THE BEDMINSTER CONNECTION KINGSWOOD COAL PART THREE

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This is a challenging title, but technically supportable. Between 1745 and 1748 a Mining Surveyor named Bennett, who had been engaged in surveying the Kingswood Collieries, was intrigued by the similarity of the geological structure at Bedminster, and particularly the outcrop of mountain limestone at Ashton Vale, to that at Kingswood. He carried out his own investigation, and was convinced that the same coal seams might be found related to this limestone, as those encountered at Kingswood. He presented his findings to Jarrit Smith, (or Smyth), the Lord of the Manor, and together they formed a partnership, The Bedminster Coal Company, to exploit the mineral wealth of the Ashton Court Estates. Their first group of productive seams included a valuable 3 ft seam which they called the 'Bedminster Great'. This was indeed later found to be a continuation of the Kingswood Great seam, and was gradually pursued in workings far to the east, right into the East Bristol territory.

The name of Bennett constantly recurs in Bristol mining history, and reappears in Kingswood in 1900, when the new consortium of The Bedminster, Easton, Kingswood and Parkfield Collieries Ltd. was formed to incorporate the local collieries, including Hanham, after the death of Handel Cossham and the break-up of Leonard, Boult & Co. Ltd. of Easton and Hanham. The directors of the new Company were named as John Ryan Bennett, Alfred Henry Bennett, and George Hancock, and their Registered Office was at Easton. (The Bennetts showed much wisdom in this move, as their Bedminster properties were running out). Even after the reformation of the Company following the closure of Easton, and the abortive attempt to sell out in 1914, we find that Alfred H Bennett occupied the post of General Manager to the new company, East Bristol Collieries Ltd., and their letterheadings still proudly proclaimed 'Established 1745' a reference and a tribute to the first Bennett survey at Bedminster.

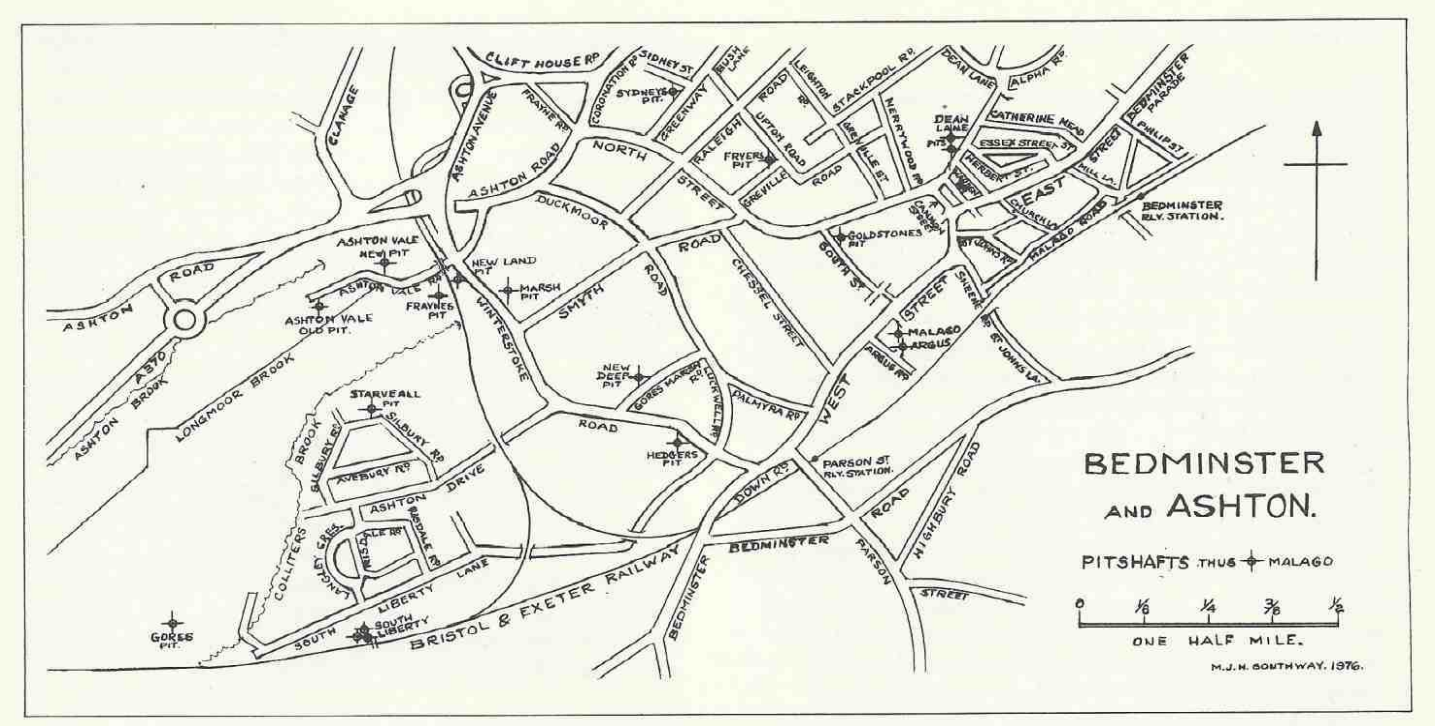
Returning to 1748, the first move of the Bedminster Coal Co. was to sink a 6ft square 765ft deep Engine shaft at ST 565701 **South Liberty Colliery** for drainage. (July 1976 has just seen the opening of a 10ft 6 ins diameter Drainage Culvert to deal with the flow of the Ashton, Longmoor, and Colliter's brooks which have troubled the area with flooding for centuries. Bennett was farseeing enough to smell trouble!) In 1750 they installed a 66ins diameter x 6ft stroke Newcomen engine of the atmospheric type, with laminated oak beam, working at 9/11 strokes per minute on 3 to 5 lbs psi steam pressure. There were three lifts of 9 ins diameter pumps each 255ft, operated from the arch head of the beam by three separate pump rods or spears, raising 120 gals/min. (Estimated to be 52¾ hp but different accounts give varying figures, one even reversing bore and stroke to 72ins diameter x 5ft 6ins!) The amazing thing is that this engine continued to serve the colliery right into the present century, and so became almost a legend.

The walled downcast shaft, first sunk to the Bedminster Great at 800 ft was eventually opened out to 13ft diameter and deepened to 1400ft to work the Ashton Great, which here was also 3ft thick. This was the winding shaft, fitted with a twin horizontal 30ins x 5ft steam engine with 18ft diameter winding drum for round ropes. The two cages were double decked, accommodating two trams on each deck. Near the bottom of the shaft, in the Ashton Great seam, was a 1 in 3 incline 300 yards long, with an underground steam hauling engine with 14 ins twin horizontal cylinders, geared 1:3 to a 6 ft winding drum. Steam was supplied by two underground boilers, the waste heat from which provided ventilation at 17,000 cfm by means of the 10 ft diameter brick lined up upcast shaft.

The colliery was eventually acquired by the Ashton Vale Iron Company Ltd which carried out the later developments, including the erection of blast furnaces to exploit the clay-band iron ore and fireclay encountered in the workings. These blast furnaces also dealt with local argillaceous black-band from Kingswood, red haematite from Somerset, ores from Iron Acton, and even brown ore from Northampton and small quantities of ores from Barrow-in-Furness. They were blown out in about 1887, but the associated forge and rolling mills continued under licence into the present century. South Liberty Colliery closed in 1925, and the site of the three closely grouped shafts is now covered by the Technical Development Unit of W D & H O Wills at South Liberty Lane.

A nearby pit owned by Goulstone, Garret & Co was the scene of a nasty accident in 1851. A skip containing coal 'hitched in the shaft' whilst being wound up by the engine. A mass of timber and earth fell and trapped 41 men and boys below, at 10.30 am on June 20th. Mr Knight of the Ashton Vale Co descended at midnight after several abortive efforts at rescue, when time was running out. With volunteer James North he rescued 2 men from the top seam at 90 ft, and six more volunteers took down axes, a windlass, and other gear. Women waiting at the pithead were organized into a working party, a 150 yards roll of canvas was obtained, and the women stitched the two long edges together to form a long tube or air-trunk to restore the ventilation. The men were found to be alive, and food and water were sent down the tube to them. Eventually at 11 am rescuers got through and the first miner climbed out at 3 pm followed by the rest, some after 40 hours below.

The Ashton Vale Iron Co Ltd were also proprietors of the **Ashton Colliery**, the first shaft of which was at ST 564712, now the site of McDougall's new plant in Ashton Vale Lane. Their later shafts were at ST 566714, now completely covered by Strachan & Henshaw's works. The abandoned railway lines in their yard once served the three closely grouped shafts. The downcast shaft was 11 ft diameter, brick lined. It passed right through the Bedminster group seams, which were not worked here, in order to get at the Ashton group below. The Ashton Top seam averaged 3 ft 6 ins thickness, and the Ashton Great was similar. The 2 ft Ashton Little was



troubled by water and not much worked. The depth of the shaft was 783 ft. The winding engine was a twin horizontal 26 ins x 4 ft with a 12 ft drum for round ropes. Each double decked cage accommodated two 9 cwt trams on each deck, and in addition was fitted with a 500 gallon tank to draw up water during the night, the tanks being self-acting both in filling at the sump and in discharging at the top.

There were two hauling engines at the surface, No. 1 had an 18 ins single cylinder 3 ft stroke, with a 4 ft drum geared 1:3 working a 400 yard incline 1 in 3 gradient, winding a journey of 6 trams conveying 54 cwts. The haulage rope passed down through the downcast shaft in a boxed enclosure. No. 2 had one 20 ins vertical cylinder with rocking beam, geared 1:3 to a 5 ft drum working a 200 yard incline, 1 in 3 gradient. These worked in the Ashton Great seam, which also employed eight horses and ponies on haulage. The upcast shaft was originally only 5 ft diameter and fitted with a 5 ft Schiele fan for ventilation at 10,000 cfm. A larger upcast 10 ft diameter and 660 ft deep was sunk later. The Great seam produced an excellent steam coal, and the small was converted into blast furnace coke in a battery of thirty coke ovens. The Top seam output was a high-class white ash house coal. Naked lights were used underground,and explosives for ripping down the roof in the roadways. Closure came in 1925.

After selling out South Liberty to the Ashton Vale Co., the Bedminster Coal Company concentrated their efforts on the **Dean Lane Colliery**, their earlier enterprise at ST 584717, now covered by South Bristol Baths and the adjacent Dame Emily Smyth playground. There were two 8 ft shafts only 24 ft apart, and the tops had to be substantially lined or walled with close-grained pennant to a depth of 180 ft to exclude a heavy feeder of water which was encountered during sinking, and built up a pressure of 78 psi and a flow of 500 gallons per minute. The shafts were first sunk to 630 ft and the coal worked 'to the rise' of the inclined seams which were tilted at from 1 in 3 up to 1 in 2 gradient. By working up the seam the faces were kept drained. When the coal had been exhausted to the rise, the shafts were deepened to 1290 ft and a new level road driven through the rock until the seams were encountered again, thus enabling the men to again work to the rise until the original workings were reached.

Five Lancashire and one 'egg-ended' boilers supplied the various engines. The main winding engine was a twin 30 ins x 5 ft with 14ft drum slightly conical. One cage ran in each shaft, carrying two 8 cwt trams on each of two decks. Only the Bedminster group of seams were worked, the deeper Ashton group were left intact for future development. At the surface there was a twin 22 ins x 4 ft hauling engine geared 5:7 to a 9 ft winding drum, the rope from which passed right down the shaft to haul sets of 12 trams up the inclined roads underground. At the bottom of the shafts was another hauling engine with twin 8 ins x 16 ins horizontal cylinders geared 1:4 to two 4 ft drums for main and tail ropes drawing sets of 24 trams along the level road. This engine was supplied by its own underground boiler, the waste heat from which provided air circulation for ventilation. At the bottom of the underground incline was a Worthington twin double acting pump delivering drainage water up the incline in 2¼ ins pipes to the sump of the original shafts. From here it was 'tanked out' during the night in tanks attached to the cages. The Worthington pump was operated by compressed air from the surface.

In 1886 a serious explosion took place, with a death of roll of nine. This was probably a coal-dust explosion triggered off by a methane gas or 'Fire-damp' ignition. The men died from suffocation by after-damp, the ventilation system having been put out of action by the explosion. This was the classic explosion danger of those days, and indeed until quite recent years. Nowadays the methane is dispersed or at least diluted by improved ventilation, and the coal-dust is scattered with stone dust to reduce the danger of explosion. Marsaut or bonneted Clanny safety lamps were introduced at Dean Lane

and used exclusively after the accident.

Workings from Dean Lane eventually extended right out under Barton Hill in East Bristol, and Charles Rowland wrote a most interesting and amusing story for the Evening Post some years ago. It was entitled 'Haunted by Ghost Trains', and told of two men, Tom Chivers and Ben Warren, who were sent down Dean Lane pit one Sunday afternoon to examine the roof, this being the quietest period of the week. As they worked on the yielding roof they were startled by a distant rumble of wheels on rails. 'It's a journey of trams on the run' said one, and they leapt aside to allow the runaways to pass. But nothing came except an even louder rumble, and some pieces of debris which fell from the roof. They returned to shaft bottom and telephoned the mine manager, who soon came, bringing plans of the workings. He went up to the scene of the ghostly noise and was soon back with orders to clear the tools out and close the workings. They were right under Temple Meads Station, he explained, and the ghostly noise they had heard was from trains running overhead! This story could well be true, the Bedminster Great workings did run below the station. Dean Lane finally closed in 1906, though some of their workings such as **Sydney's pit** at ST 575718 off Greenway Bush Lane, (probably in the car park at the rear of the 'Try Again'), **Fryers** at ST 678716, and possibly **Goldstone's** at ST 579714, were abandoned at an earlier date as unproductive.

Another Bedrninster pit which experienced an explosion was **Malago Vale** at ST 582710/1, a site now occupied by the Colodense Works. The Malago shaft is said to date from c.1840, when it was a single shaft pit. By 1854 it was in the hands of Stuckey's Bank, together with another pit called **North Side**, which may have been worked in conjunction with Malago, as by 1862 both pits were being worked by Steedes & Pilditch. By 1868 North Side had gone, and Malago was worked by S Steedes & Co, followed in 1874 by the Malago Vale Coal Company. In 1875/6 they carried out considerable development, sinking a new 15 ft upcast shaft 1740 ft deep, the Argus. At the same time they opened out the Malago shaft to 14 ft diameter 1566 ft deep as a downcast shaft. Both shafts worked the Bedminster group only. The Bristol Collieries Co Ltd were quoted as the owners in 1877. Malago was equipped with a twin 24 ins x 4 ft horizontal winder with 10 ft drum for round ropes, handling two 8 cwt trams in each single deck cage, and drawing water by night in 200 gallon tanks placed in each cage. The former winding engine, a vertical beam engine geared 1:2 was retained for haulage the rope passing down the shaft and hauling sets of 12 trams up a 1 in 3 incline 1200 yards long. Argus had a twin 26 ins x 4 ft horizontal winder with 11 ft drum, and handled two 8 cwt trams in each single deck cage, but no water tanks. A hauling engine, twin horizontal 16 ins x 2 ft 6 ins was near the bottom of the shaft and was geared 1:3 to two sets of winding drums, one for an 800 yard incline at 1 in 3, the other for 'main & tail' haulage along a level drift which cut both Top and Great seams.

Naked lights were used originally, but in 1891 an underground explosion took place. No lives were lost, but safety lamps were introduced as a precaution. Men at the coalface who had been getting 6s 6¼d per shift with naked lights were offered 6s 8⅜d for working with locked lamps, and other grades a proportionate increase, but this was refused by the men, who demanded 1d per hour compensation for loss of earnings due to the inconvenience of working with safety lamps. This was refused by the management, and a strike took place which lasted fifteen months, at the end of which the colliery finally closed in 1892, discharging 300 men. The only reminder today is the nearby 'Jolly Colliers' pub. It is said that a complete horse and cart fell down one of the shafts, and as it was irrecoverable the horse was shot, and the bottom of the shaft filled by tipping, sufficiently to cover the remains, entombing both horse and cart. This might have happened after closure.

An early pit was **Bedminster Starveall** at ST 565718, just off Silbury Road, part of the old tip has been cut away to accommodate the Ashton Vale Boys Club building, the rest of the site is covered in rough scrub now. Then there was **New Deep pit** at ST 574709, at the rear of Nos 29/39 Gore's Marsh Road, a lorry park now. At ST 567712, west of Winterstoke Road and just south of Ashton Vale Road, was **Frayne's pit**, now only remembered by the cobblestoned pit road from the level crossing to Snow's sawmill. This pit apparently worked both Bedminster and Ashton groups of seams, as indeed did the Starveall pit also.

Quite near to Frayne's, between the Portishead railway line and Winterstoke Road, was **New Land pit**, which could have been a second shaft for Frayne's. In the nearby school playground at ST 570712 was **Marsh Pit**. Down at ST 559701 was **Gore's pit**, another old shaft now completely gone. Anstie has left us a poser with his mention of 'Brain's Pit', about 300 years to the southwest of the Deep Pit': could he have meant southeast? This seems more likely from his Figure 12 section. If so, the site would agree with that of **Hedger's pit** at ST 575707. There seems no trace of any connection with the Brain family of Golden Valley, (Bitton), Kingswood and St George.

A great deal of interesting research remains to be done in connection with the main coal-mining entrepreneurs, the Bennetts, the Whittucks, (Charles, Samuel and John Jubilee), the Boults, father and son, both called William, their nephews the Boult Monks, and others. A particularly interesting industrial archaeological project would be a study of the Gregory family, father and son, whose works on Kingswood Hill constructed many of the steam winding engines and pumping engines installed in local pits. Gregory's had an office in a dwelling house (recently demolished to make way for the new extension to the Kingswood Telephone Exchange) in 1918/20 and presumably a small workshop at the rear, as a small apprentice in blue overalls could frequently be seen polishing the front brass doorstep. The present completion of the trilogy on Kingswood Coal does not by any means signify that the subject is exhausted, and others may well feel inspired to pursue the research further. Happy Hunting!

References

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