Millgrit sean	n (2ft to 2ft 6in)	at 100 yds depth
II	Rag seam	(2ft)	at 108 yds depth
III	Coke seam	(2ft 6 in to 4ft)	at 160 yds depth
IV	Little seam	(2ft 2in)	at 176 yds depth
V	Black seam	(3ft to 8ft)	at 188 yds depth

"The dip was about 9 inches per yard west north west. The condition of the seams at this colliery is said to have been extremely good - the 'Little' seam was a firm, hard coal and in that respect superior to the usual quality of the Golden



Valley coals which are generally soft. The coal at Newton Colliery was chiefly used for coking."²³

The later account shows that by the 1830's and 1840's coal was being worked from lower levels than before, and that the thickest seam, the 'Black' seam, was probably opened up in that period to provide a last flourish of prosperity for the pits before their eventual closure in 1845. It would seem that the turnpike pit was the one to be closed in 1801, when the fire engine was advertised for sale, as none of the later accounts refer to it. For the most part, coalmining in Newton involved working thin seams, clearing large quantities of rubbish to get at them, and hauling coal and rubbish along slopes of about 9 inches every yard. All of which then had to be brought up to the surface with primitive winding gear. These difficult conditions were very much representative of the Somerset coalfield.

What of those who worked in these conditions? How many men were employed by the Newton Coal Company? An approximate figure is possible. The total numbers recorded as coal miners in Newton, Corston, and Twerton at the 1841 census, added to the boys employed, but unrecorded, plus a handful of masons, carpenters and smiths, produce an estimate total of about one hundred men and boys employed at the. Newton Coalworks. This was a common figure for the smaller Somerset pits.²⁴

With a labour force of this size, what would have been the level of output of the Newton pits? Some actual sales figures survive from the year 1738-9.²⁵ The value of the coal sold in that year from the Newton pits, amounted to £740 3s 3d., which at 3d a bushel or hundredweight, the pithead price, meant a coal output of 2,960 tons. In 1795, Somerset coal production was in the region of 1,500 to 2,000 tons weekly from 26 coalworks. The labour force employed in the Somerset coalfield was about 4,000 or 5,000 men and boys.²⁶ Assuming an average annual coal output of 2,884 tons for each pit. This last figure is very close to the earlier figure of estimated coal output at Newton in the 1730's. The introduction of engines for hauling coals in Radstock in the early 1800 s raised daily out-

put from 20 to 50 tons.²⁷ By 1824, daily averages had risen from 60 to 100 tons. While the number of collieries being worked had declined by this date (a whole line of collieries at Brislington, Queen Charlton, Pensford and between it and Marksbury had been abandoned), 'the enlarged scale and spirit with which those mines are worked that are now in activity much more than compensate for the diminution in numbers.'²⁸ With the coalpits all around Newton closing down, Newton's existence appears precarious in the 1820 s. But the evidence s suggests increased employment at the Newton pits in the 1830 s, and coal output probably increased.²⁹ It might well have reached 25,000 tons by the time of its final closure, or over eight times annual figures of the 1730 s.

The colliers, themselves, were very much a community within a community.³⁰ There were good reasons for this. Many of the colliers lived close together in cottages in Newton and Corston villages, or in cottages surrounding the coalworks. To a large extent, they were physically separate from other workers. The hours worked - early morning to early afternoon, often only for five turns (shifts) a week, producing a long weekend, gave them a pattern of work and leisure which was quite different from that of other labouring men. The collier started work at 4 am before the dawn raised the agricultural labourer. He had his free waking time in the afternoon and early evening, before other labourers had finished work for the day. Then an early retirement to bed was required for the early morning start. This was particularly necessary for the young boys, whose free time might be curtailed by schooling in the late afternoon, after the day's shift.

It is easy to understand why schooling was unpopular with the collier boys, and why they were largely illiterate. The nature of the work, the common danger, the shared experience of mutual dependence, and the secrets peculiar to miner's skills, gave the colliers a distinct identity. They had a strong independent spirit, exemplified in their own sickness clubs, and the refusal to have recourse to poor relief. Colliers enjoyed a reputation for physical strength and fitness, which was remarked on by the coalmasters, despite the tendency towards a shorter life expectancy. They were further distinguished by their black faces, blue scar marks, and the

slightly distorted posture, which came from working in cramped conditions. This was one of the reasons that colliers rarely took up other work outside the pits, and if they did, they found themselves physically unsuited to it.

Collier families commonly intermarried, usually at an early age, and tended to have large numbers of children. The Newton colliers followed the pattern. The total number of persons belonging to the 19 collier families in Newton St Loe in 1841 was 133. Their average household size was 7.0 persons compared with the average for the village of 5.20. High fertility, with a child every two years, was the common pattern, and with marriage at about 20 years of age, large families were inevitable. There is little doubt that this was deliberate. A young collier at 20 could earn top hewer's wages, and was therefore able to set up house for himself. He wanted children, boys in particular, as they would supplement his income, with the equivalent of a farm labourer's wage when in their early teens. More than half of the colliers residing in Newton, Corston and Twerton had a father or a brother or both working in the pits alongside them. The most extreme case is that of a father and five sons spread over three households and two villages:

1.	Robert Buck	50	Blacksmith	Newton St Loe
	Thomas Buck	16	Caolminer	Newton St Loe
	James Buck	14	Smith	Newton St Loe
2.	Henry Buck	30	Coalminer	Newton St Loe
3.	George Buck	20	Coalminer	Corston
	Robert Buck	25	Coalminer	Corston

The wage differential between colliers and other labourers in a rural area meant that miners' families were relatively affluent The following scale of wages was given by Charles Ashman, manager of the Radstock Coalmines, as a witness before Dr Stewart, the Commissioner for Somerset in 1841:

Children 8 - 9 years	4d per turn
10 - 12 years	6d, 8d or 9d per turn
16 years	1s, 1s 2d or 1s 4d per turn
over 16 years	1s 6d per turn
	-

Hewers 2s 3d to 3s per turn

A hewer working a full six day week could earn up to 18s, more than double the 7s of the agricultural labourer in Somerset. But even higher figures were given by another witness, Isaac Cox, ' Clerk to Messrs White & Co at Nailsea Heath Coalworks:

Young persons wages - the lowest 6s, 9s, 12s or 13s 8d. The hewers get 15s, 17s 6d or 20s a week according to the number of turns and they have "firing for their own homes and candles for the mine". Even day workers, men past the gruelling task of breaking coal, received 2s 2d a day for an eight hour shift. When there were several members of one family working in the pits, the income received into one household could be considerable. An example of the estimated income of one family of Newton colliers in 1841 may serve to show the level of prosperity that could be enjoyed for a period of something like ten years:

John Cox 50 Coal miner Day la	bour 13 13s
Sarah Cox 45 wife	
John Cox 20 Coal miner Hewer	18s
William Cox 15 Carter	9s

Thomas Cox 14	Carriage Boy	7s	
Mary Cox 12			
Joseph Cox 10	Trapper	3s	
James Cox 7			
George Cox 5	Total	50s	
Richard Miles 12 Ag. lab. (lodger)			

The importance of the sons' earnings are clearly demonstrated in this particular family where the father in his fifties has gone past his peak. Even the two teenage boys would probably have earned more than their father, when adding their wages together. In these circumstances, it is understandable that because of their earning power, they often wanted to leave home and lodge in cottages in the same community or a neighbouring one to their parents, but striking out for their own independence. It is also evident that out of such relatively high incomes, colliers were able to save money enough to contribute to sickness and burial funds in colliers clubs. They rarely lived until old age, but it was a fact remarked on by the coalmasters that colliers were unlikely to have need of poor relief. William Ashman, manager of Clandown Coalworks, Radstock, could not recall "an instance of a collier going to the workhouse from the works managed by him". This was not mere special pleading before the Commissioners. His statement is born out by the absence of colliers mentioned among the Newton paupers. The relative prosperity of the colliers enabled them to "sometimes hire other labourers to cultivate their own gardens". And by all accounts the colliers ate well. Charles Ashman claimed the miners at Radstock were "generally well fed, and indeed were particular about their food, and pay well for some delicacies".

Describing the general physical condition of the colliers, Dr Stewart reported: "They are with few exceptions, a strong and robust set of men, and their children have such a trying ordeal to pass through that, on the Spartan principle, they must either sink under it or become hardy and enduring." The youngest boys did not merely have to endure the dark, the danger, and the physical exertion in the pit. The breakers and the older boys were probably feared more than flooding and falling rock. Several of the witnesses, men and boys, recalled having been beaten as youngsters by the carting boys, and less often by the men. The testimony of William Pratten, aged 26 of Writhlington Pit, is the most informative: "Has been severely punished, by being struck with a stick, a and with an 'iron crook' about a dozen years ago. This is altered very much of late. The master used not to know it so much formerly" and "the boys used to be afraid to tell of it for fear of being beated worse. They now complain to the head or bailiff, and he will do it instead of the bigger boys." It was by such means that the hierarchy of authority below ground was maintained, especially between the older and younger boys. All witnesses agreed that some improvements had taken place in this repect in recent years. With investigation of the pits under public discussion, the bailiffs were anxious to remove their vulnerability to criticism on this score.

Accidents, according to the Commissioner's report were "very numerous" in the Somerset pits. Mostly they appear to have been the result of falling coal or rock. The managers blamed the men for not propping up the roof of the gallery in time, or causing falls by too many men and boys crowding into the baskets (hudges) in which they were lifted out of the

pit. But clearly, the narrow conditions and primitive methods employed in hauling and winding held some part of the responsibility. As victims of injury, men and boys had to endure a loss of pay when absent from work. Occasionally fatal accidents occurred. The number of recorded deaths from accidents in the Newton pits. that I have managed to trace from various sources amount to nine in a period of thirty years, from 1774 to 1804. This is possibly a conservative figure in that the parish registers, the Poor Law disbursement book, and the local newspapers record different cases. The first and the last read as follows:

1774 Sept. 13th "Friday evening the following melancholy happened at the coal-pit at Newton near this city: Henry Merret, a boy of 12 yrs old, being as is supposed, asleep by the fire near the mouth of the pit, and one of the men at work calling him, he suddenly started up, and fell into the pit, near 60 fathoms deep, whereby he was so terribly bruised that he instantly expired."³¹

1804 10th Spt. On Wednesday, a boy of the name of Kington, was killed in a coal-pit at Newton. It is supposed a stone fell upon his head while eating his dinner at the bottom of the pit.³²

Of the nine recorded deaths, there were five men, and four boys. Three died from falls of coal or stone, one from a fall down the shaft, and one from drowning; the others died from unknown causes. Six of the deaths occured within a six year period, between 1786 and 1792. No recorded deaths have been traced before 1774, and after 1804. By comparison, the fatalities in the pits in the Radstock district, which employed far more colliers than at Newton, appear to have been fewer.⁴⁸

The last word on the Somerset colliers rests with Dr Stewart: "Upon the whole I am disposed to think that with the exception of a general character for turbulence and rudeness, the colliers will not appear to great disadvantage when compared to other persons in humble life They are not proverbially thieves, nor particularly debauched if their fondness for drink be not set down against them."³⁴

Certainly, the village of Newton St Loe assumed a far more sober character with the departure of the colliers after the closure of the Newton pits in 1845.³⁵



References

- 1 Newton St Loe Estate map of William Gore Langton Esq. 1789. nos. 156, 130.
- 2 Ibid, no. 172 Hound Acres.
- 3 J A Bulley, To Mendip for Coal: A Study of the Somerset Coalfield before 1830, Som. Arch. & Nat. Hist. Soc. Vol. XCVIII 1953, part II, p.30. It may not have been the only pattern eg. Bishop Sutton, large parcels of land were bought for the exploitation of coal.
- 4 Langton Collection, Somerset Record Office.
- 5 Felix Farley's Bristol Journal Oct. 10th 1801. An advertismeent for the sale of the fire engine at Newton pits contains this suggestion. "A company of Miners purchasing the above might find Veins of coal near the Engine, as Coals have been found, and the Pits worked there for many years."
- 6 Langton Collection.
- 7 Bath Herald June 2nd, 1792, Aug. 18th, 1792, Aug. 25th, 1792.
- 8 Langton Collection.
- 9 Camerton Coal Lease, Som. Rec. Office.
- 10 Bulley, part II, p.30.
- 11 Bath Herald 3rd May, 1845 describes the transfer of a boiler from Newton pit to one at Dunkerton. The Newton poor rate book records no payment of rates by Newton Coalworks for May 1st 1845. The following year three individuals pay rates on "land lately occupied by the Coalworks".
- 12 Charles Wilkins, the enlightened cloth manufacturer, Whose mills at Twerton were commended by the Factory Commissioners in the 1830's, rented a small plot of land in Newton from Col. Gore Langton, who owned the land from which Newton Coalworks operated. (Newton St. Loe Tithe Award 1840).
- 13 Twerton Churchwardens Accounts.
- 14 Bulley has noted coke used for drying malt at Farmborough, High Littleton and Writhlington, all in the late 18th century, part I Som. Arch. & Nat. Hist. Soc. 1952 p.62.
- 15 Recalled by Mr George Allen, aged 90, of Corston, who worked at the Globe Inn early this century, when in his teens, keeping the cattle for the landlord and cleaning out the vats. His wages were then 13 shillings a week with three 2½d pints of best bitter a day. His opinion of the brewhouse: "The fumes were more powerful than the beer. I remember staggering out after a morning in the vats. It was wonderful beer they made there then." I am indebted to Mr Scott of Saltford for this information.
- 16 John Wood An Essay towards a Description of Bath pp. 58-9.

- 17 This may be compared with Jonathan Hornblower's steam engine at Radstock in 1782. This former employee of James Watt built his engine with two cylinders, one 19 inches in diameter by 6 ft stroke and the other 24 inches in diameter by 8 ft stroke. Some idea of the depth of working at the Newton pits can be gained from the figure of 41 fathoms mentioned.
- 18 Hunt Collection Vol.IV, Bath Ref. Lib.
- 19 Bulley part I p.71.
- 20 Harcourt Masters Bath Turnpike map. 1786, Som. Rec. Office.
- 21 Joseph Sutcliffe The Geology of the Avon, 1822, p.11.
- 22 W Buckland and W D Conybeare, Observation on the South Western Coal district of England, Trans Geol. Soc. 2nd series 1824, p.268.
- 23 John Anstie The Coalfields of Gloucestershire and Somerset, 1873, pp. 45-6.
- 24 The 1841 census lists 21 Newton colliers (including engineers, agent etc), 28 in Corston, and 12 in Twerton. The colliers' sons aged over eight years amount to 30, making a total of 91, plus the carpenters and masons etc. (Enumerators Census Schedules, Newton St Loe, Corston, and Twerton, 1841, P.R.O.) The Coal Barton pit, near Coleford, employed about 100, of whom half were under 18 years of age, and a fifth were under ten. In five pits in the Radstock area, under the control of James & Co., about half the 700 workers were under 18. (Commission Report on the Employment of Women and Young persons in Coal Mines, 1842).
- 25 Langton Collection.
- 26 Bulley, part II, p.33.
- 27 G C Greenwell and J McMurtrie The Radstock Portion of the Somersetshire Coalfield, 1864, (in Victoria County History of Somerset vol. II, p.385).
- 28 Buckland and Conybeare. p.263
- 29 Newton parish registers record more colliers in the 1830's.
- 30 Much of the evidence outlined below is taken from Dr Stewart's report of the Somerset coalfield, as one of the Commissioners inquiring into conditions in the mines, which was written in 1842. The evidence of Newton collier colliers in the parish registers, and in the census schedules, is introduced in support where possible.
- 31 Bath Chronicle Sept. 13th 1774; James Baker's register gives the boy's age as 11, and a figure of upwards of 40 fathoms for the depth of the pit.
- 32 Bath Journal Sept. 10th, 1804.
- 33 Writhlington Pitman's book. The figures are recorded from 1848 to 1881. Taking the period 1848 to 1878, a total of 18 deaths occurred in Huish, Foxcote and Kilmersdon pits.
- 34 Commissioners Report 1842.
- 35 See G P Davis. Social and Economic Change in a Somerset Village, Newton St Loe 1801-1871. Unpublished MSc Thesis, University of Bath, 1975.