

THOMAS SOPWITH AND THE FOREST OF DEAN 1832-1841: “NOTHING SHORT OF NEWCASTLE”

Robert Sopwith

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It is a delight and a privilege to be addressing you to day in surroundings well known to my great-great grandfather, Thomas Sopwith F.G.S. The sub-title of this paper “Nothing short of Newcastle”, needs rather more explanation, but reflection upon that city’s reputation as a centre for coal even before the age of steam will point you in the right direction. In his diary for the 8th of June 1837 Sopwith wrote “Dr Buckland said that he had been applied to, to recommend someone as a proper person to undertake the Office of Mining Commissioner on the part of the Free Miners ‘I told them’, said the Doctor, ‘that they must have nothing short of Newcastle and I named Mr Buddle and yourself’”.

Sopwith was enjoying a swift post-breakfast conversation with Dr Buckland, the foremost geological academic at Christchurch, Oxford, and Dr Gilbert, President of the Royal Society, on the subject of a school of mines: converse was swift because Sopwith had a place booked on the Blenheim coach leaving at 10 a.m. to return to meet Mr John Buddle, eminent colliery viewer of the north-east. The quoted remark is open to confusion because it implies that Sopwith and Buddle would act on behalf of the Free Miners. Only in the most general sense was this true - in the hearing of claims - and it is later clear that Sopwith was the Crown Commissioner, John Probyn of Cheltenham the commissioner representing the Free Miners and John Buddle the umpire.

Who was this junior man from Newcastle? It is right that we should focus on his contribution to the affairs of the Forest of Dean at the time of great Whig reforms which began to sweep away customary and legal relationships in the era of tithe commutation, municipal reform and the new Poor Law. Sopwith both gave to and gained from the changes in Dean Forest; indeed the work was crucial in his career as a focussed professional involved in both coal and lead mining. Apprenticed at first in his father’s joinery and cabinet-making business, he had learned practical surveying skills as a boy. This interest in accurate measurement and drawing served him well in the lead mines at Alston in Cumbria. In 1829 he surveyed the new Derwent Road south-east of the town. The Durham Junction

Railway and a section of the Newcastle-Carlisle Railway also bore his hand. As H.W. Opaar has noted in his local history paper there was plenty of work for him in the north, quite apart from the need to be at hand in London when railway, road and town improvement bills had to be argued before parliamentary committees. The opportunity to survey the Royal Forest of Dean brought new status to the Newcastle man, at his most energetic in his thirties and at his most fruitful in developing the practical skills with which he was endowed.

It was on 3rd January 1833 that Mr John Buddle, whom he had met the previous September “called upon me with an official letter from Mr Milne of the ‘Woods and Forests’ relating to the proposed survey of the mines of Dean Forest and this was my first introduction to that field of occupation” (Diary 1, p69).

The process of surveying woodland, noting encroachments, the shape and size of enclosures had also been put in hand in 1833. Sopwith set out on the Courier coach from Newcastle on 9th February at 9.30 a.m. Spending Sunday in York, he moved on via Leeds and Sheffield, up at 5 a.m. on Tuesday the 12th, making for Worcester, leaving for Gloucester at 10.45 a.m., lunching at Tewksbury at 2 p.m., off again at 5 p.m, seeing night fires marking the collieries on a dark stormy night and finally arriving at Coleford at 8.30 p.m. “ We went to the King’s Head Inn and found the worthy landlady (Mrs Porter) well entitled to the recommendation which Mr Buddle had given me” (Diary 4 p72).

A brief description follows in the journal with reference to the geological formation “well defined and illustrated by Dr Buckland and D. Mushet Esq.” and “the custom of gales or galing mines from the agent of the Crown, a system which is liable to much uncertainty and an endless source of dispute” The selling of gales to “foreigners” led on to identifying Mr Protheroe of Cheltenham who had “obtained by far the largest proportion and his collieries produce nearly half of all the coal now raised in the Forest” (Diary 4 p76).

Protheroe thus had the clout to take exception to any survey at this stage, so Sopwith wrote to Buddle after a first attempt at starting the survey there and then. But it was Edward Machin, deputy gaveller, here at Whitmead who needed to be squared first. Buddle had evidently descended one pit without permission and the agent, Gething, did not wish to get into trouble again. Machin caught up with Sopwith soon afterwards: meanwhile the district had been viewed with Mr John Hosner and Mr David Mushet. Hosner was described “as an intelligent gentleman engaged on a tedious and extensive survey of small enclosures in the Forest” but at least his wife and children were

Thomas Sopwith



able to lodge at Coleford during the seven months needed for this task.

On Monday 18th of January Sopwith was toggled up to go below ground at Hopewell. Machin showed him Protheroe's written objection. "Once their surveyor (Mr Buddle) was sent without application to me. If any gentleman should again think of making the descent I would advise him to settle his worldly affairs first, as he would be unlikely to visit the surface of the earth again, unless he could find his way without the aid of my machinery".

So Sopwith wrote to Buddle and read the composition of the letter to Machin first. The three sub-surveyors were dispatched back to Newcastle while he went to London to await Buddle's reply. Milne at the Office of Woods, Machin and Protheroe probably agreed a go-ahead, for on the 16th of February, Sopwith was looking at his assistants' plans "done during my absence in the north and which as well as the survey was highly satisfactory" (Diary 5 p20).

He himself was working on the surveys for a week following 25th February. Marcus Scott, his brother-in-law, and William Woods, were up in London with him, seeing the sites between work on railway committees and the Newcastle Waterworks Bill. On Friday 7th March they left for Coleford and on Monday 19th March the surface surveys had begun in earnest.

"The first field book was kept by Marcus Scott, the second or duplicate . . . by Mr Johnson. Mr William Woods, Mr Seymour, Mr Taylor and Mr Smith were assistants. In these surveys the whole of this and the following week was occupied" (Diary 5 p53).

Meanwhile Sopwith kept late nights working on his *Treatise on Isometrical Drawing*, a short work published in 1834, demonstrating his eagerness to delineate buildings, furniture design and mine plans.

How did Sopwith set about the practical methods of surveying? We have already observed something of the politics of proceedings in dealing with deputy gaveler, fellow commissioner and the Office of Woods and Forests. He had trustworthy assistants and maintained methodical record keeping. The necessities for accuracy was immeasurably helped by Sopwith's own improved travelling stove, almost certainly developed, if not yet in use in the Forest by the close of 1833. It was in use in 1834, which doubtless contributed to the map of 1835. We also know that Mr Simms of Troughton and Simms, suppliers of scientific equipment, ordered 100 staves in 1836, no mean order in light of the disastrous fire at Sopwith's Painterheugh Works and three years before his new and spacious premises were created to produce furniture and hardwood manufactures.

As always the practices of surveying involved much sheer hard donkey work. In a letter of 22 December 1833, after describing Protheroe as "Monarch of all unsurveyed", he told Buddle that the heavy rain had given them a "delightful succession of shower-baths and every variety of plodging, chiefly from ancle (sic) to knee deep. I take notice of the quality of coal, horses and gullies - where timber is required etc. The level roads are so worked that they can scarcely be accurately plotted on a scale of less than two chains per inch which I am doing on separate squares of 20 inches each" (NCB/1/JB/1328). In a forthcoming trial on the boundary between Mushet and Thomas involving the survey of the position of gales, crop of coals, enclosure fences and roads, he expected a lengthier and more costly process than was first thought. The *Treatise on Isometric*

Drawing was all the more useful and although the Dean Forest work cannot be exclusively responsible for the interaction of surveyor and subject to produce improved practical expertise, it nevertheless played its part.

Then follows a gap in the action until 1837 - at least in the diary. The evidence from the survey had become the subject of a Parliamentary Bill. Sopwith was with Milne at the Office of Woods on 18 May 1837. Mr Gardiner, Milne's nephew, was in Dean Forest "endeavouring to arrange matters respecting the Crown's rights in the lands, and that so far as the mines are concerned, the provisions of the Free Miners and that other parties are less opposed than might, from the magnitude of the object have been expected" (Diary 7 pp17-18).

On 6th June, Buddle and Sopwith were at Gloucester. From 6 to 10 a.m they pored over several clauses of the bill and objections made or likely to be made. At Newnham by noon, a further five hours were spent in conference. Ten were present, discussing the bill, Mr Protheroe being quite happy with the general merits "until the agents of the body of miners came in (when he objected) to the confined nature of the present meeting - disclaiming all intention or authority to express the opinions of others".

The agents for the miners were the Rev. G Roberts, a Mr Clarke, but only Mr Clarke is mentioned as being at the 6th of June meeting. The *Gloucester Journal* of 10th June gave notice of a "General Meeting of the Free Miners and Quarrymen" at the Speech House on the 12th. A Newlands meeting on the 8th had evidently raised fears about enclosure of waste land but at the Speech House meeting of the 12th, nomination of John Probyn as commissioner for the Free Miners was supported by letters from local landowners. Later the *Gloucester Chronicle* of 2nd June 1838 grunted at the expenses of £5 a day to be paid to the Mining Commissioners noting that one (John Probyn) was a "mere sporting country gentleman . . . never further underground than to unearth a fox".

The journalists might have been surprised to know that five guineas per minute was reputed to be the price of seeing the London to Brighton Railway bill through at the height of activity on it. He also noted, wryly, that infringement of clause 33 of the bill made the perpetrator liable to imprisonment with or without hard labour. So, he pondered, Messrs Crawshay, Guest and Protheroe had "better beware lest they be elevated to the honours of the treadmill instead of the peerage".

A simple list of the activities of the 1st to the 11th of September 1837 masks the considerable activities of the surveyors, but a list must suffice.

1st September: Owners were met at the King's Head Inn, Coleford.

2nd September: The Regulator Pits of Mr Bennett were entered, the High and Low Folly and Tormentor Pit examined

4th September: After visiting Machin, here at Whitemead and Gething at Park End, the surveyors entered the Royal Pits, Buddle and Sopwith in one part, Atkinson and Oliver (Buddle's clerk) in another.

5th September: A view of Protheroe's Bilson Collieries and Flindall Iron Mine led on to a scramble up the old "Scowles" or "churns".

6th September: The High and Low Levels at Mushet's Bixlade and through Barn Hill enclosure to Vallett's Level.

7th September: Protheroe's agents Nicholson and Gould supplied information on the owner's coal works and Mr Thomas Brace referred to them by Machin, claimed injury by the draining of water for his mill into Oakwood Deep Level.

8th September: A dispute between competing developments of

Mr Thomas and Messrs Harris and Bennett in Lydbrook Deep Level, and an inspection of Crawshay's pair of pits to the Park End Veins (one was nearly 100 yards deep, not yet reaching the coal), the 16 mile ride that day including Protheroe's new work "The Fancy" and Mr Davis' alongside. That day's journal entry also provides the clearest account of how the enclosures, outcrops and settlements looked to him.

9th September: Drawing sections and otherwise assessing the dispute between Bennett and Harris.

10th September: A walk with his cousin Martha, a governess at Mr Marshes, to the Buckstone Rock.

11th September: Mr John Harris came as summoned to give information and to be warned that a crown injunction would be requested to stop works going ahead (Harris did not have a gale or licence in any case); to Bream and Lydney, seeing shipping arrangements at Lydney Basin and viewing several thousand tons of coal on the quays at Bullo Pit, finally fulfilling an engagement with Mr Protheroe.

The post of Commissioner for the Crown for the ensuing work under the 1838 Act was confirmed. Sopwith must have expected this. On 14 April 1837 he writes of a "long, confidential and very gratifying conversation with Mr Milne", who said how pleased Lord Duncannon and the whole Office of Woods had been so far. Milne went on to state "in confidence some proposed arrangements" and the words, "As commissioner for Crown" appear thus in parenthesis. On 30th August 1838 Buddle and Sopwith were at Milne's where Buddle introduced John Atkinson as a suitable deputy gaveler and Cary's in the Strand provided several drawing and surveying instruments selected for his use: Atkinson's name also occurs on maps and on a report of 1853 concerning Park End, New Fancy and other independent collieries. As Sopwith prepared for the last, the most public and, in some ways, the most testing period of his Dean Forest work, he brought a further practical competence and authority to the task. This was his geological model of the Forest.

As all map-readers know, the ability to visualise a piece of ground in three dimensions is essential. When these dimensions are transposed under the piece of ground, the visual imagination if further challenged. Whilst a general knowledge of the coal outcrops along the west and east of the Forest's coal basin was clear to the experienced observer, the depth and curvature of the coal bed was by no means as apparent in the central part of the basin. They knew about the 1000 yard limit to prevent crowding of operations at the surface: they needed also to understand the complexities of working underground, to avoid breaking into each other's workings. How much more, then, was such a geological model needed for the Parliamentary committee considering the bill in late 1837? The suggestion of a model came from Buddle, and Milne clearly thought it a good idea, believing that one could be made for £16-20. The model was being constructed in September 1837, on show and the subject of a paper given by Sopwith in March 1838, and in August 1838 it was again on show at the Newcastle meeting of the British Association for the Advancement of Science. At this meeting in his home town Sopwith continued pressure on the government to establish a committee for keeping National Mining Records, a concern of his from early days at Alston (represented by the Hudgill lead vein plan noted earlier), continuing through his part in the Museum of Economic Geology, of which he later wrote an account, in 1843. The Cambridge Dean Forest model lies, rather disconsolately, at the Heritage Centre at Soudley (This is not a criticism of the director, with whom I have discussed the problems of display in the past. Twenty-five years ago I borrowed a quarter portion of the Oxford model, presented to Dr Buckland and now in the Oxford Museum of Natural History: a further request to borrow it for this conference was

emphatically turned down).

The stage is set for the final contribution by Sopwith in the Forest of Dean. "The first meeting of the Dean Forest Commissioners was held at the King's Head Inn at 12 o'clock this day - September the 5th", but there was not enough room so they adjourned to the Angel where Sopwith took the chair and addressed the meeting on the nature and objects of the commission. The minute book shows the commissioner's declaration of no rights, titles nor interest and is counter-signed by Edmond Machin, deputy gaveler. Protheroe, Clarke and others had remarks and enquiries to make. Two fairly urgent matters were presented: an application for a gale at Woodside Green near Ruardean made via Messrs Clarke and Court and, secondly, a decision on the status of Mr John Harris' works at New Strip and At It. The gathering was then adjourned until 10th September at the Speech House. During the week Sopwith and Probyn were available for private business at the King's Head: Sopwith prepared a tabular statement as a useful way of receiving and recording claims. On Saturday 8th September "a letter was received from John Jenkins and George Jenkins stating that "Mr Protheroe had taken from them by arbitrary power three gales called Freemasons Right, Shading Tuft Water Works and Freeminers Folly No. 3."

In fact Bull Jenkins and his brother were in the "Last Hope Saloon", for when the complaint was heard on 15th January 1839, it was clear that the Jenkins had sold gales to Protheroe. At the Speech House meeting on 10th September, the tabular form was explained and the plans announced to hear claims at the Bear Inn, Newnham, the Speech House and the Feathers Inn, Lydney. Gales were described as being "on foot" or active if the current year's rent or a day's work could be proved. On 21st September, some twenty local gentry, clergy and others examined the Dean Forest model here at Whitmead and, on the same day, Sopwith received an excellent travelling desk, 39 inches long by 26 inches high and 12 inches deep to stand on a frame. He was also busy studying the old Mine Law Orders of the Forest.

The final part of the autumn session of 1838 was attended by Mr Buddle, the Umpire. Receiving the proceedings together with Sopwith, he told him to read an abstract of the Mine Law Orders. Reference was also made to the 1755 Order and the Memorial of 1825, "signed by sixty-two free miners and fourteen other occupiers and proprietors . . . to the gavelers, begging them not to gale and water pit or water wheel or engine within at least 1000 yards of the head of another Free Miner's."

Adjournment ran from 10th October to 7th January 1839. The first report was written in the winter months in Northumberland and was finished by 28th February 1839. The minute books show that resumed business in January included a boundary dispute between Mushet and Trotter Thomas; a concession by Protheroe in relation to the Protector Cheltenham Co.'s pit; a request by the Office of Woods for a report of proceedings and the expenses so far, to lay before the House of Commons; and in April, a memo signed by many Free Miners asking that gales in arrears of rent would be declared void. The Commission refused to accept that principle, preferring to deal with each case on its merits. The diary makes few concessions to describing the works of the Commission: 10th March, a rare entry states, "the rest of the week was very closely occupied with the intricate and perplexing business of the Forest". Far more often forming the subject matter are forest rides and walks, especially with Mr John Probyn, dinners and subsequent music-making at Machin's and pleasurable excursions in the area.

1841 I am nearly done. 6th of March: "This evening after dinner we finished copies in triplicate of our award of coal mines in Dean Forest". It was signed on the 8th of March. It covered 105 collieries. Straightaway some iron mines were viewed and the commissioners went down Mr Sling's Pit. By July the work was all but complete and Mr Buddle's dinner was given on 24th July at Mrs Barnett's new hotel at Ross: "A warrant for a 'Fat Buck' had been sent to us a few days previously" (and at each end of the table was) a noble dish of venison". The Commission had concluded on 26th July; the Act expired on 27th July, three years after it had begun.

It has been the purpose of this paper to show the interweaving of the career of an ambitious young surveyor with the statutory reforms put in place for the Royal Forest of Dean in that decade of parliamentary activity which began with the Great Reform Act of 1832. For Sopwith, progression from junior commissioner to presiding confidence was marked by improved levelling skills, the creation of superb models, large and small, winning him a Telford Silver Medal in 1841 and fellowship of the Royal Society in 1845; easier entry into the salons and offices of academic and political lions of the era of the Great Exhibition, but notably amongst the great geologists, Buckland, Conybeare, de la Beche, Murchison and Lyell. He did no more notable survey than this, unless it be that of the Sambre-Meuse Railway in Belgium.

For the Free Miners submission to a greater degree of regulation was probably not welcome to all, but a fair review for 829 registered miners set out the basis on which Free Miners might continue their lawful business into the 20th century. For the Office of Woods which directed the Crown's interest in the Royal Forest there was both relief and gratitude; relief that the riotous destruction of fences of the enclosures which had necessitated the setting up of boundaries under the 1831 Act had not been repeated, and gratitude for the competence of the completed work. The diary entry of 21st October 1841 states: "At 10 o'clock I went to the Office of Woods. Mr Buddle attended at the same time and we had a long interview and very agreeable (sic) conversation with Mr Milne. He expressed the greatest satisfaction at the result of our Dean Forest labour and said he had never known any government business of this kind better conducted, to which Mr Buddle jokingly replied that he thought this admitted of an easy explanation., viz. that they had not, on former occasions, gone far enough north for commissioners".

Nothing short of Newcastle, ladies and gentlemen.

Robert Sopwith,