

The Cromhall Collieries

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Introduction

The background to this article lies in the preparation of a report in 1999 for the Avon Industrial Building Trust (AIBT) on the remains of an Engine House at Cromhall.¹ During this a number of individuals with different information were approached and the strands of evidence began to be drawn together. It included an historical appraisal that attempted to set out all the evidence found both physical and documentary. This article is intended to be a more readable account of that evidence, whilst also including further findings since the AIBT report was completed.

The village of Cromhall lies at the northernmost end of the Bristol coalfield. Here the coal of the Lower Coal Measures reaches the surface where there are two narrow seams. These are usually referred to as Cromhall Top and Cromhall Bottom. Published material referring to Cromhall indicates there were only unsuccessful attempts at mining. Sufficient evidence has now been uncovered to suggest a nearly continuous period of activity for over seventy-five years.

There are three distinct areas of mining activity:
 The area around Old Engine Cottage Old Engine Works
 The site of the ruined Engine House New Engine Works
 Tapwell Bridge Area Tapwell Bridge Pit

Early workings

The Roman Villa in Cromhall lies close to the coal outcrops. This may have been a factor in the choice of its location. Investigation of Bristol City Museum regarding the Villa indicated that excavation was carried out by J.W. Stirling and also by D Siddars. There are a number of Roman remains in their collection although there is no specific evidence referring to Coal mining. Bill Solley, who was involved in the excavation work at the adjacent sewage work site refers in his publication *An Archaeology of Northavon*² to Tapwell bridge and the coal seam and also to a Report and Plan in the City Museum regarding the Roman remains. This has not been located.

No firm evidence has been found to confirm Ro-

man mining although as with all areas where coal is readily available on the surface it was probably gathered from this time and continued to be collected on a small scale. Evidence of bell pits in the fields between Tapwell Bridge and Jubilee Lane has also been noted. Whilst walking the fields between Tapwell Bridge and Jubilee lane, following ploughing in the late 1980's, Ian Greenfield noted a circular patch of coal waste.³ This staining to the ground is typical of spoil extracted from bell pits. A slight depression can still be determined at this location. This type of working was typical in the medieval period.

On the geological maps the edge of the coalfield arcs round towards the field at the end of a track known as the Green Lane. When inspected in the spring of 2000 the typical staining of a number of bell pits was found. The coal outcropping nearest to this point is the Cromhall Top vein. Sections of the Green Lane appear to be a level surface raised above the fields on either side, suggesting a tram-road for hauling coal from these bell pits to the Toll Road.

It also appears that there were workings following the seams since the Transactions of the Geological Society of London 1819 include a report by Thomas Weaver,⁴ which refers to earlier exploration 'by means of pits and shallow levels'.

Samuel Rudder's *A New History of Gloucester*⁵ dated 1779 also suggests earlier workings in his description of Cromhall-Heath which refers to the 'fossil productions' of the village being 'pit coal, and white-lay stone.' He goes on to say that the coal is 'in great plenty; but the works have relaxed for some time.' An earlier reference is the 1702 inventory of William Taylor 'of Wickwarr' in the Gloucester Records Office (GRO)⁶ This describes him as a 'Coll Deiner', believed to be an old phrase for a maker of adit mines, particularly a person who digs the coal at a face rather than a shaft.⁷ The Cromhall and Wickwar Commons join together and the coal measures run below both.

Old Engine Works

The Old Engine Works centred on the site of what is now Holly Manor. This cottage was previously called Sunnyside but before this was known as Old Engine Cottage. At this location early maps clearly

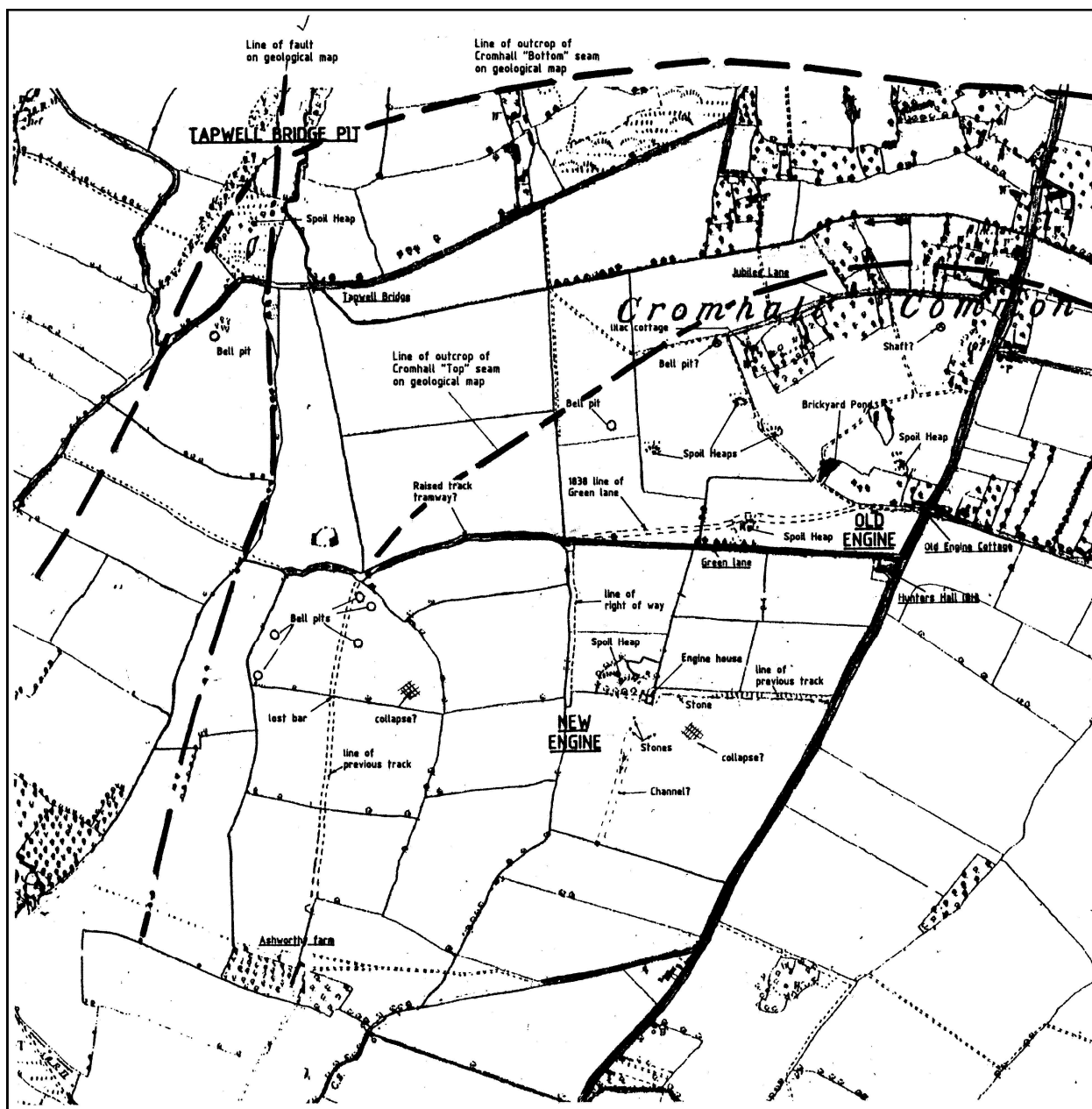


Fig. 1 The Engine Works area from the OS first edition map showing location of remaining mining features



Plate 1 'Batch' to west of Old Engine Cottage during survey, Summer 2000

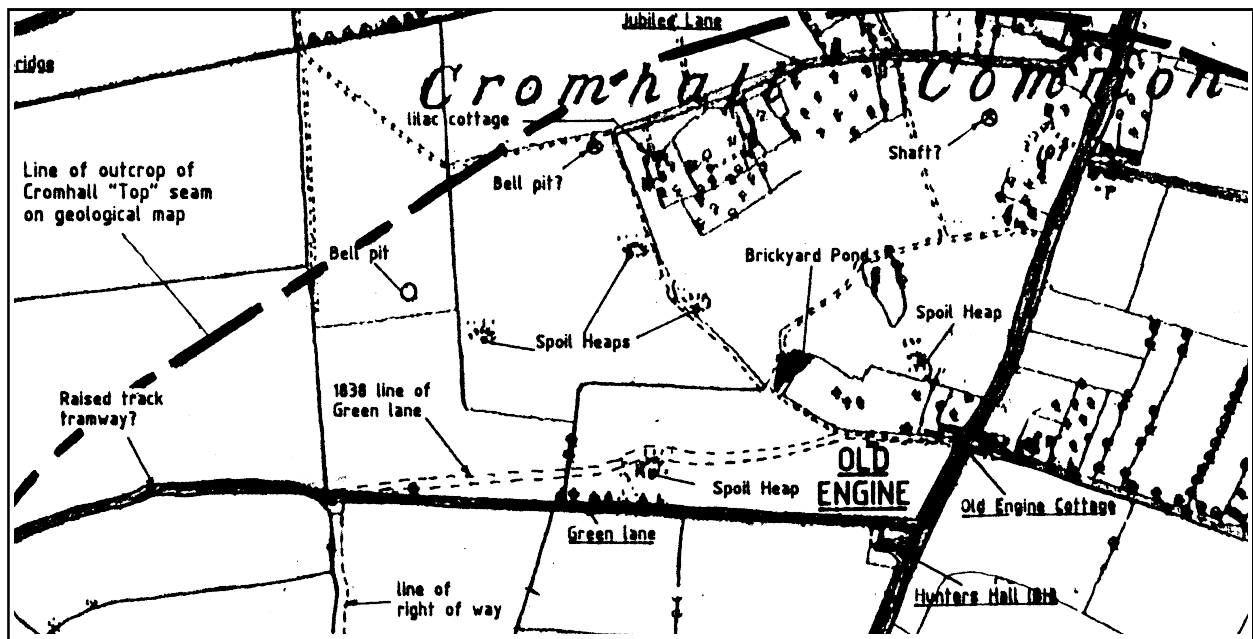


Fig. 2 Details of the Old Engine Works

state 'engine'.⁸

Circa 1774–95

Thomas Weaver's 1819 description of Cromhall referred to the 'principal work' being established 'about forty five years earlier' i.e. circa 1774. Rudder's description suggests there was no active pit at the time of his visit although his travels would have been earlier than the publishing date (1779), possibly even before 1774. The location Weaver gives is 'in the northern portion of the field 500 yards south of the dell'. This dell is likely to be the small valley running from Cole's bridge through to Tapwell Bridge and his map gives a general location for 'Cromhall Colliery' to the west of the main road but not as far across as Tapwell Bridge. The location of the Old Engine Works fits his description.

In the GRO is a lease dated 25 March 1787 between Francis Moreton Lord Ducie, and Robert Baylis & Oswald Jackson.⁹ This grants 'free licence to dig, sink, rid, win, work and make pits...'. It refers to 'seams of coals opened and not opened' and 'all such engines, mills, ...sheds now standing...'; suggesting there were already workings in the area and of sufficient size to merit these structures. Messres. Baylis & Jackson were to explore for coal with an annual rent with a percentage of the money from the sale of the coal being due to Lord Ducie. They are to sink pits 'as soon as convenient...'; so it would appear likely that either a significant colliery was commenced in Cromhall at about that time, or existing workings were enlarged.

In addition to the lease is an inventory of equipment belonging to Lord Ducie 'now on the common ...'.¹⁰ This includes an engine, which at this date

would probably have been a Newcomen engine. The inventory is dated over a year earlier than the lease, indicating Robert Baylis took equipment on 10 February 1786 which belonged to the Late Thomas Lord Ducie deceased. The second Baron Ducie, Thomas Reynolds, died in 1785,¹¹ and his son Francis became the third baron. The title 'Lord Ducie' was not granted until 1836¹² although it is used in both the 1786 inventory and also the 1787 lease, which also uses the other family name Moreton. It would appear that Robert Baylis signed for the equipment following the death of Thomas. He was already mining on the common prior to the 1787 lease which was then drawn up to formalise the agreement with the new Lord Ducie. Oswald Jackson may well be primarily a financial business partner. He is described as being from Woodchester and at this time the Reynolds/Moreton family also had links with Woodchester Mansion.

A curious footnote to the lease is that it appears it was originally to be signed by William Baylis. Robert Baylis stepped in to take his place after the indenture had been drawn up. The earlier inventory confirms Robert Baylis was already involved in Cromhall. The division of the profits with two thirds to Robert Baylis suggests it may originally have been intended for there to be three partners, Robert Baylis taking on the additional share when William Baylis declined to be involved.

There is a further inventory/valuation dated 1789,¹³ again signed by Robert Baylis. This includes more items than the previous inventory. In addition to the engine, ropes and tools there are a number of items for use by the Smith and pieces of boiler-

plate. There is also reference to a Brown Gelding and a Black Blind Mare, Coal Carts, 16 fathoms of air pipes, and a Candle Chest giving an indication of the working methods in the pit at this time. It has been suggested that the inventory was drawn up as a result of the closure of the mine. The 1787 lease, however, makes provision for the value of the engine and other equipment to be reassessed after two years if Robert Baylis did '...not give notice to discontinue in the colliery'. The inventory and valuation are dated two years later than the lease and it is likely that the valuation is connected to this lease provision.

Weaver describes the early workings as 'soon abandoned', although from the lease and inventory evidence it would appear that works were either still being carried out or had recommenced in the late 1780s. Weaver probably did not have this evidence since he states, 'no written document remains' regarding these workings. The 1787 lease was for sixteen years and was therefore not due to expire until 1803.

In 1795 pitwork from Cromhall was sold to the colliery at Cowhorn Hill, Bitton.^{14&15} The items described include items from the shaft which would almost certainly have been underwater had they not been removed soon after the pumping engine had stopped. It would appear likely that these coal works were continued until 1795.

1815–1819

Weaver's description given of this colliery is an 'engine shaft and a bye pit' sunk about eighty yards in depth. Weaver refers to the working 'of the same colliery' being resumed in 1815 with a steam engine erected 'on the old engine shaft and new pits opened in the northern and north-western portions of the field'.

Weaver indicates that the reopened colliery was worked for three years and then 'relinquished', the leaseholder being Mr Walker. The same name occurs regarding a lease drawn up in 1817, between Thomas Moreton, and Messrs. Teague and Walker.¹⁶ The invoice for the legal work involved is in the GRO although the lease is not. It is unclear why, if the pit was recommenced in 1815, the lease was prepared two years later, although it is worth noting that the previous lease of 1787 was not drawn up until several years after the death of the previous Lord Ducie, and that there was review after two years. Weaver's information probably dates from 1818, since it was published in the Transactions of the Geological Society of London for the following

year (paper read 4 June 1819).¹⁷ A section is given through the geological strata along with comment on the quality and thickness of the coal indicating that the coal narrowed and the ground was heavily faulted and fractured. The depth to the coal in 'one of the basset pits' is given as 49yds. 1ft. 9in. A basset pit is believed to be a shallow working close to the outcrop, 'basset' being a term for an outcrop.¹⁸ This shaft would therefore be one of a number to the north of the main site of the Old Engine Works. Weaver's account acknowledges the assistance of Mr. Walker in providing information. The description in Weaver's report from Walker describing the poor quality of coal and ground conditions is much as would be expected from a mine operator whose pit had just closed as a result of difficulties.

It is possible to speculate which of the known shafts are those Weaver indicates were sunk as part of the 1815-1819 workings. A number of spoil heaps remain on what was previously Cromhall Common and the locations of others, now levelled, have been identified. These are relatively small compared to the spoil heaps of more modern mines, although when it is considered that prior to the introduction of machinery, hand excavation methods would have been used, this is understandable. One of the largest spoil heaps runs out as a finger from the Old Engine site, and to the northwest is a crescent-shaped batch. The footpath adjacent to this mound runs directly to the Old Engine Works suggesting a possible route taken by miners. This path continues on to connect with the paths linking the bell pit workings and the Tapwell Bridge area giving a network of small tracks between the mining sites. The tithe enclosure map of 1838¹⁹ appears to show the line of enclosure being taken around the crescent shaped batch, suggesting it already existed then.

1819 lease -

Thomas Moreton to Messrs Walker & Pope
There is a footnote to Weaver's report to the effect that since the account was written, the working of the Cromhall 'Quarry'[sic] had been 'partially resumed'. The recommencing of the works corresponds to a lease dated March 1819,²⁰ again between Lord Ducie, who by now was Thomas Moreton, to Michael Walker and Andrew Pope. Mr Walker is described as a 'Coalmaster' of Cromhall, Mr Pope a Banker from Bristol. The introduction of a Banker as a partner in the 1819 lease implies that the coalmine may previously have closed due to financial difficulties and was refloated with a new partner and financial package. The 1819 lease was

due to expire in 1840.

Henry Woollcombe, the brother of Darrell Woollcombe Rector of Cromhall, visited his brother in 1819.²¹ His diary tells us he visited 'the coal mine on the common' on 31 August 1819 and notes that the shafts were lined with brick. He also notes that the 'whims' are referred to as 'Gins' and that the mine is about 19 fathoms deep. In his diary he also refers to Mr. Weaver dining at Cromhall during his stay. Thomas Weaver's earlier article refers to Rev. Woollcombe's excavations for the cellar of the rectory, so it would appear that they were acquainted.

One of the largest spoil heaps in this locality lies approximately due west of Old Engine Cottage. This suggests it is not one of the new pits described by Weaver. It is possible that this is a separate pit although the distance and orientation is such that could be linked below ground. In 1984 D.J. Pollard found two small fragments of plate rail embedded in the spoil.²² Subsequently other pieces have also been found. The type of rail is typical of rail used in the early to mid 19th century. There could have been a tramline to the main road and the main colliery site at the Old Engine Works (including the weighbridge). An alternative is that rails existed below ground to aid the hauling of coal to the shaft. This is perhaps more likely although why the pieces are on the surface is unclear. The size of rail is similar

to pieces recovered from underground in a Forest of Dean coalmine.²³

The old line of the track from Engine Cottage to Ashworthy Farm shown on the 1838 tithe map appears to make a dog leg at approximately the location of this spoil heap. This track not only links the site to the Old Engine Works, its route suggests the existence of the spoil heap at the time the map was drawn up.

Undated Valuation/Feasibility Study

A further document in the GRO is a report commissioned by Lord Ducie regarding the financial viability of mining on Cromhall Common.²⁴ This document is a valuation of the Cromhall Colliery and gives an appraisal of how much saleable coal is likely to be obtained per year. It refers to the coal being 14 inches thick, one third of which is described as 'best coal'. Allowance is also given for coal that is left for supports. It is interesting to note that the section given by Walker to Weaver in 1818 also refers to coal 14 inches thick, this being part of the vein being worked which was 2ft. 6in. thick 'yielding' large coal at 16 inches and small coal at 14 inches.

The valuation uses the following figures for the numbers of people required to work 5 acres:



Plate 2 Holly Manor - previously called Sunnyside and Old Engine Cottage (May 1999)

4 Banksmen	8 shillings per week
2 engine men	12 shillings per week
1 Carpenter	10 shillings per week
1 Blacksmith	9 shillings per week
2 coal measures	9 shillings per week
Bottom Steward	12 shillings per week

There is reference to 22 Men & 22 Boys working 9-hour shifts ('Puncheions') and the need to employ an Agent.

The valuation refers to driving 'levells and strait-work' as well as sinking 2 'Pitts', and the amount of coal used by the engine as 720 bushells per week.

It is not clear whether the number of men required to work the pit is based on an existing labour force of an existing pit, or whether this is an estimate of the requirements for a new pit. There is reference to sinking two pits, which might imply a new site - Weaver indicates that the workings from 1815 to 1818 included two new shafts. There is however no reference to a new engine, implying the reopening or enlargement of an existing pit. The thickness of coal is based on reports from the miners since it states this is as '..they inform me', there was therefore clearly a pit either active or previously open at the time of this study. The depth estimated of 60yds. is more than the 49yds. $1\frac{3}{4}$ ft. referred to in 1818 for the bassett pit, but less than the 80yds. referred to in the same document for the depth of the main workings. It is also much less than the 137yds given by John Anstie (see below) as the depth 'to the first coal' in the Engine Pit.

The report also refers to 'Lime coal'. Lord Ducie also had Limekilns on his land and it is likely that much of the coal from the earlier mines would have been used for lime burning. Unfortunately there is no date on the feasibility study.



Plate 3 Remains of colliery building, Old Engine Works, May 2000

Physical Remains

It is common for a name such as Old Engine Cottage to indicate a converted engine house. The modernised cottage however does not give any clues now to its previous use. The height of the walls of the oldest part of the cottage, the end nearest the road, have been raised. The older part of the walls of this section appear to taper in width, although at their thickest point (ignoring chimney breasts) the walls are little more than 500mm in thickness inclusive of render. These walls appear to be relatively old, possibly dating from the late 18th century, when the colmine was in operation. The walls are however significantly thinner than those of the ruined engine house at New Engine Works and are more typical of the wall thickness common in cottages in the area.

There were also previously other buildings on the site. These appear on the 1838 tithe map and also on later Ordnance Survey Maps. Prior to its renovation Ian Greenfield and John Cornwall of the Bristol Coalmining Archives inspected the property.²³ At the time there was a square outbuilding with thick stone walls and a partially sunken brick floor. The building has since been demolished but was almost certainly part of the mine. Of the other buildings one small shed remains, now consisting of nothing more than two walls built against the boundary wall with a modern corrugated sheet roof. When this was being revised in the summer of 2000 the floor was excavated and found to contain a lot of coal waste. There were two separate layers of flagstone flooring discovered.²⁵ A significant depth of coal and shale was also found when the foundations for the garage and adjoining bungalow were excavated.²⁶ There is no longer any sign of the cottage in the paddock to the west of the house or the 'weighing machine' building, also in the grounds - all of which are shown on the 1838 map.

In addition to the spoil heaps referred to above the Coal Authority records include further shafts where no physical remains exist. Recent fieldwork has found another spoil heap, now levelled, which is evident on the 1946 air photographs.²⁷ Another interesting feature in this area is a pond. This was known locally as Brickyard Pond.²⁸ and, being located centrally to several spoil heaps, might have been the source of clay to make bricks to line the shafts. When this pond

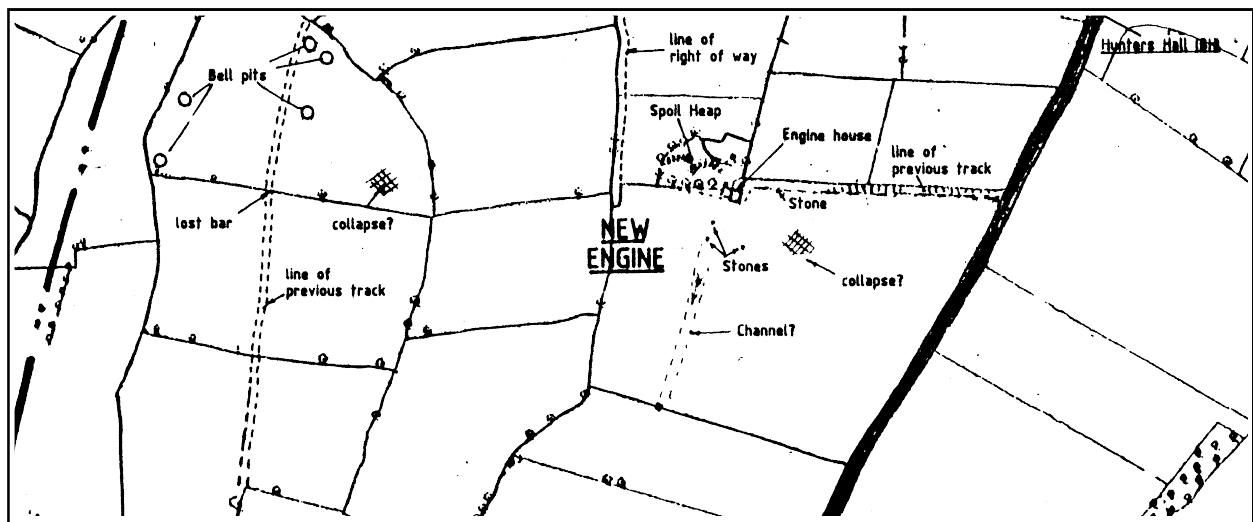


Fig. 3 Details of 18?? OS map showing New Engine Works

was partially filled a large amount of material was used although there is still a sizeable pond in wet weather.²⁶

New Engine Works

1827 lease - Lord Ducie and Samuel Long

By 28 August 1827 Samuel Long was working pits in Cromhall.²⁹ The lease of that date is for 21 years from 20 March 1827 and refers to 'several pits and veins of coal' already being worked and specifically to 'opening on Cromhall common one other pit for searching and procuring coal...' Samuel Long is described as a clothier of Charfield.

Samuel Long appears in Pigot's Directory of 1830³⁰ for Wotton-Under-Edge as; 'LONG - Samuel & William Woollen Cloth Manufacturer Chagfield & Park Mills, Wootton'. There was an extensive textile industry in the Wotton-Under-Edge area and the Long family was involved in most of the Mills. These were originally water powered by the streams coming off the Cotswold escarpment, although steam was introduced during the 19th century. Drawings exist in the Boulton & Watt Archives of steam engines introduced by the Long family³¹ although no evidence has yet been found to confirm that one was purchased for Cromhall. The largest of Samuel Long's three Mills at Charfield dates from 1829,³² and it appears to have had steam power. A cheap source of local coal was essential. The railway line and coal wharf at the station in Charfield did not open until 1844.³³

The Long family is confusing since one of William Alexander Long's children was also William Alexander and there is reference to both Samuel Long 'the Elder' and his son Samuel Long 'the Younger'.³⁴ When Samuel Long the Elder died in 1846 his sons

continued the mining interests. The 1827 lease would have been with Samuel Long the Elder.

The lease refers to 'fire engines, whimseys, cranks, gins and other machines...' all in the plural, again possibly indicating the scale of activity at the time. It therefore appears that Samuel Long was already working the Old Engine Works and possibly others. The 1827 lease refers to repairing various items and for filling up and making safe old workings. This may be simply a standard lease clause, there being a similar phrase in the 1819 lease to keep in repair various items, or it may suggest a state of disrepair following the failure of the previous ventures.

Samuel Long has a further direct connection to Cromhall in that he is one of the founders of Cromhall Chapel³⁵ and the name is also linked to the non-conformist chapels in Wotton-Under-Edge, Kingswood and Charfield.

His later partner at Cromhall, Christopher Keeling, had shares in the 'Yate Coal and Lime Works',³⁶ which suggests a connection with lime burning. No direct connection has yet been established between Samuel Long and the lime workings under the ownership of Lord Ducie although it is likely that coal was also supplied to these.

Samuel Long also had mining interests at Moseley Green in the Forest of Dean³⁷ and the name is again linked to Yate where the mines on Engine Common were run under the name 'Long Keeling and Co.'^{38&39} There was also a mine called Longs Pit in Yate, on land in the ownership of Samuel Long on the Yate tithe map.⁴⁰

1838 Tithe Map & 1839 Schedule

The map of 1838 for Cromhall¹⁹ states 'Coal Works'

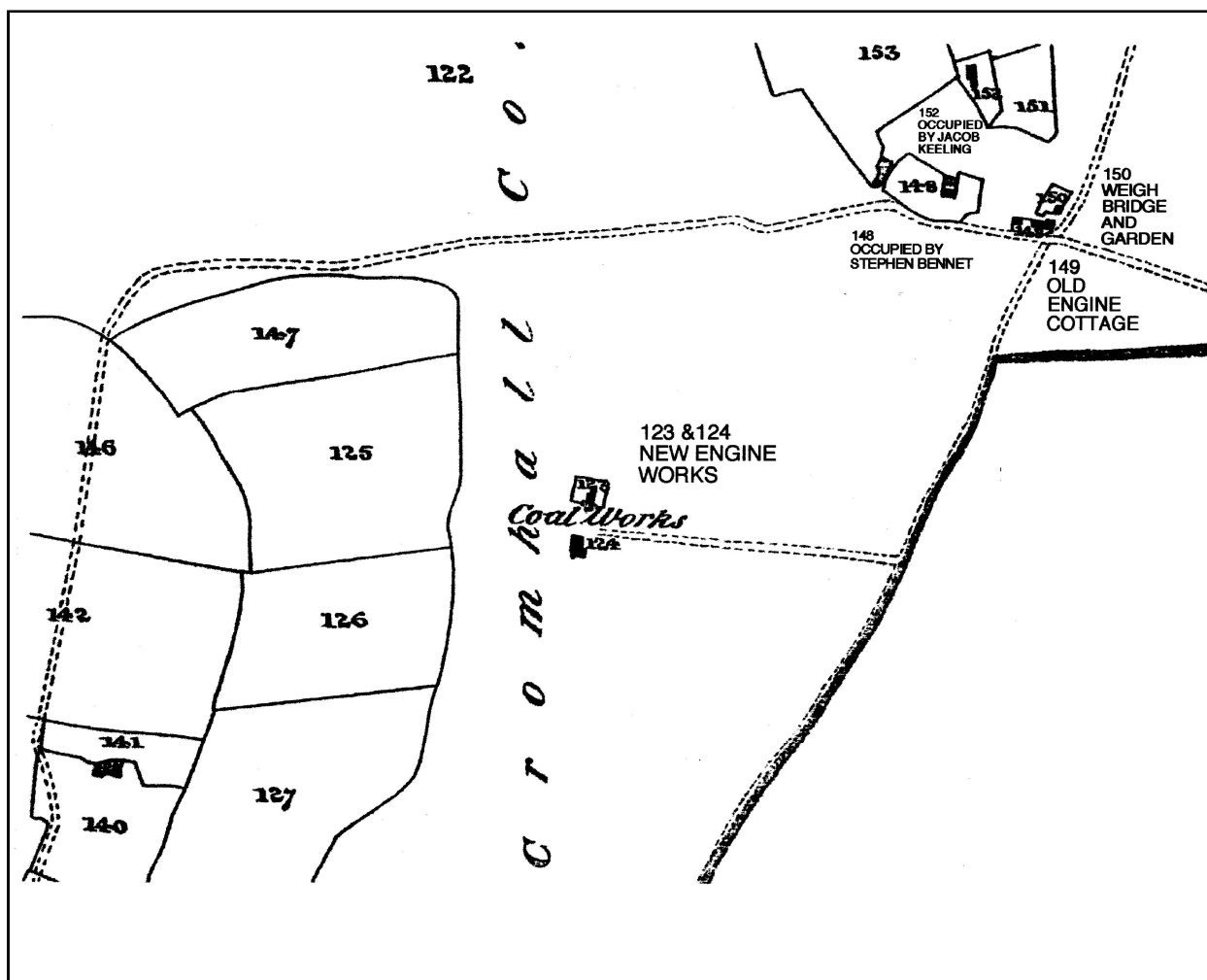


Fig. 4 Tithe Map of 1838

on the site of the New Engine Works. This map shows a building which would appear to be the engine house, and a further building to the north in a separate enclosure. The current boundary around the copse includes a kink on the northern edge, which corresponds to the edges of this other building. There would have been a need for a blacksmith and other colliery equipment and this would appear to be their location.

The 1839 schedule to the tithe map⁴¹ lists the owners of 'the New Engine Coal Works' as Samuel Long and Christopher Keeling 'leasehold under Thomas Earl Ducie'. Also listed under the lease to Samuel Long and Christopher Keeling, and assigned to 'Themselves and John Mills', are two plots described as 'Old Engine Cottage' and 'Weighing Machine and Garden'. The location for Old Engine Cottage is the earlier site, the Weighing Machine is in the field to the north of this, now part of the cottage's garden. This not only confirms the site of the Old Engine Works but also suggests that by this time there was a cottage on the site.

The use of the names 'Old Engine' and 'New Engine'

is the first use of both these terms for the two colliery sites, although Weaver does use the term 'Old Engine Shaft' in relation to the recommencing of the works in 1815. The use of the term 'cottage' cannot however be taken as confirmation that works at the Old Engine Works site had ceased. A cottage on the site, used in conjunction with the works would naturally become known as Old Engine Cottage even if the works are still in operation and the building has no actual connection with the engine itself. It is therefore possible that even in 1839 the Old Engine Works were still in operation and being run in conjunction with the New Engine Works. It is surprising that the weighbridge remained at this location if coal was being raised some distance away.

The tithe map shows a number of buildings on the Old Engine Cottage site in 1838, some of which are still shown on the 1966 Ordnance survey sheet.⁴²

Also under the same leasehold grouping on the 1839 schedule are a number of cottages:

			a	r	p
Issac Keeling	No 120	Cottage and garden	-	1	2
Stephen Bennet	No 148	Cottage and garden	-	3	3

Jacob Keeling No 152 Cottage and garden - 1 16

As with Samuel Long, Christopher Keeling is also associated with Cromhall Chapel where he is buried and there is a memorial plaque to him on the wall. Christopher Keeling's will³⁶ indicates that Isaac Keeling and Jacob Keeling are his brothers.

Inspection of the tithe maps also show various other buildings on the common, some of which may have been hovels, occupied by mine workers. One of these was later known as Lilac Cottage. Now derelict and used as a cattle shed, it was at that time occupied by the Pick family.

1842 Children's Employment Commission Report This report³⁹ gives details of the conditions and method used in the mines at that time. By the time of this report 'Cromhall Common Colliery' was being 'carried on' by Long and Keeling. The description states that there is 'A very wet pit, pumping engine at work'. Christopher Keeling was not available at the time of the inspection being 'busy underground'. The inspector did however speak to 'several of the men and boys, as they came up at the pit mouth'. The inspector noted that there are few boys working this pit and their wages varied from 2s. 6d. to 7s. a week. The cutters were earning 17s. per week at most. One boy, who drove the horse in the whim, is described as 'very ragged' having no better clothes, no mother and a drunken father. The boy is also described as 'uninstructed'. The hours of work are 'as usual', described elsewhere in the report as eight to ten hours. The air in the pit is 'very bad, which sent several men out of the pit before the regular hour of leaving work'. A 2ft. 6in. vein was being worked at a depth of 60 fathoms and about 40 hands were employed.

One of the 'lads' working the mine is described in detail. His name is John Pick and he is 'a stout Hale lad aged 16-17'. In contrast to the 'ragged boy', John Pick can read 'very well' and goes to Sunday School. In 1842 he had been employed for four years at the pit and earned 7s. a week. His job was to haul 40 tubs a day, each containing 4 'bushels' of coal, a distance of 40 yards on level ground assisted with neither 'wheels nor plates'. The method of hauling coal was by using a 'tug and girdle', worn around the lower part of the body so that the Pelvis and thighs take the strain. This was used in preference to the shoulder strap tug used in the Forest of Dean area, which put greater strain on the spine and abdomen. It should be noted that due to the narrowness of the veins in the South Gloucestershire coalfield, the

height of passages is described as 'not more than 3 feet in height and often several inches lower'. The hauliers would therefore have to crawl hauling the coal behind them. The hard twisted rope would 'gall' at first over the hips of the young boys who would wrap old clothes around the rope at first until this effect wore off. John Pick acknowledges that his work is hard and the other men indicated that 'none but a strong boy could do it'. The inspector also indicated that the men at Cromhall could not be persuaded that the shoulder straps used in the Forest of Dean were better, a comment from one of the men being 'every country do like his own way best'.

The Report suggests that rails were not being used underground although sections of plateway have been found in the locality. It is possible that there was a main heading with rails and the boys would be hauling 'unassisted' to this, although no plans of the workings have been found.

The 1842 Report also describes the pits at Yate. Two of these are being worked by Long Keeling and Co., and managed by John Wilks, a name which also has links with Cromhall.

1851 Census - Cromhall

This Census⁴³ refers to Christopher Keeling as the Coalmine proprietor. He is 49 and originally from Moore Green, Nottingham. It includes the following 6 coal miners:

John Pick	(aged 27 born in Cromhall)
William Smith	(aged 28 born in Cromhall)
Thomas Ford	(aged 34 born in Cromhall)
James Stafford	(aged 37 born in Cromhall)
Joseph Smith	(aged 52 born in Cromhall)
Charles Smith	(aged 27 born in Cromhall)

John Pick is almost certainly the same individual referred to in the 1842 child commission report. There are also 5 blacksmiths in the Census; at least one of which may have been associated with the mines. There is a brickmaker listed, and again this may have a connection to the mine. There were still active coal workings in the village in 1851 although the numbers employed are lower than those envisaged in the feasibility study, and less than the 40 hands given in the 1842 report. This suggests a reduced scale of operation and possibly that the works were in decline.

1851 Census – Surrounding Villages & Towns

Two of Samuel Long's children, Paul Long and Samuel Long (the Younger) appear in the 1851 Census for nearby parishes,^{44&45} with reference to both the

woollen and the coal trade.

Christopher Keeling's brothers appear in the 1851 census for Yate.⁴⁶ Isaac Keeling's household includes James Ford, his wife's son and Luke Kendle his thirteen-year-old nephew. Both are coal miners and both were originally from Cromhall. Thomas Ford is in the Cromhall census as a coal miner. He may be a relative of James Ford and therefore related to the Keeling family through marriage. Isaac Keeling is described as being 55, a labourer originally from Poynton in Cheshire, and he was blind. Jacob Keeling is also 55 and is described as a coalminer originally from Northampton. His four children were all born in Cromhall.

These families, and possibly others, previously lived and worked the mine in Cromhall before moving to Yate to work a different pit.

Robert Hunt's Mineral Statistics

The list of collieries in Robert Hunt's Mineral Statistics for 1853/4⁴⁷ and 1855⁴⁸ shows Earl Ducie owned the Cromhall Colliery. It is not mentioned from 1856 onwards.⁴⁹ This does not necessarily mean that this was when the mine closed, as Hunt can be somewhat unreliable.

Hunt lists Yate colliery from 1854 to 1880⁴⁷ as owned by Long, Keeling & Nowell as well as Long & Co., (the name tends to switch back and forth from year to year). Records in the Wiltshire Record Office (WRO)³⁸ confirm the involvement of both the Long and Keeling families in these mines and it is known from the 1842 Child Commission Report³⁹ that they were already involved in 1842. The name Nowell may be that of the widow mentioned in the 1851 census for Wickwar⁵⁰ but no connection to Cromhall has yet been made.

1871 Royal Commission Report and J. Anstie

The Royal Commission was appointed in 1866 and five years of investigation lead to the report.⁵¹ Civil and mining engineer John Anstie was involved in this and later published his own book on the area, *The Coalfields of Gloucestershire and Somerset and their resources*,⁵² first published in 1873. The maps prepared by him for the Royal Commission Report includes a section taken through the coal basin from Cromhall southwards through the Mendip Hills. Anstie was employed for 21 weeks from June 1867⁵³ and refers specifically to visiting Cromhall in his book. The report of the Coal Commission of 1871 itself contains the following information:

The total amount of coal extracted at Cromhall was estimated at 71,500 tons,⁵⁴ and that remaining underground at 730,800 tons.⁵⁵

The estimated area where the 'top seam' had been removed was 22 acres - only the top seam was described as being worked.⁵⁴

The thickness of coal was given as two seams (top & bottom) both 2ft. 6in. thick, the depth to the bottom of the first seam being 137yds. 2ft. 6in. and 161yds. 5ft. to the lower one.⁵⁶

The list of collieries included Cromhall Engine Pit, Cromhall Old Pit, and Tapwell Bridge, all of which were closed by 1871.⁵⁷

In his book Anstie describes the remains 'at the side of the turnpike road' as 'an abandoned engine-house, connected with some coalworkings'. This description could apply equally to the Old Engine Works or to the New Engine Works. However, since it appears that on the site of the Old Engine Works there was a cottage, his description of the abandoned engine house probably refers to the New Engine Works. He goes on to describe another shaft to the north 'recognisable by its heaps of refuse shale' which could be the spoil heaps around the area of the Old Engine Works.

In his report Anstie relies heavily on the report in the *Geological Transactions* of 1819 by Weaver⁴ although Anstie ignores the footnote that the mine restarted. Anstie states that the pits were first opened in 1778 and incorrectly assigns this information to Weaver who used the more vague term of 'about forty five years ago'. There is a clear error in the lack of reference to what must have been fairly substantial workings at the New Engine Works by Long and Keeling from circa 1827 through to at least 1851 and probably 1855 if Hunt is to be believed. Anstie goes on to say that local residents indicated a different section for the coal than that indicated by Weaver. Weaver is, of course, referring to the Old Engine Works and not the later works, which would not have been commenced at that time. It is therefore not surprising that the details given to Anstie differ. Anstie gives a depth to the first coal in the 'engine pit' of 137 yards, as well as quoting the 49yds. 1ft. 9in. reported by Mr. Weaver. When Mr. Cullimore purchased the New Engine Works shaft in the late 1960s it was plumbed and found to be over 300ft deep.⁵⁸

Physical Remains

At the New Engine Works are the remains of the

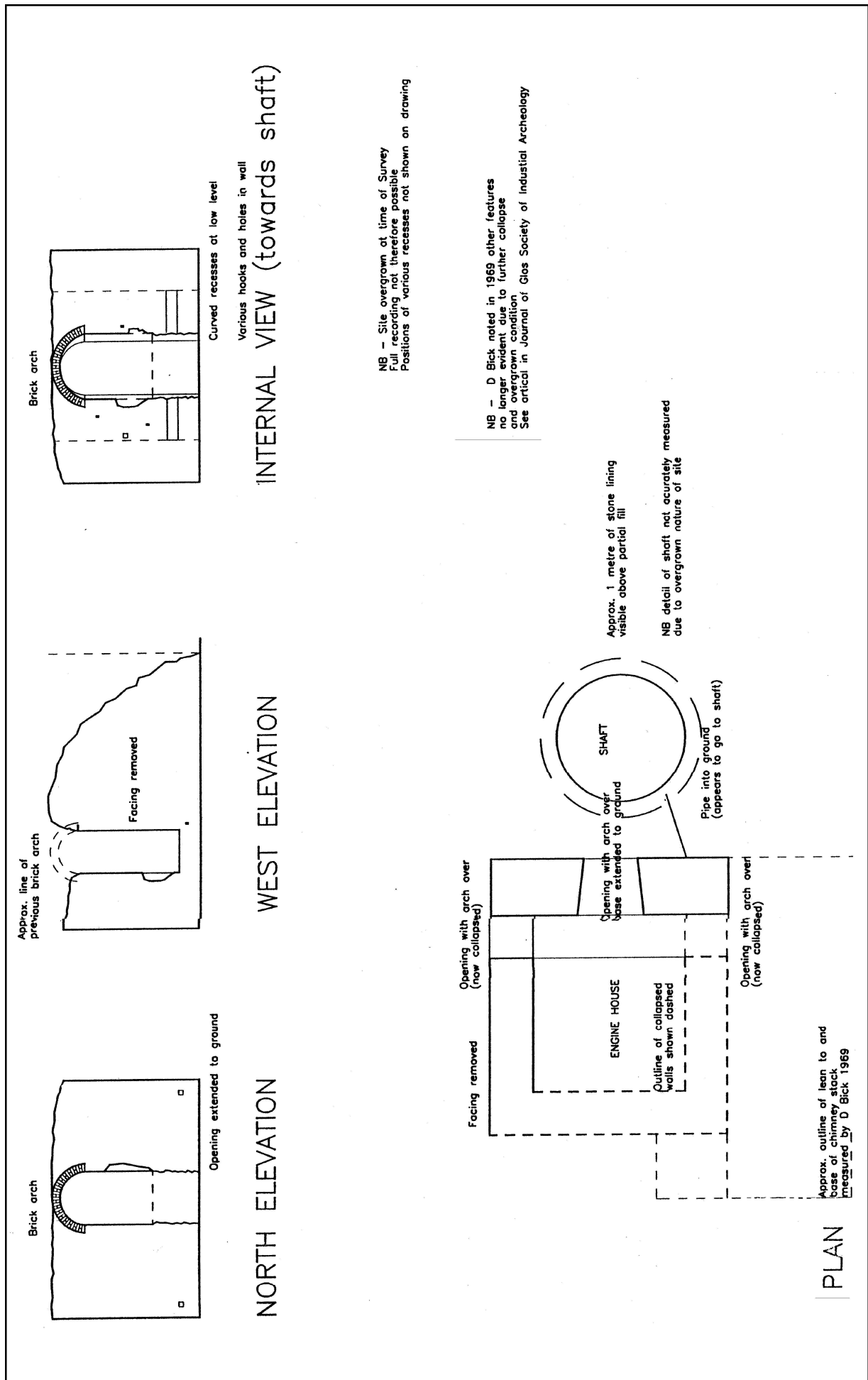


Fig. 5 Survey of existing remains of engine house, Cromhall, South Gloucestershire. Surveyed by Derrick Hardwick, April 1994



Plate 4 Copse containing remains of engine house of New Engine Works April 1994



Plate 5 Arch in bob wall of engine house April 1994

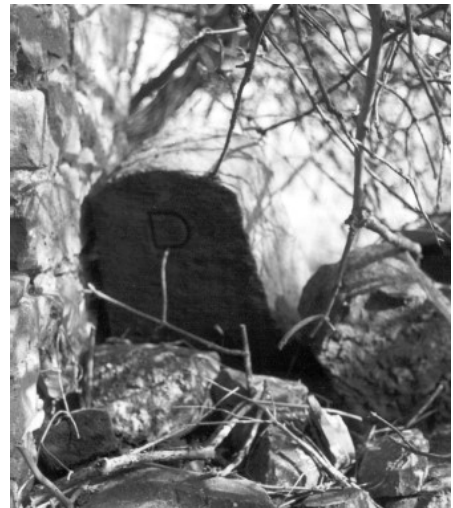


Plate 6 Boundary stone - note 'D' probably for 'Ducie'



Plate 7 Arch in bob wall of engine house



Plate 8 Curved recess in engine house wall

ruined engine house, shaft head and spoil heap. The spoil heap is larger than those around Old Engine Cottage. The depth to the coal at this point is deeper and would have created more spoil in excavation accounting for some of this. The amount of material extracted would again only have been the minimum necessary. To have accumulated this amount of spoil suggests that the pit may have worked for a longer period of time. There is currently a rectangular section which appears to have been removed from an even larger spoil heap. This was for a former silage clamp, a number of old tyres used with this remain.

In the early 1980s a collapse occurred in the field to the West of this site.²⁸ This was 'several yards across' and when probed with a stick appeared to be about 20ft. deep. The remains of a cow were also found which appeared to be quite ancient, suggesting an earlier date than that suggested in this appraisal for the New Engine Works. The collapse is approximately due west of the New Engine Works and it is possible that this is another shaft connected with the workings. This is the same field as the bell pit remains noted in the spring of 2000.

Local historian Roger Howell recalls an incident in the same field when his father lost a crowbar down a hole, when he was excavating a hole for one of the gateposts at the side of the old track to Ashworthy Farm. This is approximately on a line due west of

both the collapse referred to above and the New Engine Works and could again be linked.

A further depression also occurred in the field that contains the engine house remains. This appeared to be a slump and was for many years mown by driving down and through the depression until it was later filled with rubble by the landowner.⁵⁸ This collapse was to the southwest of the ruined Engine house.

In a southerly direction from the ruined engine house there appears to be a shallow valley running towards the pond at the southern edge of the field. Often in mines water was pumped to an adit level to take water away from the workings. Cromhall Common is, however, relatively flat, without an obvious lower level for water to be pumped to. It is therefore possible the water was simply brought to the surface and allowed to flow away from the workings down this channel.

Whether the New Engine Works were linked with the older shafts of the Old Engine Works is speculation. If the old works had been abandoned before the commencement of the new works, the old workings would no doubt have been flooded and breaking into them would have had serious consequences. The new works are only likely to be linked to the older workings if they were still pumping from these at the time of the commencement of the new works. Both were under the control of Long and Keeling. Since the engine house of the New Engine Works is located at the southern end of the workings, pumping would have been carried out at this point. The evidence of the spoil heap and map information indicates that extraction of coal took place at this point. The engine used in the 1842 report³⁹ was being used for pumping, with horse whims used for raising and lowering coal, equipment, and possibly even the men.

It is possible that more than one engine was in operation at any one time, and this could be inferred from the references in the leases. The cost of a steam engine would have been a major expense and reuse or repositioning an existing engine may have been an alternative. It is difficult to see how the two collieries could be linked if the engine was relocated. The spoil heap where the plate rail was found is almost directly north of the New Engine Pit. Even if there is no connection to the Old Engine Works it is possible that this shaft could have been used in conjunction with the New Engine Pit.

The remains of a track running from the turnpike road across to the ruined engine house at the New

Engine Works can still be made out. It could be assumed that the coal-laden wagons would have been taken along this. There is also evidence of a further track running from the west side of the spoil heap towards the Green Lane to the north of the colliery. There is a pencil reference on a copy of the 1921 OS map which used to belong to local agents Young and Howes stating 'right of way'.⁵⁹ This can still be made out from the position of the field gates and runs from the western end of the copse containing the spoil heap, in a northerly direction to connect with the Green Lane, adjacent to a small ruined building. The existing line of the Green Lane is not that shown on the 1838 map. The original route of the track to Ashworthy Farm was from the Old Engine Works. This short length of right-of-way links the New Engine works to both the spoil heap with the plate rail and the Old Engine Works.

The remains on the site include two stones each marked 'D'. These may be boundary stones which would have marked out an area set aside for storing the coal due to Lord Ducie as part of his rent. The county OS map from circa 1890⁶⁰ shows the positions of four stones immediately southeast of the Engine House.

On the side of the old toll road, approximately half way between the two colliery sites, is a property called Hunters Hall. This is at the end of the revised line of the Green Lane. This was previously a public house and the marks of the licensing details written on the canopy of the porch can still be made out although no longer readable. Hunters Hall does not appear on the 1838 map although both the property and the Green Lane are on the first series OS map, the property being labelled as a public house. The story told locally about the closure of the mine is that the miners returned to the pit after spending time in the Hunters Hall to find it had flooded with all the tools and equipment still underground.

Tapwell Bridge

Anstie's book describes earlier workings around Tapwell Bridge and refers to a shaft to the northwest of the remains he describes. He gives details of the thickness of one coal seam in two bands. The top band was five feet thick, but mostly bad although it did contain 12 inches of a good white-ash coal. The lower band was 2ft. 2in. to 2ft. 6in. thick. The 1921 OS map from Young & Howes also has a pencil reference indicating 'Old Shaft' near Tapwell Bridge in the field opposite the sewage works. The information held by the Coal Authority suggests

possible locations in this field for the 'shaft' to which Anstie refers. Investigation in spring 2000 of this field found a small patch of coal adjacent to the road and the faint outline of a circle of shale, which could indicate the position of a bell pit. The geological maps suggest this location is near to the outcrop of the bottom seam and the workings here would have been shallow.

There is a fault running through the area and Anstie makes comment on this, stating that within a few yards of this the rock is seen dipping almost vertically. In the 1871 Commission Report the depth to the coal in this pit is given as 28yds. 2ft.⁵⁶ For this depth to be achieved the shaft would need to be on the northern side of the fault.

When the sewage treatment works were installed, part of the work included excavating a circular hole for the septic tank, during which a coal seam was exposed. On the 1:2500 OS maps of the area there is marked what appears to be a spoil heap on the site of the sewage works. Closer inspection reveals this to be a coal spoil batch similar to those near

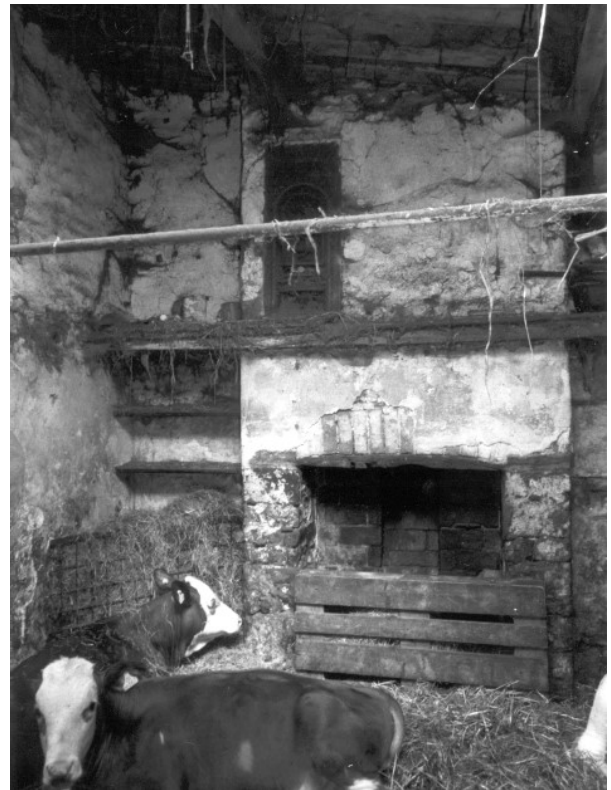


Plate 9 Lilac Cottage -it was probably from here that John Pick set out for his first day at the pit aged 11 years old



Plate 10 View of 'The Green' early 1900. The manager of New Engine Coal Works, Christopher Keeling, lived in No.1

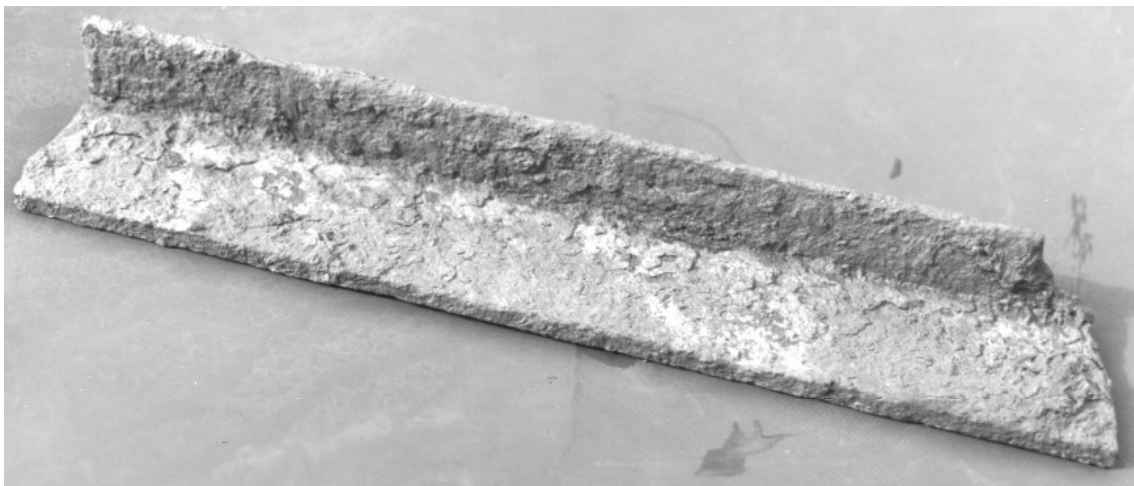


Plate 11 Section of rail found in spoil heap

Courtesy of John Cornwell

the Old and New Engine works with the appearance of a 19th century pit. A depression at one end suggests the possible position of the shaft. The size of the batch is consistent with a shaft deeper than a bell pit and this is therefore likely to be the shaft to which Anstie refers.

Very little is known about the history of the Tapwell Bridge Pit.

Sites of Interest

General

Abbotside Limekiln referred to in 1787 lease

Old Engine Works Area

ST 6958 8914 Old Engine Cottage (now Holly Manor, previously Sunnyside)

ST 695 891 Site of Old Engine Works. See Old Engine Cottage

ST 6955 8920 Approx. middle of spoil heap adjacent to Old Engine Works site. (Approx. ref. from Coal Authority Record for shaft is 6955 8917)

ST 6934 8912 Approx. middle of spoil heap, SMR 3571 (grid reference incorrect). Plate Rail Found. (Also approx. ref. from Coal Authority Record for shaft)

ST 6938 8924 Approx. middle of crescent shaped spoil heap. (Approx. ref. from Coal Authority Record for shaft is 6937 8925)

ST 6932 8929 Approx. ref. from Coal Authority Record for shaft. Building shown on OS map 1921 at this point but not shown on 1838 tithe map

ST 69280 89365 Approx. ref. from Coal Authority Record for shaft. Adjacent to footpath from Jubilee Lane to Tapwell Bridge

ST 69595 89362 Approx. ref. from Coal Authority Record for shaft. Rear of Council Houses off Jubilee Lane

ST 6959 8917 Approx. position of 'well' in grounds of Holly Manor (formerly Old Engine Cottage). Within enclosure described in 1838 tithe schedule as Weigh Bridge and Garden

ST 69615 89140 Well at Rock Cottage

ST 6965 8914 Position of Well at Old Farm (6in. to 1 mile OS map)

ST 6909 8908 Small Buildings & enclosure at end of Green Lane (remains of walls still visible). Building shown on 1921 OS map at this point but not shown on 1838 tithe map

ST 6936 8932 Building & enclosure near path from Jubilee Lane to Old Engine Cottage (no remains?)

ST 6935 8936 Lilac Cottage - former 2 storey Cottage

on tithe map occupied by Pick family – now used as barn (mid 18th century 1st floor fireplace, remains of range at Ground floor, and pigsty adjacent)

New Engine Works Area

ST 6920 8886 Engine House

ST 6920 8887 Shaft

ST 6916 8888 Approx. middle of New Engine Works spoil heap

ST 6920 8891 Location of former buildings (shown on 1838 tithe map)

ST 6921 8885 Area marked out by boundary stones – (shown on OS first series map)

ST 6985 8886 Estimated location of collapse in 1980s

ST 6875 8885 Estimated location of gate post (crowbar lost down hole)

ST 6928 8882 Estimated location of earlier collapse

Tapwell Bridge Area

ST 68628 89550 Approx. ref. from Coal Authority Record for shaft. Adjacent to spoil heap in sewage works

ST 68552 89425 Approx. ref. from Coal Authority Record for shaft. In sewage works

ST 68576 89399 Approx. ref. from Coal Authority Record for shaft. Field opposite sewage works

ST 68557 89375 Approx. ref. from Coal Authority Record for shaft. Field opposite sewage works

ST 68526 89364 Approx. ref. from Coal Authority Record for shaft. Field opposite sewage works

ST 68545 89360 Position of pencilled mark on 1921 OS map stating 'coal pit' in field opposite sewage works

ST 69545 89445 Cesspool of sewage works - coal seam found during excavation

ST 6858 6973 Site of Roman Villa

ST 6913 8926 Approx. location of probable bell pit remains in field on former Cromhall Common

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Plate 12 Green Lane - possible tramway