



THROUGH THICK AND THIN

THE HISTORY OF JOHNSON, POOLE AND BLOOMER

1844 - 1994

SULA RAYSKA

'Through Thick and Thin'

A 150th anniversary year history of
Johnson Poole & Bloomer
1844-1994

SULA RAYSKA MA FRICS

SETTING THE SCENE



*Henry Johnson
1823-1885
Founder of
Johnson Poole & Bloomer*

Next!

The rather timid young man knocked on the door and entered the room. He looked nervously at the three partners of the firm, wondering what difficult questions they would have thought up for his interview. The preliminary polite questions about his journey were soon over.

'Why do you want to come and work for Johnson, Poole & Bloomer?' asked one of the three in a voice which gave nothing away.

'Well, I know that it's an old established firm and the leading practice of mineral surveyors and geotechnical engineers in the country', he replied, hoping this was the right answer.

'Do you know how old? Do you know anything of its history?'

'No, n-n-not exactly', came the stammered reply.

The senior partner stood up and walked to the window, glancing as he rose at an old photograph on the wall which showed a rather large man in a top hat, leaning against a fence with one of his cronies.

'You'd better listen to me then, and I'll tell you how it all started', he said, as he looked out across the industrial landscape of the Black Country.

'The story that I'm going to tell you', he began, 'is one of enterprise and hard work over the last hundred and fifty years. But the real beginning was some 300 million years ago when the coal-bearing or Carboniferous measures were formed and left a generous quantity of coal all over the area now known as Staffordshire.

Staffordshire has been described as 'one vast coalfield', as coal exists at depth over practically the whole county. For administrative and geological reasons, however, the county has been divided into three coalfields, those of North Staffordshire, Cannock Chase and South Staffordshire and it is in the last of these that this story takes place. Despite its name, the South Staffordshire coalfield in fact includes a considerable area of north Worcestershire around Halesowen and Lye as well as the southern part of Staffordshire.. In the central part of the coalfield between Dudley and Darlaston the Thick Coal seams represented a greater volume of relatively shallow coal than anywhere else in Great Britain. After these easier, central parts of the coalfield had been worked out, however, it was explorations at the edge of the coalfield - notably at Sandwell beyond the eastern boundary fault - which revitalised the area's economy in the late 19th century.



The geological feature which gave the area its economic strength is the Thick Coal or Ten Yard Seam. The Thick Coal is however, despite its alternative name, actually twelve to fourteen different seams thinly separated by shaley matter, but they give the appearance of a single seam and have generally been worked as one. The Thick Coal was easy to work, being rarely more than 400 feet below the surface in a large part of the South Staffordshire field.

*Working the Ten Yard seam
South Staffs. Coalfield, 1907*

Coal - 'sea-coal' as distinct from charcoal - was being mined in Staffordshire in the 13th century but was exploited on only a small scale for the next two centuries. By the 16th century, mining had increased considerably: the historian and traveller Leland recorded that the smiths of Birmingham used 'see coale out of Staffordshire'. By the late 17th century it was being widely used as a fuel, not only in the many small metal trades of the area such as nail making and lock making, but also in general industries such as glass manufacture and brick making. By that time too there was a growing population and a dwindling supply of wood, so it was increasingly used as domestic fuel.

Open works on the outcrop of coal and shallow bell pits and adits were replaced by pits sunk down to 60 feet or so in the 17th century and ten times that depth two centuries later. The shafts of the South Staffordshire Coalfield were still primitive until the late 19th century. By 1850, when 600 feet was still an uncommon depth, shafts rarely exceeded seven feet in diameter and a pair of shafts would serve only ten to twenty acres of surface land.

A collier's life was fraught with danger, especially from fire, water, explosive gas and roof falls. The last of these was the most life-threatening, but many lives were lost from the other three. An analysis of miners' deaths between 1837 and 1842 showed that almost half died accidentally rather than through illness or old age and of these the majority were killed by falls of coal or stone underground.

Despite these dangers some 26,000 miners worked in Staffordshire pits around 1850, and in South Staffordshire before the legislation of 1842, which prohibited child labour, it was common for children to enter the pits between the ages of seven and nine. The miners were well paid when times were good for the industry, but the employment was unpredictable, rising and falling with changes in the economy, and there were the discomforts and dangers of a life below ground to bear.

Such then was the scene in the early 1840s when Henry Johnson, the founder of Johnson, Poole & Bloomer, finished his apprenticeship and began working on his own account in Dudley. The business which he established under his own name has continued for 150 years and is now the country's leading firm of geotechnical, land and mineral resource engineers. The name of the firm has changed just twice in that time, first to Henry Johnson, Son & Bloomer about 1905, and then to Johnson, Poole & Bloomer in 1939. The Johnson family were directly connected with the firm from 1844 until 1933, a period of 89 years.

A SEDGLEY BOYHOOD

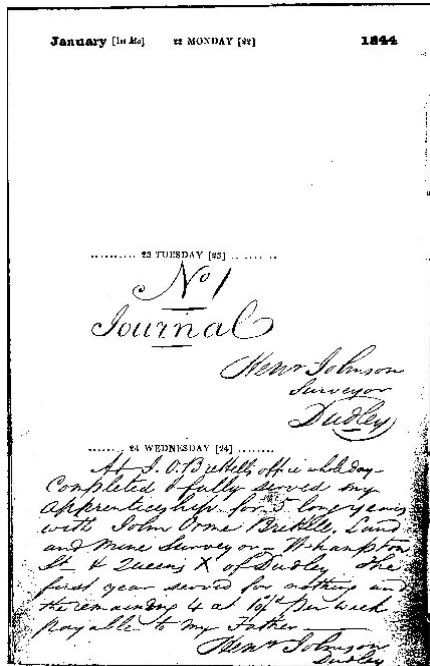
Henry Johnson was born on the 24th January 1823, the eleventh of thirteen children of John Johnson of Sedgley and his wife Elizabeth. John Johnson was a farmer with land in Jews Lane at Upper Gornal in the parish of Sedgley, at the time of Henry's birth. He also worked as a bailiff or agent for Lord Dudley on his estate at Himley, but after 1812 he is listed in the parish register as a farmer, perhaps an indication that he purchased his land in Sedgley around this time. The Johnsons had worked for Lord Dudley's family, the Wards, for generations, William Johnson, Henry's grandfather having been steward to Viscount Dudley and Ward from 1766 until 1820.

Sedgley was a quiet little town with a long history dating back to Saxon times. By the 19th century its importance had increased because the surrounding area was rich in minerals. There was plentiful coal and limestone, high quality ironstone and fireclay as well. Coal and ironstone were mined in the locality as early as the 13th century. In the 17th century Lord Dudley's illegitimate son, Dud Dudley, the man who first smelted iron with coal, erected a large furnace in the parish of Sedgley, which was said to produce a record seven tons of iron a week. He was also reputed to be responsible for the discovery of the famous Ten Yard seam of coal in the area which was to bring so much prosperity in the future.

It was into this area that Henry Johnson was born. He was christened in the parish church of Sedgley on the 16th March 1823 and grew up in the family home with his brothers and sisters. He attended grammar school and was well educated there, learning to write in the excellent hand which graced his diaries, notes, maps and sections for the next half century. Out of school he probably spent much of his childhood helping his father both on the farm and on Lord Dudley's estate, and this gave him a taste for surveying work.

APPRENTICESHIP

At the age of 16, no doubt with his father's help, he had decided on his chosen career, and was apprenticed to the well respected local land and mine surveyor, John Orme Brettell. The work of a surveyor in the early 19th century was very general and, as we shall see, after five years' apprenticeship the young surveyor could turn his hand to anything from mapping estates to framing pictures, dialling and levelling in the mines, valuing property and even drawing the bodies after a pit disaster.



The first entry in Henry Johnson's diary
24th January 1844

His training would have started off at a very basic level, and for the first year Brettell paid nothing at all to Henry or his father, but afterwards he paid his father at the rate of 10 shillings a week. 'Completed and fully served my apprenticeship for 5 long years with John Orme Brettell, Land and Mine Surveyor, Wolverhampton Street. The first year served for nothing and the remaining four at 10s per week payable to my father.' This first entry in Henry Johnson's diary, for the 24th January 1844, his twenty-first birthday, begins the remarkable journal he was to keep for the next forty years. He had a talent for recording matters that were so familiar to him that they might well have been left out, almost as if he understood the interest his diaries would have for posterity.

Johnson's five years' training with Brettell had been excellent, and at 21 he was competent not only to deal with the technical side of his chosen career but also to look after the administration and accountancy that, as a self-employed professional man, he would have to cope with. The diaries he kept served a dual purpose in recording what he did and who he worked for as well as acting as a check list for invoicing. They also record many details of his private life as well as giving a fascinating glimpse of the social activities, hobbies, and pastimes of a professional man and his family at that time.

Henry spent the first two weeks after the end of his apprenticeship out and about making contacts and inspecting various jobs. Some days he was simply 'At home', but from then on he became very busy and it seems that his reputation

grew in no time at all. One of his first jobs was reducing plans of part of the Oak Farm Colliery, showing the site of intended schools and copying the reduction onto a conveyance. He did this for 3½ hours one Sunday to meet his client's deadline. Often he would work a twelve-hour day, with a chain man who was paid 1s.6d. per day for carrying the measuring chains and helping his master take the measurements. Within the first few months he surveyed the Nether-ton Hall Estate, near Dudley, and the Parkhead Furnace Colliery, south west of Dudley town centre, and inspected open coal and clay works near Stourport. This employment was interspersed with smaller jobs such as endorsing plans on deeds and even mounting pictures.

Life was not all work, however, and on the evening of the 22nd July 1844 he went to Dudley Races. On the 7th August he spent half a day electioneering, and, although he does not go into any detail about his politics, in later life he became a staunch supporter of the Conservatives and Disraeli, his accounts showing regular payments for membership of the Conservative Club.

A MARRIED MAN

Henry had married before he finished his apprenticeship. His wife was Mary Jones, a tanner's daughter from Montgomery, and they were married on the 7th July 1843 in Aston, Birmingham. Despite claiming that he was 'of full age', Henry was not yet twenty-one. His bride, who could only mark the register with a cross, was three years older than her husband. It seems likely that Henry married someone who was regarded as socially beneath him and he possibly did so against his father's wishes; hence the need to lie about his age and so avoid the need to secure his father's consent.

1843. Marriage solemnized in <u>St. Andrew's Church</u> in the Parish of <u>Aston</u> in the County of <u>Warwick</u>								
No.	When Married.	Name and Surname.	Age.	Condition.	Rank or Profession.	Residence at the Time of Marriage.	Father's Name and Surname.	Rank or Profession of Father.
309	July 10 th	Henry Johnson	full age	Bachelor	Surveyor	Dudley	John Johnson	Shipbuilder
		Mary Jones	full age	Widow	—	Dudley	Thomas Jones	Tanner
Married in the <u>Parish Church of Aston</u> according to the Rites and Ceremonies of the Church of England after <u>Consent</u> by me, <u>Thomas Sanderson</u>								
This Marriage was solemnized between us,		<u>Henry Johnson</u>			in the Presence of us,		<u>William Johnson</u> <u>John Lewis</u> <u>Mr. Fry</u>	
		<u>Mary Jones</u> <u>ms</u> <u>M</u>					<u>Curate</u>	

The marriage certificate of Henry Johnson and Mary Jones, 1843

Henry and Mary's first son, George Henry, was born on Friday 4th August 1844. Strangely, when Henry registered the birth, he appears to have made a mistake, giving the date of birth as 4th October, although this error could have been made by the registrar. Thomas followed in 1845. In February and March 1847 Henry did some surveying of the Moelydd Lead Mines near Oswestry and spent five days at the house of Samuel Evans, after travelling by coach from Dudley to Wolverhampton then taking another coach to Shrewsbury and a third to Oswestry. The return journey took from 7 a.m. to 3 p.m. and brings home to us the difficulties of travel before the spread of the railways. Even if Henry went from Dudley to Birmingham to visit someone he could waste a whole afternoon if the person was not there. While he was away surveying the Moelydd mine his third son Henry was born, Mary being delivered at 11 o'clock at night, on the 20th March 1847, by the surgeon who regularly attended the family, Mr. Foreday.

Henry's diary provides interesting insight into medical and dental treatments of the time. In October 1847 he felt very unwell with '*inflamed gum, cutting tooth of knowledge*' (presumably a wisdom tooth). He had it lanced three days running and the pain prevented him from doing any work at all. By the end of the month he had recovered and took himself, his wife and George (then three years old) to see Cooke's Circus.

MINES AND RAILWAYS

Henry Johnson's interest in science and the technology of mining was evident early in his career, as was his ability as an expert witness which caused him to be much in demand in many mining cases. The terrible death rate in 19th-century pits caused many cases of negligence and manslaughter to be brought against the chartermasters and deputies.

On the 23rd March 1847 Henry was visited by his friend Richard Growcott who told him that six men had been burnt at Gibbons' new pits near the Oak, Yew Tree Pits. Gibbons had installed a new, supposedly improved, system of ventilation in the mine, but there had already been a fire at the same pit the previous April. Johnson went to visit the scene of the accident and sent a representative to the adjourned inquest. He obviously felt that Gibbons' system was to blame, rather than Love, the deputy, who had been taken to Stafford Gaol on a charge of manslaughter. Johnson interviewed one Emos Hodgetts '*who was burnt under the Gibbons system on the 7th April last*' and had him taken before the magistrates to make a statement. The matter took some time and on the 24th June Johnson received an appeal to the miners from Love which he then printed and distributed. This, his first case, was a success for Johnson and his client for on the 23rd July Love was acquitted at Stafford assizes.

The 1840s was a period of great expansion for the railways, and in September 1844 Henry Johnson began work surveying the route of the Oxford Worcester and Wolverhampton Railway. He surveyed the Wolverhampton Goods Depot site, the site of Bilston Station, the Stourbridge - Wolverhampton section of the line and various other parts. The work continued into 1847, the whole railway being opened in 1854.

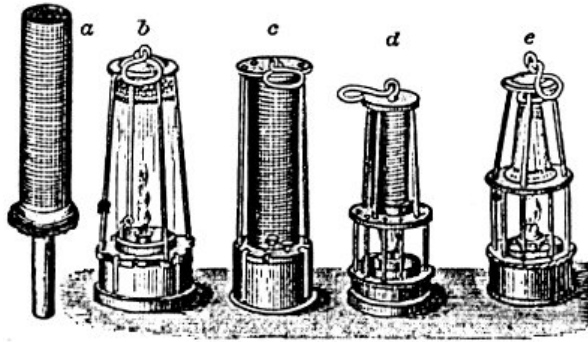
In February 1846 the Johnsons moved to Wolverhampton Street, Dudley, where Henry was to have his house and office for the next 17 years. He spent some time arranging his papers and effects there and, as his diary shows, he was a keen gardener too.

By this time Henry was becoming seriously involved in various local mines as agent or surveyor. The system of working at that time was that the owner of a colliery would employ a mine agent or surveyor on a casual part-time basis. The surveyor would look in once a week or fortnight or come to survey new levels or roads as required. The surveyor was not held responsible for what went on in the mine as he did not have daily control: that was in the hands of the chartermaster (known locally as the butty) and the mine deputies (or doggies) who were often illiterate.

Agents such as Johnson often invested in the mines themselves; with their geological knowledge they could see the opportunities to be had and showed confidence in their own work by buying shares in speculative ventures.

Gases had long been a problem in the coalfield, and in Staffordshire were at their worst in the southern part of the Black Country. Dr. Robert Plot, the Staffordshire historian, was among the first in Britain to classify mine gases, which he divided into seven categories. He recorded in 1686 that where miners had succumbed to one of these, which he called Peas Blossom damp, it was customary to bring them 'into the open air, dig a hole in the ground and lay them flat upon their bellies, with their faces in the hole', which, he observed, '(if not too far gone) infallibly recovers them'. This was what is now called 'black damp', i.e. mine air with a deficiency of oxygen. Methods of dispersing explosive gas were equally primitive.

One man who made some advances in this area was James Ryan, an Irishman from Donegal, variously known as 'Hell-Fire Jack' and 'Count Sulphur'. He discovered that by driving air-headings in the upper seams of the Thick Coal he could create an upward movement of air strong enough to disperse concentrations of gas and even enabled operations to be carried out by candlelight in most collieries of Lord Dudley and Ward for whom he worked from 1805 to 1808. He cleared the Netherton pit, one of the most fiery in the district, in less than three weeks and put the workings in a safe state. Although Ryan's main work was done in the first decade of the 19th century, before Henry Johnson was born, the two later became friendly in the period of Johnson's apprenticeship and remained friends until Ryan's death in 1847. Johnson records that '*James Ryan died in lodgings of Mr Brookes, currier, Wolverhampton Street about midday - aged 78*' and four days later '*went to poor Ryan's funeral*' where he noted with sorrow that there were very few mourners. Ryan left all his books to Johnson and many of them still remain in the offices of Johnson, Poole & Bloomer. Ryan appears to have died in poverty, despite having been a great benefactor of the South Staffordshire miners.



English safety lamps

From early in his career Henry was interested in the technical side of mining, from improved ventilation systems to miners' safety lamps. On May 9th 1848 he was experimenting with Dr. Clanny's new lamp and he had discussions about lamps with Mr. Jordan, an ironmonger. In the evening of the same day, showing the fervent religious side of his nature, he records that he attended 'Dr. Raphael's lecture on the Book of Job - sublime!' On the 5th of June he spent all day making drawings of his own design for a safety lamp and just over a month later received the new lamp, half finished, from Field & Son.

In August he spent time with his brother William 'scheming at my safety lamp' and described it as a Davy lamp with an improved method of raising the wick and an improved shield. He was still devoting time to it in November and December, including half a day at the 'tinkers'. After that, however, there are few references to it, and it is not clear whether it was ever produced commercially or whether he had made it for himself. Most lamps, however, were made locally for nearby pits at that time, rather than being mass produced.

Over the next few years Henry records many personal details, more or less as asides in what was primarily a work diary. In October 1848 Mary suffered a miscarriage, and she did so again on 14th October 1851. In all six children were born alive between 1844 and 1861: four boys and two girls. On the 16th December 1848 he described his wife, then 28, as 'seized with hysterics'. This is the first indication of what turned out to be long term problems with her mental health which later turned her to drink. Henry too, however, was fond of his ale and frequent references in the early years are made to long drinking sessions. 'Indisposed all day - arose from getting drunk last night'. Two days later he was 'fuddling with Jim Morris and John Jones at John Jones house 3/4 day!' Two days later still, perhaps not surprisingly, he was money hunting for half the day!

Entertainment seems to have been plentiful in the mid nineteenth century. At the Whitsun Holiday the limestone caverns at Dudley were illuminated and were a grand sight according to Johnson, who spent half a day there. Two days later he paid 6d. to see the fireworks in the Castle courtyard. On 26th June he records himself giving 'self and family' a treat at the Castle on the day when there were grand illuminations in the castle and its precincts and in the limestone caverns.

On 6th December the same year he was present at a raffle at Kimbereley's, Oldbury, for two fat pigs and he won one, the smaller of the two, but at a cost of £3 13s. 6d. Perhaps not surprisingly the next day he records 'evening skirmish with wife'. He successfully re-raffed the pig at the Talbot Inn, Dudley, early in the new year.

By then he was receiving a salary of £80 per annum, paid quarterly as a retainer from the Heath Colliery Co., and a increasing amount of his time was spent at their mines near West Bromwich. Some of his duties are described in his account of a Saturday visit to one of the pits (January 1851): 'Down the Lewisham and dialled the workings and took section of 2 lengths in the new tunnel. Discussing with field carpenter about new pit frame to be put up at the Heath Pit - agreed with Haines to submit the drawings to him next Saturday.'



The Stewpony Inn, Kinver in 1828

A fire broke out at the Heath Colliery in February 1851 and suffocated 3 horses. Three miners, John Meake, Joe Ridley and George Bird, were almost suffocated by the fire stink while drawing up the bodies of the horses. Meake and Bird very nearly died. Johnson does not describe his own part, but he became very unwell the next day and was ill for three weeks. Eventually he took himself and his son George to the Stewpony Inn 'for our health', and they remained there for a week before returning home apparently recovered. The Stewpony was not all that far away - near Kinver some 6 miles from Dudley - but it was in the countryside where the air would have been much clearer and healthier than in Dudley, crowded with pits and furnaces. The treatment seems to have worked for, once back home, he was fully back in harness right away.

In March 1852 fire broke out again at the Victoria Pit, also part of the Heath Colliery. Johnson records his efforts all day trying to conquer it near the pit bottom with the aid of six men. He gave them 1½ pints of brandy and ten quarts of ale, but the fire stink got the better of them and they had to retreat.

During the 1850s Johnson acted as mine surveyor for many collieries - Watling Street Colliery and Sycamore Pits at Wilnecote, Churchfield Colliery in Bilston, Peel Colliery at Tamworth, and Moor Farm and Langley Field in Dawley, Shropshire, to name but a few. At times he was assisted by his brother William, but mostly he worked alone.

FINANCIAL PROBLEMS

Johnson began to invest his own money in mining ventures and perhaps rushed into this rather too soon for by 1855 he was in some trouble. The year began badly for him - his father died in January after an illness of nine weeks - and by April Henry was having to ask for time to repay his outstanding debts. He had bought an interest in Churchfield Colliery in Bilston but failed to obtain a loan of £100 for 4 months which he needed to repay £80 borrowed for purchasing it. Consequently the men at Wilnecote went without their wages on Saturday 28th April as did Johnson's own Churchfield men. He tried borrowing from various other sources in Birmingham but failed and came home *'penniless and hungered - and may God keep me for seeing such another day as this. Myself, assistant and horse completely knocked up.'* He borrowed £70 next day and paid the miners at Wilnecote, but three days later he had to sell his interest in Churchfield Colliery for £230.

In July matters came to a head at Watling Street Colliery. Johnson's partners, who were the main investors, had become tired of his failure to prove the Seven Foot Coal and the financial strains caused them to wish to dissolve the partnership. It appears that there may have been some treachery going on, for when Johnson was given a final chance to prove the coal his attempt was foiled by Ridley the foreman who removed the handgear and winding engine so that he could not descend. The pit was sold for £500 to W. B. Collins on the 7th July. By the 4th August they had sunk through the coal and proved its thickness - 7 ft. 9 in. and of *'capital quality'*. Despite such disappointments, Johnson remained cheerful. He continued to carry out general work such as estate valuations, as well as mine surveys and in the summer he sometimes even spent the odd day haymaking.

In 1857 and 1858 he spent much of his time managing the Peel Colliery near Tamworth with Captain Bennett. But the problems of Watling Street Colliery had not disappeared. Johnson clearly felt he had been cheated out of the true value of his share in the colliery and brought a legal action to try to seek redress. In January Vice-Chancellor Stewart found for Johnson in the Chancery case of Johnson v. Perrens, but a further case followed - Perrens v. Johnson. As a result, in June 1857, Johnson records staying in his office from the 17th to the 20th June for fear of being arrested. On the 20th an attempt was made to arrest him and he left for Sedgley on the 21st. He then hid with his drinking crony John Jones at Tipton until the 18th July, from where he went to his sister at Liverpool for a week before returning home.

On the 5th August, however he signed a deed of arrangement settling the two Chancery suits, and two days later he received £600 for his interest in the Watling Street Colliery. Clearly he had been in the right as this was more than the whole colliery had been sold for some three years earlier.

By 1861 Johnson was still suffering from financial pressures. On the 23rd January, the day before his 40th birthday, he was preparing a schedule for a petition of insolvency. On Wednesday 18th September he petitioned the Insolvency Court at Lichfield and was committed to Lichfield Gaol at 4 p.m. He remained there till Monday 23rd September when he was discharged on bail. On the 16th December he attended the court again and paid enough money to keep his creditors happy. This seems a strange episode in a career which was so clearly successful in professional terms, and it shows that financial security was not assured even to a leading mineral surveyor. This was no doubt mainly because of his investment in the various projects that he was connected with and the temptation to invest more than he could afford.

His stay in Lichfield Gaol seems to have marked a turning point in Johnson's career, for from then on he seems to have consolidated his position, claimed a certain status among the other mine agents and become involved in more successful projects than before. It certainly did not do him the harm that a professional person today would suffer from a spell in prison for insolvency. There are no further references in his diary to serious financial problems, although he never became a rich man.

MOVING HOUSE

In 1863 Johnson moved his residence and office from Wolverhampton Street to a house in the Portersfield area of central Dudley. He spent a whole day working in the garden of the new property on the 6th August and began removing the contents of his house and office on the 1st September. The move took over a week and on the 9th September Johnson records that he was *'in bed having a rest half the day'*. Less than a month later he tells of an earthquake - *'a shock from an earthquake felt over Great Britain at 3.30 a.m. this morning. I felt it myself as also my wife. It shook the whole house and made the curtain rings on the bed jingle together.'* At that time the Johnsons had six children - George, Henry, Tom, Pollie, Nellie and Jack. According to the census records of the period the family usually had one female general servant living in with them, a girl aged 15 or 16.

By the end of 1869 Johnson felt the need for larger premises and agreed to take a lease of a house in Trindle Road at a rent of £30 per annum. He did not move in until the following summer, and had an extension built for an office at a cost of £208. He was to remain there, using the house both as office and residence, until his death. The house was an impressive detached house not far from Dudley Castle and can be seen in many prints and engravings of the period.



*The Johnsons' house in Trindle Road,
the larger one in the centre of this picture*

During the mid and late 1860s Johnson was very busy. As an example we may take his work during August 1865. During that month he worked for at least 24 different clients on matters ranging from general pit inspections and maintenance work to inspecting the condition of a lane full of potholes with a view to gaining compensation for a man who had been injured together with his wife and his horse. There was work too on compensation for damage to land by the Great Western Railway; making a plan for roofing a dock warehouse; and dealing with the disposal of spoil from the Dudley Railway Tunnel. Despite carrying on this wide range of general surveyor's duties Johnson considered himself, as he was, mainly a mining surveyor and engineer and advertised himself as such in the trade directories of the time.

In June 1866 Johnson records the death of one of his close friends named Capewell, whom he describes as a *'kind, cheerful friend, a hard worker in the field of science and a great lover and admirer of all that was good and grand in science. His loss is that of a brother. His early death (at 44) was greatly accelerated by his incessant attention night and day to his poor wife and mother and by the great pecuniary disappointment in studying science too closely and getting embarrassed in consequence.'* Was he recognizing here a problem which he himself had only just avoided? He perhaps felt his friend's early death all the more keenly because of its resonance in his own life.

THE INSTITUTE OF MINING ENGINEERS

One of Henry Johnson's great achievements was his role in 1866 and 1867 in setting up the Incorporated Association of Mine Agents for South Staffordshire and East Worcestershire which continued as the South Staffordshire and Warwickshire Institute of Mining Engineers, now integrated into the Institution of Mining Engineers. He had already been actively involved with the Dudley Geological Society. His efforts on behalf of the local mine agents were recognized as early as 1864 when his fellow mining engineers presented him with a purse of money and a level and staff on the 5th December for his defence of the profession against the remarks of a metallurgist named Percy. For his services to the Dudley Exhibition organised by the Mechanics' Institute in 1866 he was awarded a medal and certificate. He was therefore a natural leader, one well equipped to bring a mine agents' association into being. The Association began informally in the autumn of 1866 as meetings arranged by Johnson and his fellow mining engineers, and became a legal entity on the 21st January 1867.

James R. Baker, H.M. Inspector of Mines for the South Staffordshire District, was appalled by the great number of accidents he had to record, especially in the Thick Coal, and he had a low opinion of the chartermasters and their deputies. He attempted to introduce new rules under the Mines Inspection Act 1861 which would have made the mine agents take more responsibility for what went on in the mines. He wanted them to run a particular pit full-time, quite different, of course, from the existing system of work and responsibility whereby they acted for many mines and visited as and when they thought necessary.

Eleven agents met to discuss their grievances against Baker's proposals on the 20th October 1866, and Henry Johnson was elected as secretary. They succeeded in getting some of Baker's amendments modified, and from this initial success they developed a professional body which has lasted over 120 years. The Mine Agents' Association soon developed an interest in scientific matters, expanding its role beyond that of a professional pressure group. The objectives set out in the new constitution of the South Staffordshire and East Worcestershire Institute of Mining Engineering, as it became in 1869, were 'to meet together at fixed times and to discuss the means for the ventilation of coal and other mines, the mining and working of collieries and other mines, the prevention of accidents and the advancement of the science of mining and engineering generally'.

The Institute went from strength to strength. Early meetings were held in hotels in Dudley, Walsall, and Wolverhampton in turn, but Henry Johnson always hoped that they would have a permanent headquarters. Nevertheless ambitious proposals to build their own premises came to nothing, and in 1870 the Institute rented the museum of the Dudley and Midland Geological and Scientific Society within the Mechanics' Institute in Dudley. From 1876 some meetings were held in Birmingham, and from 1888 all meetings were held at Masons College, Birmingham. The Institute's programmes featured many speakers drawn from among its members, and Henry Johnson gave a paper at the first A.G.M. entitled *'On a review of different Trial Sinkings and Explorations in Various Parts of the South Staffordshire Coal Field during the last two years'*. In 1870 he gave one of the most famous papers presented, describing exploration at the Sandwell Park Colliery, four years before the full success of the sinkings was to become clear. The papers were printed as a series of transactions.



Members of the Mine Agents' Association of South Staffordshire and East Worcestershire on an outing in 1868 to W H Dawes' Blackheath Colliery, Rowley Regis. Henry Johnson junior is second from the left in the front row, and his father is fourth from the left.

Outings to pits and other places of interest such as ironworks began to feature regularly in the programme. The majority of members were self-employed; they were free to spend as much time on such matters as they could afford, and Henry Johnson's diaries indicate that sometimes he would spend two or three days at a time preparing to give a paper, giving it, and going on an excursion. Later visits took the members farther afield, even as far as Belgium. Fortunately some photographs of these excursions survive, showing the mine agents dressed in frock coats and top hats. On some occasions, surprisingly, a few women accompanied the men on these excursions, even when underground; a Miss Johnson was present on several outings, including one to the Black Heath colliery in 1868, when six women went down the pit.

Henry Johnson was secretary of the Institute from 1867 to 1871 and president in 1872 and 1879. Without doubt he was largely responsible for the success of the Institute and for its professional and scientific approach.

It was during this period that Henry also joined the Freemasons. Although he does not make many references to his membership he records attending Harmonic Lodge 252 with George Gilbert in January 1869 and the following September he paid £1 3s. for a Masonic apron and case and an annual subscription of £2 2s.



Henry Johnson with his friend William Blakemore in the late 1860s

THE SANDWELL PARK COLLIERY

The sinking of pits and winning of coal at the Sandwell Park colliery was another major achievement in Johnson's professional life and one for which he received widespread acclaim for it brought prosperity to a large area for many years.

The main obstacles to the extension of the South Staffordshire Coalfield were the Western and Eastern boundary faults. The Eastern boundary fault had a downthrow of some 354 feet in the vicinity of West Bromwich and Oldbury, thus setting a limit to the early extension of coal mining in those places. By the later nineteenth century, however, advances in mining technology, improvements to pumping and winding machinery in particular, made it possible to plan for much deeper mining.

After a few boreholes had been sunk in the Smethwick area by various engineers without any notable success, Henry Johnson secured an option on a lease of 1,700 acres of land at Sandwell Park from the Earl of Dartmouth for 60 years at a royalty of 6d. per ton of coal produced. He realised that the only way to finance a major exploration was by forming a company, and he sold all 200 shares at £100 each within ten days of announcing his scheme. Johnson was appointed engineer and secretary to the Sandwell Park Colliery Company Ltd. and lost no time in beginning work. This massive undertaking was not without its problems, and over the next four years there must have been times when he wished he had never started.

In April 1870 two boreholes were sunk at Roebuck Lane, Smethwick, in the angle formed by the Birmingham to Wolverhampton railway line and the Stourbridge extension line. The boreholes proved satisfactory, and two four-foot jackey pits were sunk. After geological studies the No.1 jackey pit was chosen as the site of the trial shaft, where work started in December 1870 and went on till September 1871. Water was originally drained by tanks on the winding rope but by July 1871 this method had proved inadequate to deal with the quantity of water so a pumping engine had to be installed; it did not work properly until November, thus causing some

delay. On the whole, however, there was much less water than expected, particularly as the sinking progressed into the Halesowen Beds and the Etruria Marl.

The sinking took over three years and there were many false alarms. In August 1872 a coal seam was found, but at 600 ft. and only 6 in. thick! Share values rose and fell with the latest information from the pit head, arguments took place about whether they were sinking the shaft in the right place, and the local newspapers had a field day. At one time Johnson entered into a bitter correspondence with other mining engineers about whether or not Lord Dartmouth's agents had supported the position of the sinking and the collected letters were published in the form of a pamphlet. There were even satirical essays and poems written about the Sandwell sinking.

Eventually, on 28th May 1874, the Thick Coal was struck at a depth of 1,254 ft. It was 20 ft. 6 in. thick, the top 15 ft. of good quality, then a stone parting with poorer bottom coal underneath. The sinking had cost £23,000, but had been amply rewarded. Each £100 share was now worth £1,200, having sunk as low as £40 at various times during the exploration.

The area rejoiced in such an important event - church bells were rung in Smethwick, West Bromwich, and Handsworth, flags were put up, and a celebration banquet provided for local people.

The following ballad, written for the Grand Demonstration held at Sandwell in July, illustrates the feelings (if not the literary talents) of the local people:

OLD KING COAL

*You've heard of 'Old King Coal' no doubt, a jolly chap was he,
About two thousand years ago he thought he'd have a spree,
So they laid him down beneath the sod, some thousand feet or more,
And dared the world to find him out till eighteen seventy-four.
Old King Coal, a jolly old soul,
Long life and happiness to old King Coal.*

*And, 'snug as any bug in rug,' the old chap had his way,
If not found out, his sleeping bout had seen the judgement day;
But 'Generals Brooch and Heathen' were in his royal train,
With 'Gubbin, Pins and Herring, to try escape were vain.
Old King Coal, &c*

*Now a dapper little Dudley lad was prowling near the spot,
At Sandwell Park, one night at dark, and thought he smelt a rot;
And with a knowing wink he said, if I am not mistaken,
My men a hole shall bore for coal; if found, t'will save my bacon.
Old King Coal, &c.*

*They digged and delved and sweated, sirs, for weeks and months and years,
And digged away most manfully, in hopes, not without fears;
At last their efforts were repaid, at least so I've been told,
This Dudley Engineer declared, 'twould turn out good as gold.
Old King Coal, &c.*

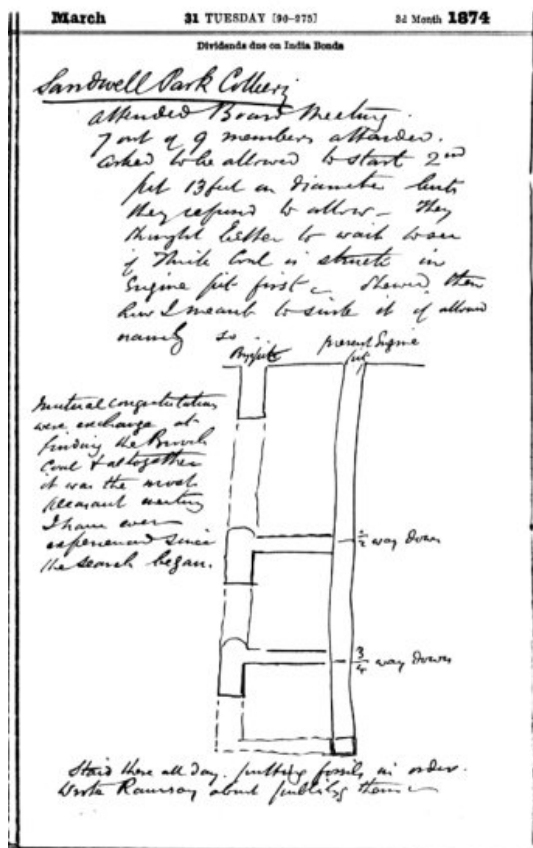
*It proved a check tho' for a time, their pluck was brought to bay,
Yet some few stuck like blisters to it, night as well as day;
And one dry cove more thirsty than the rest, would oft declare,
'Go in and win, boys, here's your gin, I'll take my oath he's there.'
Old King Coal, &c.*

*And so it proved, the King got caged, and ne'er was known to wince,
And them as found him say he has behaved well ever since;
And so he will continner for to do his werry best,
To 'keep the pot o'bilin,' and Old Harry take the rest.
Old King Coal, &c.*

*And now to finish up the work, for friends are friends indeed,
The Board declared the men upon the Bonk should have a feed.
So here we're met to-day so gay to join this festive scene,
And drink success to Sandwell Coal, and so God Save the Queen.
Old King Coal, &c.*

Two further shafts were sunk between 1874 and 1877 and full production then began, with each of the winding engines able to raise 1,100 tons a day. In the first twenty years over 6 million tons were raised and the pit provided much-needed local employment both at the mine and in the associated trades.

The shafts at Smethwick continued in production till 1914 when the workers were transferred to the Jubilee Pit which had been commenced in the year of Queen Victoria's Diamond Jubilee (1897). This was a mile and a half north of the original shafts. Coal was found at 2,070 ft. and production continued from 1910 until 1960 when the coal reserves were exhausted. Thus Henry Johnson's biggest and boldest enterprise provided employment and economic benefits in the Sandwell area for a period of some 90 years.



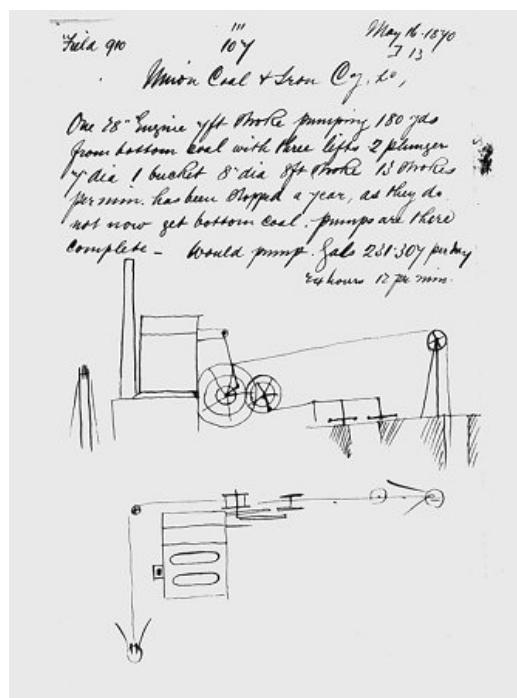
Extract from Henry's diary for 31st March 1874 showing plans for second shaft at Sandwell Park

and two assistants. At this time photography was not possible underground as the means of producing strong enough light had not been perfected so Johnson sketched the bodies where they lay before bringing them to the surface. He reached home about 1 a.m. 'nearly used up with the three days and nights toil and anxiety'. He was later publicly commended for this particular act of courage.

THE MINES DRAINAGE ACT

Water had always been a problem in both the North and South Staffordshire coalfields, even in fairly shallow workings. At first it was drained by means of barrels on endless chains drawn up by horse gins and by the mid-18th century Newcomen engines were in common use. The Tipton area, however, suffered serious waterlogging in the early 19th century and in 1854 the colliery owners decided to make a joint attempt to drain the mines of the area. In 1870 another attempt was made through the formation of a joint stock company. As neither of these schemes succeeded it was decided that a compulsory scheme was necessary and Henry Johnson was employed to design the drainage works and see that the necessary legislation was passed.

Sketch from Henry's notebook for the South Staffordshire Mines Drainage Scheme showing pumping arrangements for the Union Coal & Iron Company, 1870



Even when success was in sight Johnson's problems were not over. On the 31st March 1874 he recorded that he was refused permission from the shareholders to start the second shaft. In June 1874 after coal had been found he attended a board meeting and had a row with Bennett and Cooksey, two of the shareholders. 'Luncheon was provided at Mr. Joshua Fellows house but I refused to go. Had my mutton chop in the office instead ... and then drove into Birmingham ... very much hurt and annoyed.' Next day, however, he dined with other shareholders at Mr. Avin's house at Moseley and was given a splendid dinner at 5 p.m. and 'stayed till midnight'.

On the 18th August he threatened to resign from the posts of engineer and secretary because of the row with Bennett, but it was resolved that he should stay in both posts with an increase of his secretary's salary from £200 to £500 a year, at least till the second shaft was down.

The years during which this exciting development took place were difficult ones in Johnson's private life. The pain he suffered from sciatica and lumbago had increased since the late 1860s and he had to spend much time resting. The rigours of a life which included so much time spent in uncomfortable situations underground could not have helped.

On the 23rd November 1871 there was a bad accident at one of the mines where Johnson was surveyor, the Black Lake Colliery, West Bromwich: seven men, a boy, and eight horses suffocated. He was told at 10 p.m. and went immediately by cab, returning home at 3 a.m. His knowledge was vital and he had to rebuke one McKenley 'for his absurd suggestion that we should master the fire'. In fact the fire was not put out for almost a month and the bodies were not reached until the 20th December, after three days of hard and dangerous work by Johnson

The Mines Drainage Bill took up much time of his in the early 1870s and Henry was instrumental in getting this piece of legislation through Parliament. He firmly believed the scheme would bring incalculable benefits to the area by providing a common means of mine drainage financed jointly by all the participating collieries. In the early part of 1873 he spent several days at a time in London, giving evidence in the House of Lords. The Act was finally passed in 1873 but although it proved successful in the short term the beneficial effects decreased later when mining stopped in many of the small pits.

FAMILY PROBLEMS

The year 1869 began a period during which Henry Johnson was beset with family problems. In February his son Tom, then aged 23, was charged with the rape of a ten year old girl, although during the hearing the charge was reduced to one of attempted rape. Tom was a commission agent (what would now be called a sales representative) who sold candles to collieries all over the coalfield. He was therefore well known at most of the mines and was a familiar figure on his rounds. Henry Johnson was naturally very upset by the charges against his son, and took great pains to organise his defence, with the aid of Stokes, his solicitor. At first Tom was remanded on bail of £150, and Henry recorded that he *'took Tom to task at midnight, in the presence of his mother, Harry and George and he declared his innocence - much to the gratification of us all - got to bed at 2a.m. and both self and wife slept soundly till morning.'*

On the 22nd February the case was heard in court. It appears from newspaper reports of the case that Tom was incorrectly identified as the wrong-doer, either as part of a failed blackmail attempt or simply because the real assailant could not be found. Tom left the court without a stain on his character, when the magistrates concluded that it was a case of mistaken identity, after hearing only five out of thirty-four witnesses who had been lined up for the defence. Henry gave the witnesses a dinner at a hotel in Dudley and took them to and from the court at Old Hill in a brake and pair which, like the witnesses, were decorated in blue ribbons. The whole incident was clearly a nightmare for father and son alike, as it was reported in full detail in the press and the court drew crowds of onlookers, largely because Henry was so well known and because it was such a terrible charge.

Rows with his wife Mary had been recorded, albeit briefly, in his diaries since the 1860s. (One interesting fact is that in all forty years of diary keeping he never once referred to her by her name, but always as 'wife'.) In 1865 he *'spent the afternoon with Hamblett and evening in consequence of row at home over giving old Ladbury a crust of bread and cheese and glass of ale although he was in a state of starvation'*. Henry's kindness was obviously not approved of by his wife.

On New Year's Day 1872 Henry had a row with his son Tom, then aged 26, and two days later he turned him out of the house with the help of the police. Unfortunately the diary does not give any details, but the row may well have been connected with his marital problems for on the 6th January Henry left home because of a row with Mary and spent two nights in the Queens Hotel, Birmingham, before returning home. In February he records that *'wife insulted Miss Wassell at Hotel'* and *'wife drove me out of my office to Birmingham by her vile conduct. She broke a large pane of glass in my office by rapping the window to annoy me.'*

By March his wife had preferred charges against him; their substance is unknown, but she later withdrew them and said *'if I would return to her she would never return to the subject again and hoped I would forgive her. That she had thrown away the key to the cellaret and would never taste a drop more liquor except in my company. I consented and returned to her room tonight.'* But the reconciliation did not last, and by August Johnson was consulting Messrs. Fereday & Smith, solicitors, about her conduct.

Another disaster befell him the same month. His youngest son Jack had been seriously ill for some time; possibly he had been an invalid all his life. Certainly in 1868 he had been staying in Birmingham under the care of a Dr. Warden, but he did not improve and his father brought him back to Dudley early the following year. Johnson records buying a *'perambulator for son John'* for £1.5s so the illness must have been disabling. In August 1872 he suddenly became much worse and Henry's agony can be felt in his own words: - *'poor Jack, poor son Johnny so ill as his life was despaired for for half an hour but the poor fellow rallied. He said he wanted to die and asked me to kill him out of his misery. He was very ill poor soul and had a very hard struggle for existence.'* Despite his rallying poor Jack died a few days later and was buried in Wolverhampton General Cemetery on the 21st August 1872. The funeral cost a total of £43.1s, which included £28 for the undertaker, including the hearse and mourning coaches, and £3.10s for the coffin.

Mary Johnson's drinking was becoming a serious problem and, although Henry does not note it in his diary, it is clear that she left the family home during this period and went into lodgings. Henry's diary becomes less frequent during the mid and late 1870s. Perhaps his enormous efforts over Sandwell Park, his increasing ill health, and his family problems had sapped his energy. In January 1879 he took a Turkish bath in Birmingham for the first time and *'felt a great benefit from it'*. Two weeks later he was elected president of the Mining Institute for the second time and his spirits were raised. He records that they *'Dined together to the number of 60 at the Dudley Arms. Spent a very pleasant day. Adjourned to my house with Hayward, Billingham and Job Tomson and kept it up with song and dance till 3 a.m.'*

Two weeks later, on the 18th February, he received news that his wife was dying. Dr. Timmins had given her up and Pollie found only 11s. in her purse. Her daughters tried to make her last days comfortable and Henry, sensing that it could do no further harm, sent her a bottle of port from his cellar. Mary Johnson died at 7 a.m. on 22nd February 1879, quite emaciated from drink with 4s. 6d. in her purse and two pawn tickets. She was 60 years old. She was buried in the same grave as her son Jack on the 27th February, mourned by her three surviving sons George, Tom, and Harry.

'THE MOST UNFORTUNATE ILLNESS'

The last few years of Johnson's life were quieter. He concentrated more on projects such as Sandwell Park, from which he was now earning a comfortable salary. In 1878 he was still at odds with some of the directors and wagered that 4,000 tons of coal could be raised in one week. The figures raised were 620 tonnes the first day, then 540, 758, 582, 855, and finally 815 - making 4,167 in all. This was no doubt achieved owing to Henry's exhortations and encouragement, and the following day he rewarded the men with 36 gallons of ale, 50 lb. of cheese and 40 four lb. loaves.

In reality, however, there was no need for him to prove his opinions in this way. He was highly respected among his fellow professionals, a member of several learned bodies, a strong churchman, and a staunch Conservative. His son Harry had been working with him since he was fourteen years old, and he was now a dependable asset to his father, able to do any of his father's work if needed.

By 1884 Johnson's sciatica became intolerable and at the end of the year it was decided that an operation should take place. On the 13th January 1885 Dr. Pemberton operated at the Queens Hotel, Birmingham. Such venues were quite common in those days! Harry stayed at the hotel while it took place and saw his father afterwards. He visited him in the evening and at weekends for the weeks during which he remained there, and towards the end of March preparations were made to bring him home to continue his convalescence. He was brought back to Dudley on the 29th March and at first there were great hopes that he would make a full recovery. Sadly this was not to be. The wound on his leg would not heal and serious inflammation set in which eventually affected not only his leg but his brain. He suffered terribly and for a long time, becoming a mere shadow of his former self, weak and emaciated. His death on the 7th July must have come as a welcome release.

Johnson's funeral took place on Saturday 11th July 1885 and he was interred with his wife and son in the brick grave at Wolverhampton. Sadly, none of the gravestones of any members of the family buried at the Jeffcock Road cemetery has survived. Glowing obituaries were published in both the local press and national journals.



The Coal Arch erected at Wolverhampton for the visit of Queen Victoria in 1866

The diaries that Johnson had kept over a period of almost forty years reveal a man whose character was kindly and passionate. Although his life was dedicated to mining, mine technology and science, he had many other recreations and interests. He was a poultry fancier, recording visits to poultry shows and the date when his Cochin hen began to sit on her eggs. He also enjoyed the theatre and musical shows in Birmingham. In addition he was very interested in general and international political events and went to see the procession of Louis Kossuth, the Hungarian nationalist, in 1851 as well as recording the assassination of President Lincoln in 1865. Queen Victoria's visit to Wolverhampton drew him to the town in November 1866 and he was thrilled to obtain a seat on the Great Western railway platform from where he watched her procession leaving the station.

Johnson's geological knowledge had given him a keen interest in fossil collecting, and several rare fossils bear his name. He corresponded with many leading scientists of his day, such as Sir Roderick Murchison, the geologist, and Charles Darwin, the naturalist, and was always interested in new inventions. He was an early pioneer in the use of dynamite for industrial purposes and used it to good effect in the Sandwell Park sinking.

Henry Johnson's death was sorely felt by his friends, business acquaintances and family alike, but most of all by his son and business partner, Harry.

HENRY JOHNSON JUNIOR TAKES OVER

A new chapter in the history of the firm opened when Henry Johnson, junior, became the sole principal on his father's death. Although it had been a painful and long drawn out illness, it still came as a shock to a son who had been very fond of his father. His own diary shows the anger and bitterness he felt at the course of events as well as his deep sense of loss.

'Poor Father died at 2.30 this afternoon after perhaps the most terrible and certainly the most unfortunate illness man was ever afflicted with, having been suffering from the 13th January last for 175 days there was no suffering in the end and he passed away peacefully without a sign of a struggle or pain. It is a great shock to me having been his daily companion in business since I was 14 and I am now 38, and I feel I can never forget it or forgive those responsible for the operation which has killed him. May he rest in peace. I will protect his name, Harry.'

After the funeral Harry left for a few days' holiday and rest, first in Liverpool with his Aunt Harriet and then in Llandudno, a favourite holiday place with him. He then returned to Dudley and spent two days sending out memorial cards before turning his attention to his father's complicated financial affairs. The fact was that, although he was a married man of 38 with a family of his own and had been working for his father since he was 14, he had no real idea of his financial affairs. Only a few years earlier his father had been paying him £1 a week and had raised that to £2 a week in 1882. Even before his father died, on the 15th April 1885, Harry had consulted his solicitor as to his position as sole executor under his father's will, explaining his perplexity concerning his own finances. After his father's death it turned out that the shares in the Sandwell Park Colliery were mortgaged and there was pressure for payment of £50 interest. Harry made an inventory of the chattels in his father's house and they were sold by Bateman & Son on 22nd September. Four days later Harry moved from West Bromwich to 5 Trindle Road.



The fossil Eucladia johnsoni named after Henry Johnson

Henry's will was proved at Worcester on the 14th January 1886 and revealed that his estate was worth £937 gross but only £38.16s. 10d. net. The will had been made in 1867, and by it Henry had left all his real and personal estate to his son Henry, who was then just twenty years old. It seems strange that he should have decided to leave nothing to the rest of his family at such an early stage, but by then Henry junior had already been working with his father for some years and he may have felt that he would take on the responsibility for the rest of the family if necessary. Henry's other children may have been provided for in his lifetime, a fact that would help to explain the small size of his estate at death when compared to the high earnings of his later years.

The fossil collection built up by his father was seen by Henry junior as a way of obtaining funds and he started trying to sell it soon after his father's death. He asked £300 for the pick of the collection but did not find an immediate buyer. He visited Professor Etheridge at the British Museum in London but was told the museum was short of funds. In 1886 he spoke to Professor Lapworth about their going to Mason's College, which might have been a suitable place for them, but Birmingham too, could not afford them. In the end they were sold through Robert Damon, a fossil dealer, to the British Museum's Natural History Department at South Kensington for £450. The collection comprised 1,551 fossils from the Wenlock Beds and 973 from the Carboniferous Rocks. Several of these were named after Johnson, the best known being *Eucladia johnsoni*, a crinoid or fossil 'sea lily' with specialised platy arms. Henry visited them at the museum, cased and labelled, in May 1892.

FAMILY LIFE

The first surviving diary of Henry Johnson junior dates from 1877, the year when the Sandwell Colliery went into full production. He was then almost thirty and on the 2nd January he accepted an appointment as Sub Manager at Sandwell at £200 per annum, subject to three months' notice on either side. In view of this he gave up work he had been doing for the Broadwell Colliery, but continued helping his father with all aspects of the business until he became the sole principal in 1885.

Like his father he recorded pleasure as well as work and seemed to enjoy an active social life going to the pantomime, opera, to London for a weekend to see the Boat Race, and on holiday to Llandudno. Early in 1878 he became engaged to Emily Adelaide Clements, the daughter of James Clements, who kept the Dudley Arms Hotel in Dudley. They were married at Yardley parish church on the 20th March 1879; it was Harry's 32nd birthday and his bride was twenty four.



Emily Clements, just before her marriage to Henry Johnson junior in 1879

He must have known her family for many years, for in 1870 his father had bought two shares in the Dudley Arms Hotel for £65 each on behalf of her father. A year before his marriage he had moved into a house at 53 Birmingham Road, West Bromwich, no doubt to be near Sandwell Park. His Aunt Martha, Henry's sister, had come to keep house for him but after their marriage they also had a female servant. Their first child, Harry Clement, was born on 2nd February 1880 and by the time of the 1891 census they had five children, Henry, Winifred, Percival, Clifford, and Ethel. A sixth, Reginald, was born in 1899.



Henry and Emily Johnson at Llandudno c.1883



Henry and Emily Johnson with four of their children, c.1887

AN INVENTIVE MIND

Harry proved to be an even keener inventor than his father, and produced plans and drawings for a wide range of products. The first sign of this was in 1880 when he was working at drawings for adding lateral support to marine bridges in the aftermath of the Tay Bridge disaster of 1878. After his father's death there followed a whole train of ideas for patents: in April 1886 he was working on a patent blasting plug, a half share of which he sold for £250 before placing it with George Shaw to patent. In October he was working hard trying to develop Johnson's improved telegraph pole, followed by Johnson's monthly circular and Johnson's compound tubular column. In 1891 he was working on a patent paving brick and patent fencing for which he had four different specifications. At the end of the year he was making working drawings of a patent chimney cowl. In 1893 there were proposals for a patent for a height measure and for an improvement in tram cars, but with regard to the latter he was advised by the Birmingham Tramway Co. that it could not be adopted with any advantage.

It is likely that he was driven to spend so much of his time on inventing things by a mixture of scientific curiosity and a desire to make money. The practice seems to have carried on with the success it enjoyed in his father's day: he was certainly not short of a varied work load and enjoyed the reasonable income it produced. Some of his ideas were successful but others never got off the drawing board.

In the ten years after Henry Johnson's death Harry dealt with the Great Western Railway Company, the Birmingham Canal Company and Lord Dudley's mining interests, Sir Thomas Meyrick's Shropshire Mines at Wombridge and Ketley, Prestage & Jones estates at Jackfield, mines at Aberavon in South Wales, the Dudley High Level Railway, Amblecote Colliery, Monckton's Mines, and Penn Common Mines - to name only a small proportion of his cases. The Dudley High Level railway was something on which he spent much time, working on his own proposals for the route and making drawings in July 1886. In January 1892 he was still working on it, making estimates of cost, income and profit. On the 30th November that year he had a long interview with the editor of the Dudley Herald who promised to issue a special supplement sheet with plans and proposals. Eventually, however, it came to nothing.

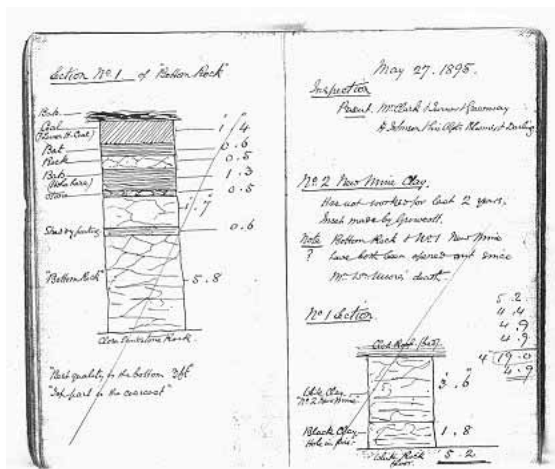
Johnson also undertook the usual negotiations connected with land acquisitions and disposal and in 1891 spent time trying to put together a land-acquisition package to enable Mr. Monckton to expand his mines. That would have required astute and tactful negotiation in order to conceal his client's ultimate intention and so avoid having to pay an exorbitant price for the last pieces in the jigsaw.

Early in 1892 Richard Growcott died; he was a Stourbridge mining engineer who had been a friend of Henry Johnson's some 45 years earlier. Harry saw the chance to buy up his practice and thus increase his business. After negotiations with Messrs. King, Stourbridge estate agents, he eventually agreed to pay 6 months' gross profits and one eighth of the gross income from any appointments that King secured for him. About the same time he wrote to eleven firms offering his services: that too bore fruit for he was appointed surveyor and mining advisor to the Himley Fire Brick Company at £40 per annum and surveyor and mining advisor to the Trustees of Lord Stamford at £100 per annum from the 25th March 1892.

JOSIAH BLOOMER JOINS THE FIRM

This increase of work meant that Harry had to take on some regular help. Some time early in 1892 Josiah Bloomer joined him. Unfortunately we do not know on what terms, but on the 29th October Harry recorded that Josiah Bloomer 'left my service today.' By the following August however he was back in the office 'all day at plans', and the two came to an arrangement for on the 21st August Johnson recorded 'Josiah Bloomer commenced 3 years engagement with me as assistant at 17s., 18s. and 20s. per week. He was 21 years of age on the 19th inst.' So began his association with the person who would eventually succeed him and stay with the firm for forty-six years. Two or three years after Bloomer joined the firm, in 1895, it was decided to move the offices from Johnson's house in Trindle Road to offices at 19 Priory Street, Dudley. This building became known as Priory Chambers and the firm was to remain there for the next eighty years. In about 1905 the name of the firm was changed to Henry Johnson, Son & Bloomer.

Henry Johnson and Josiah Bloomer worked together for the next twenty years, building up their clientele and continuing work on many of the projects which had occupied Henry Johnson during the previous half century. Although the diaries which had been kept so regularly by both Johnsons, father and son, since 1844, do not continue after 1895, there are many other records which remain to enlighten us about their work. Detailed notebooks were used for individual cases and include rough notes, sketches, and drawings; they also record instructions, meetings, and opinions concerning particular matters.



Extract from Henry Johnson junior's notebook of 1895

One such notebook covers Henry Johnson's valuation of Messrs. Harper & Moore's properties at Lower Delph Colliery, Cradley, in 1895. The valuation was required for dealing with the property after the death of William Moore, one of the partners. Henry Johnson was to value for Mr. Lister Lea, representing the late William Moore, while another mineral surveyor, W. F. Clarke, was to act for Mr. John Moore, presumably the heir.

Henry started by taking instructions from his client and then making a list of questions to ask at their next meeting. Having noted his task in great detail, he then had several meetings with Clarke, sometimes accompanied by young Bloomer and sometimes by another assistant called Darling. He started inspecting the actual pits involved, making rough plans and sections of various roads and shafts in his notebooks. These are full of technical and geological information, as the illustration of the 'No. 2 New Mine Clay' shows.

After inspecting all the pits involved, Johnson went on to interview some of the older colliery workers to enable himself to make reasoned judgements about future mining prospects. Before noting their opinions he carefully noted his witnesses' experiences in various mines (no doubt a good habit instilled in him by his father) so that his evidence would stand up under cross examination if need be.

The valuation was then drawn up, based on a consideration of all the evidence he could put together. Johnson's valuations came out consistently higher than Clarke's: for the mines the respective figures were £18,847 as against £13,524, so it could be safely assumed that it was Johnson's client who was selling and Clarke's who was buying, even if we did not know who they were representing. In the process of all this, Johnson even records the negotiating tactics and compromises that were made, as in the following extracts: 'I suggested reducing rib for support of buildings under area 4 which Mr Clarke accepted. Mr. C. also accepted my suggested area for support under purchase No. 2... I demurred to Mr. C's suggested area for support for No 9. Ditto No. 12. I pointed out to Mr Clarke that Fault B was only a single downfall of 6 yds. and that I proposed to include both clay and coal from the foot of it.'

It all sounds very gentlemanly, though generally, the reader gets the impression that technically Johnson had the upper hand. Eventually it appears that, after many meetings covering a period of some eight months, Johnson and Clarke had agreed as many matters as they could and then adopted the time honoured method of coming to a compromise and split the difference that remained between their valuations.

Mine drainage was always one of the major problems of the area. The South Staffordshire Mines Drainage Act of 1873 had ameliorated the problem by compelling local owners to contribute to a communal scheme of drainage with pumping engines. Twenty years later, however, as some pits closed and pumping ceased, water levels again became a major problem. Johnson and Bloomer were often called in to advise on drainage problems.



Clifford Noel Johnson, c. 1904

THE THIRD GENERATION

About 1905 Henry Johnson junior was joined by Clifford Noel Johnson, his third son. Clifford, born on Christmas Day 1884, had been educated at Wolverhampton Grammar School and was then articled to King & Company, auctioneers and estate agents of Stourbridge. When he had finished his articles he joined the family firm.

Clifford's older brother Henry Clement Johnson had also joined the firm for a brief period but had emigrated to Canada after a disagreement with his father. Henry, born in 1880, had served in the Boer War and returned to work with his father. Despite being tutored in geology and land surveying by two private tutors as well as his father, Henry had a desire to qualify by means of a degree in Mining Engineering, which he felt was a better route than learning on the job as his father and grandfather had done before him. His father did not agree and so, dismayed with his lack of progress and what he saw as a bleak future, young Henry packed up and went to Canada in 1903. For some years he worked on the Canadian Pacific Railroad but later, in 1913, he moved to Ottawa to work for the Board of Transport Commissioners. He remained in Ottawa until his death in 1979 at the age of 99.

Clifford Johnson, however, settled down to work with his father and Josiah Bloomer. He did not, perhaps, have his older brother's desire for learning and qualifications, because he never became a member of the Institute of Mining Engineers.

As the Black Country coal industry began to be scaled down much of the firm's work was concentrated on the local clay mines and that was to become a significant proportion of the company's work until after the Second World War. The Himley Fire Brick Company, E. J. & J. Pearson Ltd., John Hall & Company, and Timmis & Company, all of Stourbridge, were all regular clients of Henry Johnson, Son & Bloomer. In most cases they were paid an annual consultancy fee to deal with any problems that arose in the normal course of their clients' business. Most frequently these were cases of subsidence and damage to property; sometimes it was necessary to negotiate to buy properties and so avoid having to pay compensation, while other negotiations concerned extending mining leases and acquiring land.



E J & J Pearson's workings at Ravensitch



Henry Johnson c. 1910, not long before his death

THE DEATH OF HENRY JOHNSON, JUNIOR

Henry Johnson junior died on 28th June 1912 at Coton Hill, Stafford - presumably in the asylum for middle and upper class patients there. He had moved to Pedmore in Stourbridge from the house in Trindle Road only a year earlier, but had soon become ill and incapable of work. His wife Emily had predeceased him by a few years and probate of his will was granted to Clifford Johnson and his unmarried sister Winifred Nora. The total value of his estate was £8,419 15s 9d, a considerable increase on his father's estate a quarter of a century earlier.

Henry warranted an impressive obituary in Blocksidge's Dudley Almanack, where it was said that *'He was well known in all the mining areas of the Midlands and his name and fame went beyond. He was consulted by more than one nobleman who owned coalbearing land, and in several instances his advice justified further operations'*. He was particularly remembered for his contributions to the Dudley and Midland Geological and Scientific Society and Field Club of which he was secretary for many years, and on whose excursions he was always forthcoming with interesting geological tit-bits. Like his father he also left a fine collection of fossils; these were sold by his son soon after his death, just as his own father's had been by him.



A field trip of the Dudley Geological Society with Professor Lapworth c. 1885.

After Henry's death, Josiah Bloomer and Clifford Johnson continued working at Priory Street, but, despite going under the long established name of Henry Johnson, Son & Bloomer, it seems that they worked as two individuals under the same roof, with their own case lists, rather than as a true partnership. Work continued much on the same pattern for the next twenty years. In 1913 the Wolverhampton & Dudley Brewery sought advice when J. Bradley & Company offered to sell the right of support for the Stamford Arms Pub in Kingswinford, which would have meant that they did not mine the Brooch and Flying Reed Coals under it. Bloomer was retained to advise the Brewery and recommended them not to buy. He felt the property would suffer little damage even if the coal was mined, so long as frequent attention was paid to the existing tie rods; he also felt that Bradleys were unlikely to proceed with mining in view of the quantity and quality of the coal which might be won.



*Josiah Bloomer in 1938,
just before his retirement*

Work for Timmis & Company of Stourbridge included dealing with compensation claims against the Upper Stour Valley Main Sewerage Board, whose works had prevented Timmis & Co.'s River Stour Fireclay Works from mining part of their land.

In 1920 Josiah Bloomer was called upon to report on the drainage problems of the Kingswinford No. 5 District, established under the South Staffordshire Mines Drainage Act of 1873. The amount of water in some of the ponds and troughs was reaching a dangerous level. Some idea of the quantities of water involved can be gained from the fact that in 1874 the No. 5 District had pumped 910,541 gallons of water every twenty four hours. With a reduction in mining the problems became serious and by 1900 an estimated 40 million tons of coal lay waterlogged. Twenty years later mining was so reduced that less than a million tons a year were being mined in the whole of the coal field and the report of the Commission for South Staffordshire Drainage described the Tipton area as lost.

Keeping mine plans up to date in pits employing less than fifteen people had become a statutory requirement under the Coal Act of 1908, which stated that they should be no more than six months out of date. This provided much bread and butter work for the firm in the early part of the twentieth century, as it was more economical for the mining companies to pay consultant engineers to survey their mines regularly and update their plans as necessary than to employ someone full time.

The First World War did not affect the firm adversely. The importance of coal to the war effort meant that mining work continued as usual, possibly even with greater urgency, as coal was needed for warships, factories and the railways and other forms of transport. Bloomer was in any case 43 by the time war began and too old at 45 for conscription by the time it was introduced in 1916. So it was very much business as usual. By the time the war was over, industrial unrest and discontent were beginning to spread. The miners of South Staffordshire were participants in the strikes of 1920, 1921 and 1926, although in each case unrest started elsewhere. Despite these problems coal mining continued though on a reduced scale, and the clay and brick industries did well out of the post war building efforts.

Johnson and Bloomer continued as partners until 1933, although it seems they were not by then on the best of terms. One day Clifford Johnson heard that he had inherited £100,000 under the will of George Cox, of whose estate he was an executor and residuary legatee. Cox was an old family friend (Clifford's youngest brother had been named Reginald Bell Cox Johnson after him), and Clifford had kept in touch with him longer than any other member of the family and they had become friends. On discovering his good fortune Clifford went into Josiah Bloomer's office, apparently in itself a rare occurrence, and told him the good news. *'Well, what are you going to do?'*, asked Josiah. *'First of all I'm going to say goodbye to you, you old bugger!'*, he replied, and

walked out of the office, never to return. In fact, after visiting his brother in Canada, he retired to Exmouth in Devon, where he lived until his death in 1962 aged 77.

Clifford had actively discouraged his own sons from following in his profession or joining the firm; he told them he thought the good days were over in the industry and that there was not much money to be made. One became a bank manager and another a solicitor, so they obviously took him seriously.

With Clifford Johnson's departure, the continued association of the Johnson family with the firm was broken after 89 years and three generations. Happily there are still members of the family living and working in the Dudley and Stourbridge area, and Henry's great-great-great-grandson, Richard Henry Johnson, spent a school work-experience placement with Johnson, Poole & Bloomer in 1992.



Basil Poole.

BASIL POOLE - MINING IN THE BLOOD

When, in 1933, Clifford Johnson left Josiah Bloomer he left the firm with a difficult problem. Although he tried, Bloomer could not update the plans for all the collieries for which the firm was surveyor within the time limits. One day Bloomer met a friend, Horace Poole, to discuss business - the matter of a small pit at Quarry Bank which was said to have caused damage to a nearby house. The question of Bloomer's staff shortage was raised and by the end of the meeting Poole had agreed to lend his son, Basil, to the firm for three months to carry out the statutory surveys.

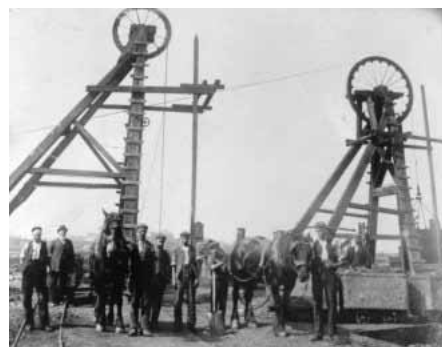
Basil Eugene Poole had been born at Church Road, Netherton, on 21st July 1909. Mining was in his blood. His father Horace was a mining engineer with a colliery manager's certificate who had managed various collieries in the Rowley Regis area for H. S. Pitt & Co. before becoming general manager of the Baggeridge Collieries belonging to Lord Dudley. He also had a small private practice. Basil's uncle Granville Poole had graduated from Birmingham University, becoming Divisional Mines Inspector for Staffordshire and later the first Professor of Mining at Durham University.



Baggeridge Colliery c. 1930.



Baggeridge Colliery Rescue Brigade in 1932. Ben Price and Horace Poole are in the front row



*Bradley Colliery, Princes End c. 1900
Thomas Higgs, Basil Poole's grandfather
is second from the left in the bowler hat*

After being educated at Dudley Grammar School, Basil Poole was apprenticed to the Earl of Dudley's Baggeridge Colliery Ltd. on 1st February 1928 and was released from his obligations on the 4th February 1930 'having now served the agreed period to the satisfaction of the Company'. He studied and qualified as a mine surveyor under Ben Price the manager. After that he spent some time furthering his experience at Hamstead Colliery near West Bromwich before joining Josiah Bloomer.

After the three months 'loan' had expired Basil Poole continued with the firm, for there was plenty of work to be done and in 1934 his father bought him a half share in the firm for the sum of £247 8s. 2d.

JOHNSON, POOLE & BLOOMER

At that time the firm was still called Henry Johnson, Son & Bloomer. Six years later, in 1939, Josiah Bloomer retired after 46 years with the company, an even longer period than Henry Johnson, senior, had served. Basil Poole bought the remaining share of the business and the firm became Johnson, Poole & Bloomer. Johnson's name was retained because of his importance to the mining industry and Poole was happy to comply with Bloomer's wish that his name be perpetuated.

The firm's work in the 1930s was varied, and Basil Poole, like his predecessors, wore several hats in the mining world. The bread-and-butter work was the continuous up-dating of plans of the various collieries where the firm was employed as agent. That was still a statutory duty and provided regular work and income. The firm also represented the interests of many landowners whose land was leased to mining companies. They were paid on the basis of royalties, according to the area being mined and the quantity of coal extracted. Unscrupulous managers could find many ways to cheat the landowners and it was the agent's task to try to stop this.

Oldnall Colliery, which worked mines leased from Old Swinford Hospital near Stourbridge, was bringing up quantities of coal which appeared to be very low, in view of the area being mined, and Basil Poole suspected some fraud. He went to investigate and noticed that some of the tubs coming up were not filled to the top. That was unusual as it would have meant more work for both the men and the pit ponies, who would have to make more journeys. The foreman fended off questions by saying that the way was very steep and the men were lazy. On a close examination of the weighing machinery Poole noticed that only if a tub was full to the top did it trigger the automatic recording device and so the partly filled tubs were not being recorded at all. When this was pointed out the colliery management naturally denied all knowledge of it. Poole revealed the matter to the Chairman (Lord Cobham) and other governors of Old Swinford Hospital and to their solicitors, and a demand for reimbursement of five years' under-payment was made. After some argument it was paid in full.

Another common trick was to drive more roads into the coal face than were shown on the colliery map. An acre of coal a foot thick, known as a footacre, should have produced at best 1500 tonnes of coal. It was difficult to work the maximum, but anything less than 1000 tonnes was regarded as suspicious and the owner's agents would investigate. On many occasions when the theoretical and practical did not match up it was found that, whereas the plan showed five or six roads, there were actually seven or eight. Sometimes workings were even collapsed on purpose to disguise the extra roadways. Basil Poole was well skilled at discovering the cheating ways of many of the collieries and so his services were much in demand by many landowners.

One important case just before the war resulted from the death in 1938 of Sir John Foley Grey, the well known racehorse owner, of Enville Hall. His estates included mineral bearing land and various mines at Kinver, Wombourne, Enville and Kingswinford in Staffordshire and at Romsley and Alveley in Shropshire. All his mineral interests including land leased for mining had to be valued and this meant making calculations about the amounts of coal and clay still to be won, as well as valuations of buildings and equipment where they belonged to him. The total estate was valued at £224,768 of which the minerals were valued at £30,275.

NATIONALISATION

The 1930s had brought great political changes and by the end of the decade the process of nationalisation had commenced. Under the 1938 Coal Act the coal itself was to be nationalised and the question of compensation had to be considered. In 1939 Basil Poole was appointed a member of the West Midlands Regional Valuation Board, set up to decide the compensation to be paid to the mineral owners. He served on this for four years, his experience and knowledge being invaluable. Under the 1946 Coal Industry Nationalisation Act the mines themselves were nationalised and this meant that all the equipment and buildings as well as the businesses had to be valued, as opposed to the minerals. Basil Poole was appointed as one of six members of the Midlands Area Board of Assessors which adjudicated on mine owners' claims for their share of the compensation allocated by the government. This necessitated frequent visits to London to attend the various meetings and much travelling around the Midlands to inspect the pits concerned.

The nationalisation of the coal industry kept the firm very busy, for quite apart from duties on official committees, there was much work to be done representing mine owners and the owners of minerals. As long as there was no conflict of interest between these clients and the work done for the official bodies Basil Poole was free to act for anyone who consulted him. The turnover of the firm had increased from £1,308 in 1934 to £4,315 in 1940 and the revenue account had also more than doubled in turnover from £799 to £1,980. In 1940 the annual salaries paid to Horace and Basil Poole were £360 and £180, although of course they also had profits from the firm, which in 1940 were £1,451.8s.3d.

RECONSTRUCTION

Any business which could carry on profitably through the war was in a good position to continue when hostilities ended, but in many ways the post war period marked a watershed for Johnson, Poole & Bloomer. The aftermath of war meant there was a great need for extra houses and a period of mass building at low prices ensued. In the Black Country, although there was plenty of land available due to the demise of many of the older industries, the land was what would now be regarded as derelict. Pit shafts, spoil heaps, and burning coal strata all led to problems which could only be resolved with a high degree of knowledge. The company were well

placed to undertake this work; with a history of over 100 years and records of so much local working safely maintained they were able to provide fast and accurate reports for the surrounding local authorities who were undertaking the reconstruction of post-war Britain.

One of the first of such cases was work for Dudley Corporation in connection with the compulsory purchase of 183 acres of land at Saltwells Wood, Dudley in 1947. The land was required for building houses and Poole was asked to give evidence as to why the mining of fireclay should not continue there. He had to give both a written report and oral evidence at a Public Inquiry. His view was that the supply of fireclay was overestimated, he also produced evidence from local clay mining companies to prove that they feared any extension of mining could cause a breach in the geological fault which acted as a water barrier and prevented their own mines being flooded. The evidence was accepted and the Corporation was successful in getting the Dudley Corporation Housing (Saltwells) CPO 1947 confirmed.



Ben Price in the offices in Priory Street, Dudley



Horace Poole



The landscape looking towards the Cuba Pit from Himley Road, showing subsidence, possibly after an underground fire

BEN PRICE JOINS THE FIRM

In 1951 Basil Poole had asked Ben Price to join the firm. Ben Price had been manager at Baggeridge and Hamstead Collieries, having joined Horace Poole in 1916. He remained there almost all his working life up to 1951 except for a few years after vesting date when he was an area agent for the National Coal Board in the West Midlands Division. He had been awarded the bronze medal of the Institution of Mining Engineers for a paper on the Working of the South Staffordshire Thick Coal and was very well known in the area. Horace Poole had also amalgamated his own practice in the firm after Josiah Bloomer retired, so the three names appeared on the company notepaper for a time. The family influence was extended even further when coal samples were often sent for analysis to Professor Granville Poole at the University of Durham.

Dudley Corporation provided Johnson, Poole & Bloomer with a good deal of work for many years from the 1940s onwards and continues to do so. Basil Poole was personally retained as a consultant and this relationship between the Council and Johnson, Poole & Bloomer continued after his retirement until the time came in the 1980s when it was no longer considered proper for a local authority to retain consultants without competition. The firm has, however, continued to win many contracts for work from Dudley Council in open competition with others. At Dibdale Road in Lower Gornal, near Dudley the site provided Johnson, Poole & Bloomer with work for many years for different clients. In the 1960s the firm was acting as agents for Murphy Bros., who were opencasting the land for coal and fireclay, in all correspondence with Dudley Corporation, dealing with drainage problems, subsidence, landslips, planning permissions and land purchases. By the end of the 1970s however all mining activity had ceased and Johnson, Poole & Bloomer produced a report on Mining Stability for the Council when the site was earmarked for development for industry and open space.

The large housing area at Russells Hall Estate in Dudley had been gradually developed from the mid 1950s. In March 1970 a further report on part of the estate outlined the continuing problems with underground fires burning where the Thick Coal was shallow. The fires could be deep seated and not necessarily confined to waste on the surface. The report actually referred back to Henry Johnsons' notes and sections which are of course retained by the firm as constant sources of reference, often just as informative today as when they were first drawn up.

In 1955 Johnson, Poole & Bloomer took over an old established practice of mining engineers and surveyors, J. & P. Higson and Henry Wall & Co of Leigh in Lancashire. They had already been working in that area and when P. W. Travers who had been running J. & P. Higson died the business was purchased and run from Dudley. Horace and Basil Poole and Ben Price were still running the company but now had a few employees as well.

Work was now concentrated on acting for surface owners affected by past and present mining activities, as the small collieries had rapidly declined after the formation of the National Coal Board. Fireclay mining still provided a certain amount of work, but the major part was concerned with the effects of dereliction and the reinstatement of land for development.

A BUSY LIFE

The 1960s brought no shortage of work. Development was continuing at a fast pace and much of the work required advice of the sort that Basil Poole was well qualified to give. Some extracts from his diary of 1965 will illustrate the variety of work, as well as some of the problems encountered. New Years Day was not a public holiday then.

- 1st. January Doulton Vitrified Pipes - to discuss programming of ground stabilisation.
- 4th January Shell Mex re Foregate St. Station.
- 5th January Dudley Corporation. Inspecting borings at Kates Hill Dudley Corporation. Meeting preparatory to inspecting limestone workings. Dudley Corporation. Re fissures in sandstone rock at formation level for concrete raft for nine storey flats.
- 6th January Opening of Geological Gallery, St. James Road, Dudley
- 8th January Dudley Corporation. Kates Hill Boring. Went to inspect cores. Bores not numbered and depth not entered. Told borer it was a waste of my time and to index properly.
- 14th January Wolverhampton Corporation. Inspection of subsidence damage at Penn Rd.
- 18th January West Midlands Gas Board, re damage at Wolverhampton
- 19th January Birmingham Regional Hospital Board, prepared report on Russells Hall Site
- 27th January Public Enquiry. Amblecote U.D.C. office
- 3rd February Infilling of limestone workings - settlement of Horton's claim for increase in rates.
- 18th February Lipton Products Inspecting boundary. 20th Century Brick Co. people manhandled my car into ditch and refused to move fence into Lipton Products land.
- 6th April Meeting re houses in Tower St. demolition order.
- 21st April Public Inquiry at Seisdon R.D.C. offices into Appeal by Birmingham Sand and Gravel Ltd. at Gothersley Farm Site.
- 17th May Eve Hill redevelopment
- 26th July Ridge Limestone Ltd re refusal of Salop Planning Authority to grant permission for additional quarrying area
- 17th August South Staffs Waterworks. Attending on NCB at Cannock re proposals to quarry sand and gravel and infill with colliery refuse near Huntington & Moors Gorse Pumping Stations.
- 26th August Dudley Corporation - re fly ash blinding at Swan Street Site

Even when his car was pushed into a ditch, Basil Poole kept calm and polite and diffused a difficult situation with his professional manner. As the entry for the 8th January shows, he was not willing to put up with shoddy labour from other people's workers any more than he would have been from his own.

NEW BLOOD AND NEW PREMISES

As Basil Poole approached 60 he was the sole partner, his father and Ben Price having retired. He began to look for a younger person to join the firm. His daughter Judith's future husband, Sydney Pilley had shared digs in London as a student with an aspiring geologist, Colin Knipe, then at Kings College. Poole and Knipe had met socially a few times and Poole was impressed. Their paths crossed occasionally over the next few years after Colin Knipe graduated and started his geological career. By 1968 Knipe was working in PS11 of the MHLG, the

minerals section of the Ministry of Housing and Local Government. Basil Poole went to London to meet Colin and interviewed him on a park bench beside the Thames. He suggested to him that he should move to Dudley and join the firm. The idea evidently appealed so Poole went to see Colin's boss, Mervyn Dunstan, whom he knew, and asked if he could poach his assistant. Dunstan agreed with some regret but was generous in his praise of the young man. On the 7th May 1968 Colin Knipe started with Johnson Poole & Bloomer in Priory Chambers, Dudley. At first there was only Basil Poole, his secretary, Joe an old retired miner and an assistant surveyor in addition to himself, but the firm began to grow fairly quickly. By 1970 it had outgrown its premises and sadly the partners decided they would have to leave Priory Chambers. They moved on Boxing Day to offices in Moor Street, Brierley Hill.

Colin Knipe had graduated with a B.Sc. Hons. in Geology from Kings College London in 1964, and, after a year teaching at Barrow in Furness, had joined the Ministry of Housing and Local Government (now the Department of the Environment). In this post he had dealt with the planning and development issues of many major mining and quarrying projects as well as the effects of major surface developments on mineral resources. He was also seconded for a time to the Ministry of Land and Natural Resources to assist with the establishment of what became the Geological Survey Minerals Assessment Unit and Minerals Resources Unit. This experience provided the perfect background for the move to Johnson, Poole & Bloomer at a time when the company's outlook was widening in scope into areas of general ground engineering and environmental skills.

As Senior Geologist, Colin Knipe at first specialised in directing and interpreting a wide range of ground investigations into soil, rock and groundwater conditions in connection with major civil engineering schemes and building and industrial developments. He also worked on the ground treatment of abandoned mine workings and shafts. By 1973 Knipe had become a partner in the firm, and in 1978 he became the senior partner.

THE END OF ONE ERA THE BEGINNING OF THE NEXT

Basil Poole had decided to retire in 1979 when he was seventy, satisfied that the firm would carry on in good hands. He had spent forty five years building it up and expanding it and had ensured its survival through the Second World War and its ability to meet the challenge of the late twentieth century. Surprisingly for someone so dedicated to his work, Basil Poole found time to participate actively in many other interests. He had come from a very musical background and was an excellent pianist; other members of his family had formed the Poole Trio who were much in demand for concerts in the Stourbridge area. He was made a Professional Associate of the Royal Institution of Chartered Surveyors in 1954 and was an active member of the West Midlands Branch over many years. Basil Poole also served on the Council of the West Midlands Arts and as Chairman of Dudley Arts Council. Several educational and youth trusts also benefitted from his involvement and he was a keen Rotarian.

Basil Poole married Gwenyth Hill in 1935. They shared a common interest in music and together started the Dudley Piano Competition, now well known internationally. They had three children, Rosemary, (usually called Ann), Judith and Jonathan, who for some years, were the shareholders of Groundworks (Dudley) Ltd. This was a civil engineering firm originally set up in a hurry by Basil Poole to put out an underground fire at the Phoenix Tube Works, Great Bridge, by drilling and grouting. It soon became an independent limited company but carried out a good proportion of Johnson, Poole & Bloomer's site investigation and mine workings and mine shaft stabilisation work.

Gwenyth died in 1984 and Basil Poole continued to live in semi-retirement at Enville, still enjoying his lovely garden and keeping an active interest in his many hobbies.

Basil Poole's retirement marked the end of an era for the company in that he was the last partner to come from a background of working in the mines of the area and to have worked in the Black Country mines himself when they still played an important part in the area's economy.

THE BLACK COUNTRY MUSEUM

One of the lasting tributes to Basil's involvement in local affairs will always be the Black Country Museum with which he was involved from its conception. He gave strong support at the original meeting called by the Mayor of Dudley to discuss the idea of an open air museum in Dudley, and his knowledge and experience were invaluable during its formative years. The site at Tipton Road was a former sewage works of the Upper Tame Main Drainage Authority and contained filter beds, toxic lagoons, a canal basin full of sludge, shallow coal workings, deep limestone workings and over thirty mineshafts, - in short, just about everything required to demonstrate the industrial history of the area. That this has been developed into an award winning museum owes much to the skill of Basil Poole and his colleagues at Johnson, Poole & Bloomer. The firm has been involved in the site layout and siting of individual buildings and they directed many engineering projects including boreholes and explorations, the treatment of numerous shafts and the grouting of shallow workings under individual buildings. They also gave general geotechnical advice.

Colin Knipe had a major involvement in the design of the underground mining display, a £1 million replica small mine showing typical drift entrances, a longwall face, an area of Thick Coal 'squarework' and other features typical of the mining history of the area.

All this demonstrates the past of the area in a way which can be understood by all and preserves many features which would otherwise have been lost for ever. Basil Poole served on the Black Country Museum Board and in recognition of his help was made Vice-President of the Friends of the Museum as well as being a life member. Basil was also made President of the Dudley Canal Trust which runs trips from the Museum site through the tunnel into the old limestone workings.

TECHNICAL ADVANCES

On Basil Poole's retirement in 1979 Colin Knipe became the proprietor of the firm. Under his direction Johnson, Poole & Bloomer has expanded into one of the leading firms of geotechnical, land and mineral resource engineers working in fields much wider than those covered by its founder in the nineteenth century. The key to this expansion and success has been in moving with the times, both with regard to technical equipment and to professional specialisation, particularly in developing strong environmental skills.



Surveying monorail at Merry Hill.

Advances in surveying equipment and the use of computers have brought enormous improvements to the way in which the work is carried out. When Henry Johnson first started work his equipment consisted of not much more than a miners' dial, an engineers' level (with a set of short legs for use underground) and measuring chains. Today surveying is carried out with electronic theodolites which download data directly into computers for processing and with precise levels capable of measuring heights to fractions of a millimetre. Geophysical investigations make use of expensive specialist equipment which requires highly trained people to use it. Johnson, Poole & Bloomer have not shrunk from acquiring the necessary tools and staff to be in the forefront of surveying technology.

Computer science is another area where, under Colin Knipe's leadership, Johnson, Poole & Bloomer has been in the forefront for many years. In the mid-1970s Knipe recognised the need for a system of recording information on old mineshafts and geological details held in various archives and for making it available in a reliable manner. Experience had shown that a routine request to the National Coal Board for a mining report could bring a reply that there were no shafts, but the same enquiry made at a different time might receive a reply indicating one or more shafts. That may have been because the records were misread or misunderstood or even missed altogether, for with manual systems of records such mistakes are easily made. Colin Knipe soon saw the application of computers to this type of work, and, although he did not have a computer background, he soon became thoroughly familiar with their potential.

This early computerisation dramatically increased the company's turnover in less than a year and led to the speedier production of reports, now word-processed by members of staff. In order to extend these benefits a larger system was purchased. Since the original installation Knipe has written his own programs for calculating the effects of surface subsidence in the event of a collapse. Such programs can reliably predict subsidence resulting from current longwall mining and from old partial extraction (pillar-and-stall) mining of coal, limestone and other minerals, and can be used to predict movement or to analyse an ongoing situation.

Computer-modelling techniques and computer-aided design (CAD) now have applications throughout the company's work. Since the more general introduction of Geographic Information Systems the use of computers has advanced even further and Johnson, Poole & Bloomer have kept in the forefront of developments. Despite this, the company retains all its old paper plans and sections because there is so much fine detail contained in them.



Basil Poole and officers from Dudley Corporation studying plans

THE WEST MIDLANDS LIMESTONE WORKINGS

It was not only in coal related matters that the company had developed expertise due to its long history. Many original plans and much correspondence relating to the limestone mines which were widespread throughout the area was contained in the Johnson, Poole & Bloomer archives. Where the mines were shallow these had long been recognised as a threat to buildings on the surface and there had been some early infilling of unstable workings under what is now the Dudley freightliner depot just before the First World War. Basil Poole had advised various surface owners and Dudley Council on many problem areas especially after an incident in 1948 when three pairs of semi-detached houses suddenly suffered severe subsidence and had to be demolished.

From then on Johnson, Poole & Bloomer had a very close involvement with Dudley on all limestone workings in the borough, especially Wrens Nest Hill and round Castle Hill and the Sports Centre. At that time many of the workings were still open and were a fascinating but dangerous place for children to play in. A young boy called Royston Bates fell down a mineshaft in limestone workings on the east side of the Wrens Nest. Despite the brave efforts of Station Officer Wade of the Dudley Fire Brigade, who was lowered down the shaft, the boy was found dead. This incident, together with the fact that by the 1960s, many of the pillars holding up the roofs of the caves were becoming unstable, caused the Council to take action. On the advice of Basil Poole it was decided to blow up selected pillars and the cave entrances at the Wrens Nest. The resulting explosions caused a temporary panic among Dudley people who were unaware of what was happening but the dangerous areas were successfully sealed off.



Basil Poole with colleagues and officers from Dudley Corporation in the limestone caverns, partly filled with sand



Packing dynamite prior to exploding unstable limestone pillars at the Wrens Nest



The result of the explosions at the Wrens Nest



The building of a gravel dam by Groundworks in the limestone caverns

The first exploration into the Castlefields Mine under the Dudley Sports Centre showed some of the dangers. It was the middle of winter and when the first hole was sunk, warm air could be felt rising up the shaft. The driller stood over the hole to keep warm, but was soon rendered unconscious for the air was deoxygenated. His mate had gone to get some tea and returned to find him lying on the ground. Fortunately he soon recovered after receiving some first aid. After this a 2ft diameter borehole was sunk and the first to descend was Dr. Gordon Warwick of Birmingham University who was keen to discover if any life was to be found in the caves after they had been shut off for so long. He found that tiny beetles had survived in the water, complete with their own little bubbles of air to breath from.

In the early 1970s infilling of extensive parts of workings on West Wrens Nest was undertaken to safeguard over one hundred houses which had been built over or close to the mines. Almost one third of a million tonnes of sand were placed in workings above and below the canal basin, and in filling in the underground canal basin itself. Sophisticated equipment was devised for this operation, so that sand and water could be mixed and pumped down the workings in large quantities by the main contractor, R. G. Horton. With the aid of the University of Newcastle, extensometer boreholes were installed and Johnson, Poole & Bloomer instituted precise levelling surveys to detect early signs of surface subsidence movements.



Lawrence Hollis surveying in the limestone caverns under the sports centre at Dudley

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COLLAPSE AT DUDLEY ZOO

A collapse which will never be forgotten by Colin Knipe occurred at Dudley Zoo in 1977. It caused a large crownhole on land which was just inside the boundary of Dudley Zoo and immediately at the rear of Dudley College of Technology. He arranged to fill the hole with rubble and then sand and warned the Zoo that it would settle after very heavy rain and require topping up. Sure enough, several months later he received a phone call to say that the sand had sunk ten to fifteen feet. Colin went to see the Zoo manager to arrange for the delivery of more sand the following morning.

While he was there making these arrangements the manager was called away to look at an ailing elephant which was causing some concern. The following morning while shaving at 7am, Colin heard the sad news on the radio that the elephant had died but had been given 'a decent burial' in the Zoo grounds. An hour later when he arrived to direct the first three lorries of sand to the hole, there staring up at him was the dead elephant, hastily tipped in upside-down and roughly covered with a few pieces of plasterboard. There was no way of getting it out and hasty consultations with the chief Ministry of Agriculture vet revealed that the elephant's stomach must be slit before burial to prevent a later explosion! Fortunately a local vet arrived to perform the unpleasant task and the elephant was then given its decent burial under many tons of sand.

This was not the only bizarre incident connected with the zoo that involved Johnson, Poole & Bloomer. Some months after the elephant's burial it was decided to explore the limestone caves so that their condition could be checked. After plotting the principal shaft's position from old records, Colin Knipe realised that it was a low mound in the zoo grounds. There was a small amount of brickwork exposed from which an area was broken out. Having cleared the debris away and removed the cast iron plates which covered the shaft, checks were made to ensure the air at the foot of the 100ft shaft was breathable. Colin was then slowly lowered on a bosun's chair. Near the bottom he could see that the ground was shimmering. As he got nearer he was very puzzled by this shimmering which he had not experienced before. When he landed he realised to his horror that he was standing on millions of maggots with thousands of cockroaches. He was surrounded by dead fish, bones and straw. He turned round and had the fright of his life as he came face to face with a dead tapir with white sightless eyes staring! The zoo had been using the shaft as an unofficial burial ground for some time.

After telling the zoo authorities what they thought of them, Johnson, Poole & Bloomer set fire to the straw and allowed it to burn for three days. Then forty gallons of Jeyes fluid were poured down, followed by forty tons of sand. Only after that did anyone allow themselves to be lowered down again and they could then walk to the base of the previous collapse and smell the juices of the decomposing elephant. Eventually the whole cave was filled with sand by Groundworks (Dudley) Ltd under Johnson, Poole & Bloomer's direction.

GAS AND COMBUSTION

Throughout the last few decades the company has been involved in many cases concerning problems of gases and burning minerals. In 1970 the wife of the publican of the Royal Oak at Ettingshall had died while sleeping in the ground floor parlour of the pub to avoid disturbing her husband as she had bad bronchitis. The inquest blamed her death on a faulty coke stove which had apparently asphyxiated her with carbon monoxide.

The following winter, however, her husband and several customers were similarly overcome by fumes one evening, although luckily they recovered. Johnson, Poole & Bloomer were called to investigate by the brewery. The stove of course had been replaced by this time so they had to look for another cause. Spontaneous combustion in the coal measures below the pub was soon ruled out and the most likely cause seemed to be the foundry next door. Innovative experiments were carried out by injecting nitrous oxide into the ground and monitoring its spread using an infra-red gas analyser. This proved that gases could travel long distances in the made-up ashy ground below the buildings and paved courtyards. It was realised that whenever very big castings were made the moulds were partly constructed in shallow pits in the foundry floor, and when the molten metal was poured in, it liberated very large quantities of carbon monoxide, some of which was driven into the ground. The gas found its way through small cracks in the cellar wall and then into the rest of the building. The Royal Oak was eventually bought by the foundry operators and closed down.

There were many underground fires in the area, mostly in colliery spoil, because dirt from the Thick Coal mining in particular is very susceptible to spontaneous heating. One such fire affected the Red Lion in Victory Avenue, Willenhall, and it was one of the first where grouting was used to put out the fire and stabilise the surface. Since then Johnson, Poole & Bloomer have dealt with many fires, including one at the Goodyear Tyre depot at Oldbury, where the contractor succeeded in inadvertently grouting up a sewer nearly 100 yards away and five

metres higher than the site. To this day no-one knows how it happened as there had been a close inspection of all known sewers and manholes in the area, but it had to be jetted through very quickly before the grout dried.

Another incident where things did not go entirely according to plan was the grouting of shallow Thick Coal workings at a site in the centre of Bilston in the gap between two shops. One was a shoe shop where the cellar was used for storage. This was inspected every fifteen minutes during the grouting operations to ensure that there was no undue pressure on it and that the grouting did not seep in. Only moments after an inspection had revealed everything to be alright someone descended to the cellar to find it three feet deep in grout with shoes floating in it!

ENVIRONMENTAL ISSUES COME OF AGE

The environment has become one of the major concerns of the late twentieth century and legislation has ensured that assessment of the impact on the environment of quarrying, major construction, landfilling and other sensitive projects has to be undertaken as part of the planning process. Johnson, Poole & Bloomer have developed assessment techniques which subject the proposals to rigorous analysis and provide solutions to specific problems identified during the process. In particular the company specialises in environmental assessments and formal audits in the fields of mineral extraction, waste management and disposal, and derelict and contaminated land, areas for which their historical strength in minerals work has been of great importance, and frequently acts as project manager on such schemes. Concern for the environment affects not only development proposals but also existing businesses with all their properties and facilities. Environmental audits have become the accepted way of examining how a business affects the environment through all its operations and are now regarded as an essential management tool for the modern company.

WASTE MANAGEMENT

Waste management is another area where the company has developed a strong expertise over many years and one in which their services are increasingly in demand, because of the ever more stringent legislation being passed both in the U.K. and in Europe. The Environmental Protection Act 1990 created a new duty of care in the handling of waste which necessitated better and more extensive investigation with regard to any disposal sites. Designing waste disposal facilities requires great attention to leachate control, groundwater, gas and other environmental issues and Johnson Poole & Bloomer have developed their experience through working with major national waste disposal operators.

For very many years the company has been monitoring and advising on the control of gases in the ground. In 1976 the Borough of Chelmsford in Essex had built a new sports pavilion but began to experience problems with it soon after opening, when there was a minor explosion at the site. Johnson, Poole & Bloomer were called in to investigate, and showed that the building, erected on a previous landfill site, was suffering from methane emission below the structure. Rapid analysis was carried out and a passive gas venting system designed and installed so that the John Shennan Pavilion was able to reopen with little delay.

Although the problems caused by chemical contamination of land and property have only been taken seriously by the property world in the last few years, Johnson, Poole & Bloomer have been assessing such contamination on soils and groundwater for well over a quarter of a century. Much of this experience came from working for British Gas and its predecessors and various local authorities and developers on old gasworks sites in many parts of the United Kingdom. Designing remedial works to restore contaminated sites to beneficial use has also become a specialisation of the company and it often supervises the carrying out of the works it has designed.

An interesting example of waste disposal work was carried out in 1978 at the Trident Steel Works, West Bromwich. The company was required to make an assessment of the disposal of spent acids down abandoned mineshafts. This necessitated full documentary research, site investigation and laboratory analysis as well as calculations to demonstrate the neutralisation and dilution of the acids by passage through the coal measure rocks and by circulating ground and mine water.



Reclaiming the site of the former chemical works, Ilford, east London

The company's early experience in such cases has been developed and it continues to undertake more and more complex work in this area. In 1988 the company was engaged by London and Edinburgh Trust as Engineer in the three year redevelopment of the former Laporte Chemical Works in Ilford, a 12 hectare site in the valley of the River Roding. Decades of chemical manufacture had left a legacy of problems, the worst of which was radioactive waste from a thorium manufacturing process, plus 60,000 tonnes of rotting tree bark previously crushed to extract quinine. There were also extensive buried foundations and other difficult ground conditions. Removal of dangerous materials from the site required such high safety standards that rail sidings had to be specially constructed to move material that could not be transported by road.

The company examined and reported on the feasibility of reclaiming the land for housing and to prepare and costed the necessary site infrastructure. They also investigated the failure of an extensive length of river wall and prepared outline designs for remedial treatment. Johnson, Poole & Bloomer also designed and supervised a new foul sewer outfall which had to pass under the adjoining river and nearby motorway feeder, a contract which involved a world record drive for a remote controlled mini-tunnelling machine. They prepared the contract documentation for the overall reclamation contract, selected the contractor and supervised the reclamation works.

This major task, with a contract value of several million pounds, is typical of the work which has become available since the government and planners began to stress the importance of reclaiming derelict and contaminated land rather than continuing to develop on greenfield sites. The stringent procedures and high standards necessary to return such land to a standard suitable for residential development afford a vivid portrayal of the changes in society's attitude to the environment since the time when Henry Johnson was working in the mid 19th century.

In 1990 the company started working for the Dudley Metropolitan Borough Council on the redevelopment of the Dibdale Burton Road Area, some 40 hectares of derelict and undermined land including an operational waste-disposal facility. To render the site fit for hard end use required the removal of the waste to a properly designed nearby repository. Opencast coal mining was used to defray costs, and Derelict Land Grant of some £4 million was obtained from the government. Extensive gas and water monitoring will be necessary for some years on this sensitive site, where one of the close neighbours was a hospital.

. Johnson, Poole & Bloomer's skill in this area has also been recognised abroad, and the company has carried out several important tasks in Europe, especially in Spain. One of the most interesting commissions was from the Junta de Castilla y León and involved making a detailed study of over three hundred refuse tip sites in order to prepare comprehensive inventories of each, to prepare a landfill site operational manual, and to make recommendations about future policy.

Many towns and villages in mainland Spain have badly sited and poorly controlled refuse disposal facilities with no real policies for management and improvement. General lack of environmental awareness means that these tips could be serious hazards to health where they were close to a water supply; in addition animal carcasses are often burnt in the open or buried in shallow graves along with other rubbish. The authorities began to recognise the problems and sought expert advice in order to formulate future policy. An eight-month study of the situation was undertaken by Johnson, Poole & Bloomer and a detailed report provided for the authorities.



A typical tip site in Spain

LAND RECLAMATION AND MINERALS

Land reclamation is often necessary where a site has been affected by past mining, industry or naturally occurring adverse ground conditions. Pollution may not always be present but civil engineering work is usually needed to prepare and stabilise the ground before it can be put to beneficial use. The employment of highly qualified and experienced chartered engineers enables Johnson, Poole & Bloomer to tackle such problems with in-house staff.



Drilling and grouting at the Celtic Football Ground, Glasgow

The firm's traditional background in minerals-related and geological work has by no means been abandoned in favour of the emphasis on environmental matters. Damage to buildings is often caused by the inadequacies of the ground beneath and the company is well equipped to investigate in these circumstances. Expert research into old maps and plans, including those drawn by Henry Johnson senior, over one hundred years ago, can reveal much information about previous land use and often helps to suggest the precise programme of ground investigation which should be carried out.

With a sound base in geological science Johnson, Poole & Bloomer also work on the finding and winning of mineral reserves and construction materials. An appraisal of potential sources is achieved through basic geological surveys and conventional drilling or trial excavations before progressing to more complicated geophysical methods; the latter can range from investigation with the aid of one-man hand-held instruments such as a magnetometer to the use of more complicated techniques such as ground radar, seismic refraction, electro resistivity or 'down-hole' geophysics and gravity surveys.

A typical task undertaken by the company in this area was advising on the feasibility of coal recovery and assessing the potential for any additional mineral processing operations at Abersychan in South Wales. Fifty acres of land had been subjected to extensive underground mining for coal and ironstone, and large spoil heaps had been created, leaving the area unattractive and potentially dangerous. Johnson

Poole & Bloomer showed that there was coal to be got both from the spoil heaps and through a limited opencasting programme. The opencast mining could take place as part of a large scale reclamation scheme which would greatly improve the site's environment.



A plate loading test.



Tip stability analysis during land reclamation in the Rhondda Valley

Similar environmental improvements were required as part of a scheme at the Lewis Merthyr Tips in the Rhondda Valley, where Johnson, Poole & Bloomer made an initial feasibility study of an extensive network of old colliery spoil mounds adjoining the Rhondda Heritage Park. The lessons learnt from the Aberfan disaster meant that the danger of poor drainage of spoil heaps could not be ignored and the Mid Glamorgan County Council Land Reclamation Unit asked the company to undertake the study with a view to improving the drainage and appearance of the tips as well as possibly providing access for visitors to the Heritage Park.

A good proportion of the company's work still concerns mining subsidence and compensation claims, the investigation and stabilisation of old mineworkings, and research with regard to present and future mining. In these spheres the company can be seen as returning to its roots and working in areas that would have been familiar in concept, if not in technique, to Henry Johnson. Many cases of subsidence from old workings give rise to compensation claims against British Coal and the company has acted successfully for many such claimants. The company has extensive archives of old mine records and it is not uncommon for a claim for subsidence compensation in the 1990s to be backed up with details from plans and sections drawn by Henry Johnson in the 1850s - still an accurate and competent record of the situation when the pit was being worked.

It is not always coal workings that provide mine stability assessment work. The problems facing Johnson, Poole & Bloomer's surveyors at South Witham Quarry in Lincolnshire were quite different. The site was an active limestone quarry over ironstone mine workings that had been abandoned in 1963. Within about 8 metres of the quarry floor there were galleries from which ironstone had been extracted; some were partly collapsed and some partly flooded, but in general they were open with a height of about 3 metres. Collapses had caused some instability in the quarry floor and there were fears that further collapses might hinder the quarrying operations. Johnson, Poole & Bloomer's brief was to carry out an underground inspection of the ironstone mine galleries and surface inspections of the quarry in order to



Surveying in cramped conditions in flooded mine galleries

assess the condition and likely problems and to advise on the appropriate action to alleviate any potential instability. This was achieved in very difficult conditions underground, using inflatable dinghies where necessary. The company was able to make recommendations after carrying out core drilling from the quarry face to the mined horizon and quarry face mapping, which established the relationship of the old workings to the quarrying operations. Processing plant and traffic routes in the quarry were repositioned to areas of least risk or areas not over the old mine, and it was possible to avoid areas identified as unstable. Future quarry operations were designed to ensure adequate depth between the floor of the quarry and the roof of the mine gallery.

Nearer home the reclamation of the Milking Bank Meadows area of Dudley proves the success of reclamation policies. This extensive area of over 60 hectares of open land within the Black Country conurbation had a long history of underground coal and fireclay mining and had been left with the moonscape appearance so typical of many old mineral working areas. Johnson, Poole & Bloomer were asked to undertake a feasibility study for reclamation, to assist with planning negotiations for the local authority and to regulate and apply funding of £1.8 million of Urban Development Grant, one of the largest of its type in the West Midlands. This scheme drew on many different areas of the company's expertise and took several years of work at different stages. Initially the site was stabilised by opencast mining and that was followed by large scale earth moving contracts to regrade extensive clay stocks. The site was provided with drainage which involved the construction of balancing lakes, and the necessary infrastructure was put in, including local distributor roads.

Extensive housing development has now taken place on this site with well landscaped areas improving the appearance. No signs remain to suggest this was quite recently an area of derelict land with a history of mineral extraction similar to so much of the conurbation.



Milking Bank Meadows, Dibdale, Dudley

Johnson, Poole & Bloomer undertake comprehensive research of mineral prospects and extensions to existing operations. They act for landowners in planning matters, in the negotiation of commercial terms, in preparing tenders and leases for mineral working, and in related matters such as wayleaves, easements and working rights agreements. The firm can act as project manager for an entire operation from planning application and development appraisal through to restoration and aftercare, areas now given great importance in planning considerations. The company also acts for mineral operators in matters relating to engineering, mine economics, planning and production.

EXPANSION

The last two decades have seen Johnson, Poole & Bloomer grow in three ways. Firstly it has grown in the breadth of work undertaken, as shown above. Secondly, there has been an increase in the number of staff from around half a dozen in the late 1960s to over eighty by 1994. Lastly offices have been opened at strategic positions in the United Kingdom, at Glasgow, Cardiff, and Chesterfield and work undertaken has expanded into Europe.

As part of the processes needed to keep up with this expansion, the company has adopted a Quality Management policy which has involved translating its own procedures into a format compatible with the Quality Assurance standard, BS 5750, with the aim of achieving third-party certification.

THE PAST AND THE FUTURE

Anniversaries, - a time to remember, a time of celebration and a time to look to the future, the next millennium.

Henry Johnson built his practice on the back of Old King Coal. He clearly lived and breathed for coal, to the point where coal even threatened his life. He was a visionary, someone who would 'go the extra mile.' He lived in a time when there was much pioneering to do and probably would not be happy in today's coal-less society. The spirit of Henry Johnson lives on in the application and endeavour which can be found in today's Johnson, Poole & Bloomer, - a Johnson, Poole & Bloomer where the individual touch, the vision and creativity may still be found.

Johnson, Poole & Bloomer, - fit for the 21st century.