

## Library Additions

A number of publications have been received and are to be added to the Club Library since the last issue of 'Below' these include:

**North Wales C.C. Newsletter:**  
No. 271, June/July 2000

**Cave & Karst Science**  
(Transactions of the BCRA), Vol.26  
No.3, December 1999.

**Telford Historical & Archaeological Society** Newsletter  
No.65, June 2000 - edited by Club member Shean Bostock

**Caves & Caving:** No.87 Spring/  
Summer 2000 - The Bulletin of the  
British Cave Research Association

## Recent Trips

A week at Nenthead, Crawstone level (Ironbridge), Britannia & Criccieth, Snailbeach 112 yard level, NAMHO Conference Truro, Potters Pit (Rescue Practice), Ogof Draenen, Swan Hill (Bat counting).

## Nenthead Accident

A man from West Cumbria was injured in June after falling down Hydraulic shaft in Smallcleugh Mine after he attempted to descend an electron ladder without a lifeline. The ladder was too short to reach the bottom of the shaft and he fell when trying to ascend. The rescue took over 7 hours to complete as Hydraulic shaft is over 1 mile from the entrance.

*Descent*

## Congratulations

At last years Club Annual Dinner Alan Taylor stated that during 2000 it was his intention to attempt to reach the 112 yard level at Snailbeach, and to get out again!

During the past few months Alan has been undergoing 'intensive' training in the Baryte Stope at Perkins Level. The training organised by Steve Holding was intended to put Alan through his paces and bring him up to speed on SRT techniques.

One of the nice features of the stope is that a number of difficult and technical 'challenges' can be set-up in an area where instructors can easily reach the trainee should they become stuck.

Following the training Alan made his bid for the 112 yard on Sunday 1st October. At the 112 the water levels were quite high, with the main level flooded and a duck having to be made to pass into it. At 74 years old, could Alan be the oldest person to get that far into the mine?

*Congratulations  
Alan  
and  
Well Done!*



## Mission 2

As soon as Alan Taylor reached the surface following his epic trip to the 112 yard level, he hatched his next plan: to clear Chapel Shaft of rubbish down to the 112 yard level - perhaps using an auger device fitted to the bottom of the cage!

## AGM Results

At the Club AGM on Friday, 6th October, Eileen Bowen was appointed to the position of Vice Chair as well as Assistant Secretary. Nick Southwick stood down as Conservation Officer, and the post is vacant at the moment. Other posts were unchanged

Subscriptions were increased slightly for Full Members, other rates remain the same: Full £14, Family: £20, Junior: £8, Day: £3.

## Tankerville Opening

Club Members are invited to the opening of the Tankerville Site by the Shropshire Mines Trust on Saturday October 28th.

## Dudley Callout

For some reason West Midlands Police lost all the MCRO call-out details and only had Steve Holdings home number, following a 'near callout' a police liaison officer has now been appointed and the situation remedied.

## New "Mole Phone"

A new generation of "Mole phone" is being developed and had some successful tests at Snailbeach.



# News Round-Up 1

## by Ivor Brown

### Salop Headframes

Following the erection of the “replica headframe” on Old Shaft (Georges Shaft) at Snailbeach (unfortunately not lined up with the winding drum position) and a “modern exploration headgear” on Watson’s Shaft, there are now 6 headframes in Shropshire. It is understood that there is another one in-store at Blists Hill and the writer still expects one day to find a horsegin or gear pit frame!

*[Don't forget the “jack roller” / windlass over the Gitchfield pit, Broseley - the only one of its type still surviving, and on its original shaft. Kelvin]*

### Gas and Oil Sites

Consultants working on the Monuments Protection Programme (English Heritage) are now looking at Gas and Oil sites. In Shropshire they have noted: The Tar Tunnel, Oilhouse Coppice, and Granville Colliery Methane Drainage Plant as worthy of consideration for listing (the Tar Tunnel is already ‘listed’), and 24 gas works and Gas Holder sites. The consultants are seeking information on anything of historic interest relating to oil, gas and these sites.

### Double Vision?

Ironbridge Gorge Museum has a photo showing two hand-winchers with 6 figures standing between them. It is obvious that one photo overprints another. Does anyone know how they can be separated. Separate, each photo would be a remarkable image of mining in Benthall in the 1920’s.

### Highley Trail

A Birmingham artist has been commissioned to design a trail, including mining historical associations around Highley.

*Birmingham Evening Mail,  
12/6/2000*

### Tar Tunnel Help

The Tar Tunnel exhibition area may be re-vamped and the museum are seeking assistance with artefacts, surveying etc..

### Tankerville’s House

The Daily Telegraph, on 24th June 2000 printed a history of Chillingham Castle, Northumberland, the former home of the Earls of Tankerville. In the 1930’s the 8th Earl decided that “the castle should die” rather than be taken over by another family, it did but recently was reconstructed by Sir Humphry Wakefield, a distant relative. The 9th Earl of Tankerville is said to be based in San Francisco, USA. Note: the Castle and Wild Cattle Park are now open to visitors. Tel: 01668-215359 and 01668-215250 respectively.

### Tarmac Sponsorship

The Tarmac Company have provided a £60,000 sponsorship package towards the cost of spreading 112 million heather seeds over 40 acres of the Stiperstones Hills. In total it is planned to restore 440 acres of heathland.

### Clay Report

English Heritage have circulated a draft report on the Clay Industries in their Monuments Protection Programme Series. The mines/ structures on Benthall Wood have been put forward for scheduling (see last issue of ‘Below’)

### Coal Site Listed

An area of ‘coal mining remains’ 350m north-west and 520m north of New Works Village, Telford has now been scheduled as an Ancient Monument. It includes the “earthworks, buried remains and machinery of an area of coal and ironstone mining - worked from at least the 14th Century”. An area of early opencast mining has been purposely included. The citation also states that an engine base and a

windlass have been found on the site as well as remains of wooden tramways. This is now one of 304 coal industry sites (out of an estimated 8,000 to 10,000 sites in England to be identified as being of National importance.

### Malcolm’s Drawings

Several of Malcolm Newtons drawings have been used in the new NAMHO ‘Mining Heritage Guide’ as a memorial to him. For details of the Guide see elsewhere in this issue.

### Recent Papers/Reports

1. A Moorland Make-over (restoration at Clee Hill Quarry, Hanson), ‘Quarry Management’ June 2000, pages 17-27.
2. Moorville Quarry (refusal of sand and gravel working, Lefarge), ‘Mineral Planning’, June 2000
3. BGS Guides - The Onny Trail, Ercall Quarries
4. Geology of the Sherrifhales Area. BGS Technical Report WA/96/80, by E.Hough, published 1997.

### New Book

Shropshire Geology, by Phillips & Stratford, publisher Phillips Tutorials. Price £4.95.

### Olympic Lamps

As the Olympics fade into history, you might be interested to know that a GR6S Protector Safety lamp was used to carry the Olympic flame during the Sydney 2000 torch relay - some 27,000km from Olympia, Greece to Sydney.

The IOC wanted a safe way of transporting the flame along with a back up, in case the torch went out.

This is not the first time mining lamps have been used for this purpose. For the 1956 Melbourne Games two lamps (on two separate planes) were used for the Flame.

Protector lamps were also used to carry the Peace Flame from Australia last year on a flight of the Royal Australian Air Force.



# The Elmore Process

by Richard Amies

## Introduction

In the 1890s the two Elmore brothers, Francis Edward, (b. Nov 9 1864 - d. July 26 1932) and Alexander Stanley (b. Jan 1 1867- d. March 4 1944), were operating the Glasdir mine, near Dolgellau, North Wales. Copper Pyrite (copper ore) was seen to be adhering to oil and grease which had accumulated on the processing plant. This showed that ore would adhere to these substances whereas wet rock would not. This stimulated Francis to experiment with ore processing techniques using this principle.<sup>1</sup>

Ore processing is the separation of ore from the waste rock and minerals with which it occurs.

On 18th October 1898 they patented their *Flotation* process, which was first used at Glasdir, then at Sygun, and at Clogau gold mine.

Subsequently they found that this “selective” action of oil was promoted by the addition of a small amount of acid, an addition that was patented in 1901.<sup>1,3</sup>

The basic idea of using oil to separate ore from waste was, in fact, already known and attempts had been made, by others, in 1892 and 1894 to develop a working plant.<sup>3</sup> The importance of the Elmore’s patent was not the discovery of the process, but the development, in Wales, of the world’s first viable, commercial plant to make use of the process.

## How the Plant Works <sup>3</sup>

On leaving the mine the material was crushed to the consistency of fine sand or smaller. At Sygun the Elmores erected a 20 stamp battery for this purpose. The crushed material was mixed with water to form a pulp which was then transferred to the “Elmore Oil Separator”.

The pulp was fed into the mixer, which consists of three cylinders about 3 metres long by 1 metre

diameter, placed vertically one above the other. Each cylinder contained a spiral blade to mix the contents. The cylinders revolved at about 6 r.p.m.

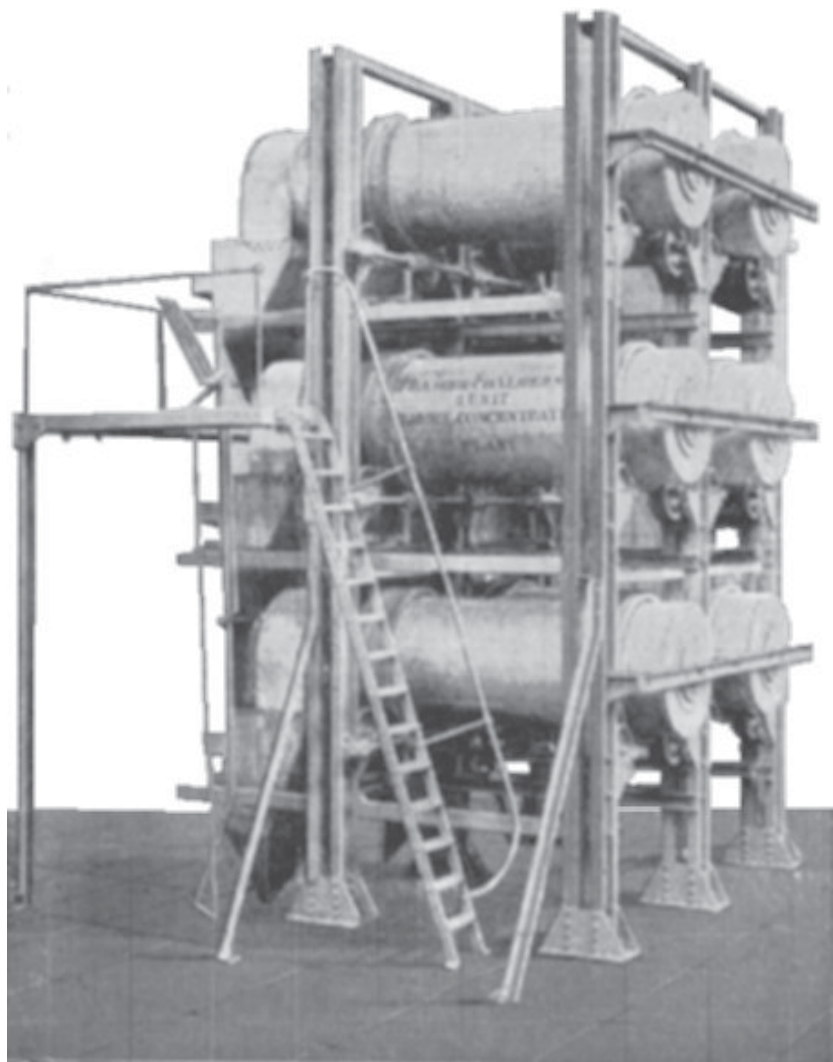
The pulp entered the upper cylinder with the oil and acid, if required. The oil used was a heavy mineral oil (American residuum oil, the heavy oil left behind after distilling off petroleum, was often used, and the acid was generally sulphuric). Apart from being ideally suited, this oil was also cheap to purchase.

During mixing the copper ore adhered to the oil, then the mixture was discharged into a pointed box, from the upper part of which the oil flowed off and the pulp was drawn from the bottom, into the next cylinder. The process was then

repeated, and repeated again with the lower cylinder, so that the pulp was agitated three times, each time with fresh oil.

The ore then had to be separated from the oil. A 48 inch (1.2m) drum centrifugal separator was used. This had solid walls and an inward projecting flange at the top. The centrifuge was filled with hot water, set spinning at 1000 r.p.m. and the oil added. The water formed a wall on the inside of the centrifuge due to the centrifugal force. This is the same force which makes the mud fly off a spinning wheel.

The copper ore was forced through the water to form a layer against the side of the centrifuge. The oil, being lighter than water, could not move through it and accumulated inside it



# The Elmore Process continued..

until it overflowed at the upper edge of the centrifuge. The oil flowed into a sump to be reused.

The mineral accumulated until the centrifuge was fully charged; a cover was opened in the bottom and the ore washed out and put through a 36 inch (90cm.) Centrifuge which removed most of the remaining oil.

The ore was then ready to be transported from the mine to the smelter. The ore usually retained 3 to 6% oil after processing.

Tests were carried out at Glasdir mine to compare traditional ore processing methods with the new Elmore process. These tests showed that the concentrates leaving the mine were worth nearly three times more with the Elmore process than with previous methods, because the Elmore process was much more efficient. This could easily be the difference between a mine being profitable or not!

## The Elmore Plant at Sygun <sup>1,2</sup>

As mentioned, the plant had 20 head of stamps to crush the material. These would have been similar to the 4 head stamps (half size) at Sygun today.

The plant also included four Wilfley tables, used for initial separation before the material was put through the Elmore concentrator.

A Wilfley table is a slightly inclined table with ridges across it. The table shakes from side to side as water flows down it. This action causes the ore to be shaken along the ridges, across the table, while the lighter waste is washed over the ridges and down the table.

There were 4 Elmore concentrator units, manufactured by Frazer and Chalmers, with a throughput of 100 tons per day. They were powered by a steam engine, situated in the

building that is now the shop; and 2 Crossley gas engines.

All that remains of the plant today are the foundations on the hillside above the shop.

## Developments <sup>3</sup>

In Australia the acid reacted with certain minerals in the ore, forming bubbles. This greatly increased the efficiency of the process and various attempts were then made to produce bubbles in the concentrators. This became known as **Froth Flotation**.

The Elmores developed their **Vacuum Process**. This used a partial vacuum which caused dissolved air in the water to form bubbles and rise to the top, carrying the ore with them. Although never used at Sygun the Vacuum Process was used at Dolcoath mine in Cornwall, where it recovered 92-96% of the available copper ore.

The vacuum separator was usually 5ft. (1.5m.) in diameter and used from 3 to 30 lb. of oil per ton of ore, depending on the ore being treated.

Froth Flotation is still used today as a standard ore processing technique.

## How Froth Flotation Works <sup>4</sup>

The theory of froth flotation is complex and is not fully understood. The following is, therefore, a simplified description:

The basic idea is for selected minerals to adhere to air (bubbles) in preference to water. Unfortunately the reverse is usually the case so chemicals have to be used which alter the surface properties of the ore minerals. These chemicals, called **collectors**, coat the surface of the mineral, and attract it to the bubbles.

**Regulators** are used to modify the action of the collectors, making them more selective towards certain minerals.

**Frothers** are chemicals which ensure the stability of the bubbles in the froth - the process would not be very efficient if the bubbles burst. Often a number of collectors, and at least two frothers, are used together.

Bubble size is between 0.1 and 1 mm, the size being controlled mainly by the frother. Flotation cells are now produced in sizes up to 85 m<sup>3</sup>, compared to about 10m<sup>3</sup> for the original Elmore cells.

## Conclusion

The Flotation process has come a long way since its development in the mountains of Wales. It is used world wide on many types of ore, and is even used on coal and in water purification plants.

Flotation has enabled the exploitation of many ore deposits which would otherwise have been impossible to profitably process and smelt.

## References.

1. A History Of Sygun. D. Bick.
2. Ore And Stone Mining. Sir C. Le Neve Foster.
3. The Dressing Of Minerals. H. Louis.
4. Mineral Processing Technology. B. A. Wills.
5. Ore Dressing. R. H. Richards.

## Sygun Copper Mine

*Beddgelert*  
Snowdonia LL55 4NE  
Wales

A Prince of Wales Award winning Mine, open most of the year - for more details contact us via:

Telephone: +44(0)1766 510100  
Fax: +44(0)1766 510102  
e-mail: SygunMine@cs.com

or visit our web site:

<http://ourworld.compuserve.com/homepages/SnowdoniaMine/>



## “Mary’s Fate” by Ivor Brown

Prior to 6th July 2000 I knew only that 5 female mineworkers had died in Shropshire mineshafts (it is said!) between 1860 and 1880, I knew the date, place, their surname and first name initial but little more. By the end of that day one of these meant much more to me.

That morning I was browsing through old “Colliery Guardian” Journals and came across a court case report (Nov. 18th 1865 p397) - a Chartermaster had been fined when a young girl, in charge of machinery, had fallen down a shaft. I noted this as it happened in Shropshire.

That evening, a meeting I was attending in Telford was delayed, so I remembered a telephone call received by my wife a year previous - could I call in and see a retired person who had an old diary which mentioned Shropshire pits (my thanks to Dave Adams for acting as middleman).

I called and the first thing I saw in this ‘diary’ was a handwritten poem or ballad entitled “Mary’s Fate”, which recalled “a legend of Paines Lane, St. Georges”. This described how a pit girl, Mary met her death in a mineshaft.

Could this poem written in 1878, recall an incident 13 years earlier when ‘M’ Taylor, the only initial that could be ‘Mary’ died in a shaft at Wombridge? Was this the case I had amazingly just read about in the Colliery Guardian? Although a strange coincidence I think that it all fits in.

The poem or ballad is a long one written it is believed by an old lady ‘E.M.Waldron’ on January 1st 1878. The lady was a relative of my host that evening.

It begins with a long preamble setting the scene - “it was an autumn eve, golden and fair”, the village “youths and maidens were at play”. As darkness fell they went “home to bed” and the “day-time toilers knelt

- to thank God - and then sleep the weary eye beguile”.

But there were others, who would work through the long, dark night:

“Outside, the boiling mass might yet be heard,  
Where mines and mills allowed no night for sleep,  
The engine puffed and groaned, the chains did give,  
And dragged the troublesome water from the deep,  
And on the summit of the hill hard by  
A lamp, of girl in wild weird brightness, burned,  
And by its light her task did Mary ply,  
While grating wheels and rattling pulleys turned  
She stood above that awful pit and gave  
Her signals for the engineer to see  
All thro’ the night much loss of time to save  
She loosed the valve and set the waters free  
Was Mary sleepy on that Autumn eve,  
Or did she envy those who slept at home,  
Or did her fancy take some love lit flight  
Or dream of gladsome days and night to come,  
I know not, but she walked into her grave  
Down deep into its cavernous depths she fell,  
And met a fate whose sight appalled the brave,  
An awful fate, no tongue could haste to tell,  
Oh twas sad to see, the deathly pallor of each stricken face,  
As she was bourn by torch light to her home,  
An awful spell controlled that measured pace  
Each footstep seemed to speak of that sad doom.  
One shriek rose wildly on the midnight air,  
And then a swoon and hurrying through the hall,  
The ghastly sight no mother’s heart could bear”

And so it goes on - for several more long verses, with vivid description of the mourning and the funeral service - it concludes:

“Yet none will help but shudder when they think  
Of Mary’s hapless fate”

What more do we know now about poor Mary? The Mines Inspectors report tells us that on 31 August 1865, a bankswoman ‘M.Taylor’ was killed by falling down the shaft of an ironstone mine, part of a Colliery owned by J.Bennett at Wombridge.

Then the Colliery Guardian reports the case, John Woodfin, the Chartermaster was fined for allowing “a female to have charge of the machinery contrary to the provision of the Act”. The colliery owner John Bennett was also charged but acquitted. (He was however charged in the Court on another issue - that he did not notify the inspector of a fatal accident at another of his mines within 24 hours of it occurring. His reply was that the victim was still alive when he left the mine, and must have died afterwards. He was fined £1). John Bennett is known to have been a harsh employer.

So what was Mary doing that ‘long dark night’? It appears that the engine was winding water in containers and her job was to “loose the valve and set the waters free”, then to signal to the driver when this was accomplished - but she slipped.



## “Mary’s Fate” continued

## The 5th International Mining History Conference, Milos, Greece, 12-15 Sept. 2000

### Footnote

It is now almost certain that Mary was the M.Taylor of the Inspectors report, but no mention of the incident was found in a recent search of the local paper - the Wellington Journal. However the Registrar General’s Index of Deaths mentions only one ‘M.Taylor’ dying in Shropshire in August 1865 - a Mary Ann Taylor. Further details about her should be available in the Wellington Registrars Office (ask for copy Certificate from Vol. 6a, p481. Price £6 collected, £9 by post). This should give her age (I suspect she was too young to be doing such work legally) and much more, unfortunately ages were not added to the Registrar Generals Index until June 1866.

### Kelly Mine

On September 10th, 2000 the Kelly Mine Preservation Society held an Open Day to show what they had managed to achieve at the site.

The group have been working for a number of years to preserve the mining remains of this “Shiney” ore mine.

On the surface the mine machinery includes items such as stamps, ore washing strips and a furnace. Power for the site is provided by a water turbine and waterwheel - both of which can be demonstrated when there is sufficient water available.

On the hillside above the dressing floor are a number of adits, which can be explored to some interesting stopes (see ‘Below’ 88.4)

This Devon mine is alongside the A382 between Bovey Tracey and Moretonhampstead, half a mile south of the Lustleigh junction. There used to be a very interesting web site for the mine, but sadly this has disappeared recently.

If you want more information about the mine contact Tony Brooks, Tel: 01626 834261

Members may remember that at the 4th Conference held in Mexico in 1998 a bid was made by the British contingent to get the title ‘5th’ Conference attached to the Special NAMHO Conference planned for July 2000 at Truro, Cornwall. This bid was opposed by the Americans who supported an offer of sponsorship by the American Company, Royal Gold Inc. (who were trying to persuade the Greek Authorities to give them planning permission to open a gold mine on the island of Milos). With promises of financial support from this company behind them - and no special offers from the UK, the Americans obviously won.

So it was that in Sept. 2000 about 130 delegates, plus some 80 ‘locals’ met on Milos Island, 90 miles from Athens (a 4½ hour ‘high speed’ ferry trip away).

The meeting also marked the opening of a rather fine Conference Centre, a conversion of former derelict industrial buildings, done at the expense of local mining companies and offered as “planning gain” to assist the island’s tourist industry. Unfortunately the buildings lie about 1 mile from the delegates accommodation which was found something of an inconvenience in the hot sun!

The delegates were mainly Greek, Americans, Australians and Canadians, about 8 Japanese, 7 British and smaller numbers of other nationalities. There were some surprising absentees - no Germans for example. All the 7 papers on the first day were about Greek Mining or Greek sites, there were some 24 papers on the second day and about 28 papers on the third day - on these two days parallel sessions were operated.

Subjects covered varied widely from ‘Ancient Celtic Mining in America’ to ‘Japanese Metal Mining Activities and the future’. Of the 59 speakers, 12 were Greek including 4 from the

sponsoring company but many gave their papers in English!

Unusually this year there were several papers given on “modern” mining practices including recent attempts at land reclamation in Milos, maintaining access to underground workings for recreation, new uses for old industrial buildings and compatible conservation and restoration of a sulphur mine treatment plant.

A visit was made to the Milos Museum of Mining, recently refurbished by the sponsoring company - and covering the mined deposits of Milos obsidian, sulphur, kaolin, perlite, alum, barytes, bentonite, building stones and of course the hoped for ‘gold’.

Another evening visit was made to the sponsoring company’s extensive bentonite open pits and dressing plants and a full days geological field trip by boat around the island.

Some delegates discovered some disused underground gypsum workings near the Conference Centre and about half the delegates completed the meeting with a post conference tour of the Laurion Silver-lead mines near Athens. These workings are in amazingly complete order even though they range in date from about the 5th Century BC to the 1980’s. Surely the Laurion area deserves to be a World Heritage Site.

It was an interesting and educational conference but was quite expensive (and no ‘sponsorship’ of delegates was evident despite promises). It was well organised but failed to keep to time because of weak Chairpersons and failure of some speakers to turn up. A ‘business’ meeting was held to discuss these points and of course to decide the venues for further conferences. Offers were made, and accepted for the 6th Conference to be in Japan in 2003 and the 7th in Canada in 2006.

*Ivor Brown*



## W.W.Smyth Mining Character Series No.9

During a break at the NAMHO Conference the writer visited Truro Cathedral and found the memorial tablet to W.W.Smyth. It makes interesting reading, but makes no mention of his early days as a mining geologist in Shropshire. For details see 'Below' Spring Issue 1997, pages 6 and 7.



To the Memory of  
Sir W.Warington Smyth  
of Marazion, Kt. M.A. F.R.S. F.G.S.  
Born 1816, Eldest son of Admiral W.H.Smyth  
Educated at Westminster and Sedford,  
Scholar of Trinity College, Cambridge,  
Mining Geologist to the Geological Survey,  
Chief Inspector of Mines to the Office of Woods;  
Professor of Mining at the Royal School of Mines,  
Mineral Advisor to the Duchy of Cornwall,  
Chairman of the Royal Commission on Accidents in Mines,  
For Fifteen years President of the Royal Geological Society of  
Cornwall  
and one of the First Members of the Building Committee  
of this Cathedral Church.  
After forty five years of devoted Public Service,  
Distinguished in Science and in the Arts,  
He died at his post 19, June 1890, and is buried at St.Erth  
Also of Anna Maria Antonia, his gifted Wife,  
Gold Medallist of the Royal Geological Society of Cornwall,  
Born 1827, 3rd Daughter of Anthony Mervin Story-Maskelyne,  
Esquire, F.R.S. of Basset Down, Wiltshire,  
Died 21, Jan 1909, and was buried at St. Erth.



## Towards Comparative Coalfield Histories

**Regional Conference of the Society for the Study of Labour History** to be held at the University of Glamorgan in *Spring 2002*

Much is familiar about the history of miners, their unions and their industrial struggles. However, with the demise of trade union and labour movement histories it could be argued that there is a need for a rethinking of approaches to the subject. The proposed two-day conference will encourage one such approach by focussing upon the comparative history of 'coalfield societies' – for long a favourite term of description, but much less commonly a rigorously defined category of analysis.

We intend to group some fifteen to

twenty papers together into three separate, although interlocking, strands: '**communities**', '**identities**' and '**organizations**'.

Proposals for papers are requested by the end of this year.

Please contact -

Prof. Stefan Berger,  
Professor of History,  
Dept. of History,  
School of Humanities and Social  
Sciences  
University of Glamorgan  
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01443-482353 (secretary)  
Fax: 01443-482138

E-mail: S Berger@glam.ac.uk

## Conference Call

### The Application of Water Power in Mining

A mining history conference to be held at the University of Wales, Aberystwyth, UK, July 2002.

#### First call for papers.

Water has proved a hindrance to mining since its inception but it has also been used to the benefit of operations from antiquity until the present day.

The positive use of water power was initially limited to the hydraulic working of alluvial and soft rock deposits. By the late medieval period it had been applied as the motive power for pumping and other processes ancillary to mining. Its heyday came during the nineteenth century when waterwheels and turbines provided the power for a range of applications on mine sites across the world.

Papers are invited on the subject of the application of water power in all aspects of mining from across the world. In addition to examples of its application based on archival and archaeological research, papers are particularly requested on technological innovation and the economics of water power.

Outlines of papers for submission should be sent to the conference co-ordinator:

Peter Cloughton, Blaenpant Morfil, Rosebush, Clynderwen, Pembrokeshire, Wales SA66 7RE e-mail P.F.Cloughton@exeter.ac.uk

This conference will be the central theme of the UK based National Association of Mining History Organisations (NAMHO) meeting for 2002, hosted by the Welsh Mines Society, with a full programme of related field trips and underground visits.

Further information will be on:  
[www.exeter.ac.uk/~pfclaugh/mhinf/namho\\_02.htm](http://www.exeter.ac.uk/~pfclaugh/mhinf/namho_02.htm)



# Northern News - 1

Submitted by Alan Vickers

## Nesham Map

A massive old map, dated 1817, showing the route of the former Nesham wagonway, has been donated to Sunderland Museum. Up to now the earliest known map was one which was used when the wagonway and collieries were sold to John Lambton, later first Earl of Durham, in 1822 and museum bosses had no idea that this map existed.

This wagonway ran from the Nesham Collieries at Success, through Philadelphia and West Herrington and then to the staithes at Sunderland.

On 13th July 1815 William Brunton's 'locomotive that walked' exploded on this wagonway, killing fourteen people and injuring many others. Later, in 1818/19, stationary steam engines were introduced on the wagonway to haul the wagons of coal to Sunderland.

## The Nesham Railway

### *New find helps to map out industrial history*

A fascinating insight into the earliest development of railways on Wearside is in the hands of Sunderland Museum bosses.

A massive map, dating from 1817, shows the route of a wagonway linking pits around Newbottle to the River Wear.

It was donated to the museum by Sunderland woman Elizabeth Parr, and has apparently been in her family's keeping all this time.

Sunderland City Museum senior curator Neil Sinclair is delighted with the latest addition to the collection.

"This was the first wagonway from what was then the limits of the Durham coalfield out towards Philadelphia to the staithes on the River Wear," he said.

Although other plans of the route

exist, this is the oldest and also the most detailed yet to come to light.

"There are not all that many plans of this particular wagonway still in existence," said Neil.

"There is one which dates from 1822, when the collieries involved were sold to John Lambton, later first Earl of Durham.

"We had no idea this map existed, and we are very grateful for this donation."

At the time the hand-drawn map was made, wagons would still have been pulled by livestock, but the days of literal horsepower were already coming to an end.

"In 1818/19, they actually replaced the horses with steam engines, though they were not locomotives. These were fixed engines which were used to haul the wagons," said Neil."

Accompanying the article was a photograph with the text: "Glimpse of the past: The 1817 map showing the route of a wagonway linking pits to the River Wear."

The photograph is by Tony Colling/No. 61246.

*Kevin Clark*

*kevinc@northeast-press.co.uk*

*Sunderland Echo*

*Friday 22nd September 2000*

## Mainsforth Colliery

### Memorial

A memorial for Mainsforth Colliery miners has been created in the North-East. The memorial takes the form of a plaque mounted on a large block of stone in a local park.

*The Northern Echo*

*September, 2000*

## Former Ryhope Colliery Workings

### *Tests fail to unearth reason for tremors:*

Mystery still surrounds the source of a series of strange tremors which rocked Ryhope.

Specialist equipment was buried beneath the village last year after residents complained that "mini quakes" had shook their homes. But after eight months of monitoring the area no underground movements have been recorded and the probes which were dotted around Ryhope have now been removed.

The Coal Authority, which commissioned a team of geologists to find the cause of the phenomenon, has promised that if any further quakes are reported it will reopen the investigation.

## Colliery Blamed

Many residents blame the rumblings on old workings at the former **Ryhope Colliery**, which closed more than 30 years ago, but a natural fault in the earth's crust could also have played a part.

Ryhope is known to sit on a geological fault which runs from Tunstall Hill to Burdon Road, but the probes in the ground found no evidence to support the claims.

Last year, more than 30 villagers complained to the Coal Authority that they had experienced the quakes.

British geological Survey workers have been monitoring the rumblings as part of a survey of the state of Wearside's old mine workings.

Their investigation also failed to uncover a cause for the tremors.

*The Sunderland Echo*  
*Tuesday 22nd August 2000*





## Northern News - 2

Submitted by Alan Vickers

### St. Hilda's Colliery

*The 'Sunderland Echo' for Friday 11th August 2000* carried a photograph and report which said :

Another site, dating from the turn of the century, has received a Lottery grant amounting to £43,200, this is St Hilda's Colliery, South Shields.

The grant has helped fund the restoration of the pumping engine house and headstock platform as well as assisting landscaping and displays.

### Additional Facts

St. Hilda's was a single shaft mine. It is thought it had a shaft known as the 'Pigeon Well' which at one time was a source of part of the water supply for South Shields. The reference to 'pumping engine house' could refer to the pump drawing from Pigeon Well.

In a document produced in 1941 '**Water Supply from Underground Sources, Part III, Well Catalogue**' the well was recorded as being disused and had a depth of 90 feet.

### Museum CD

The Tom Leonard Mining Museum, in Skinningrove, East Cleveland, (UK), has produced a CD-Rom of images of the mining era from the museum's archives.

The product was the idea of Brotton photographer Sarah Browning and contains photographs of the old ironstone mines, the ironstone miners, and photographs of the surrounding area. The oldest photograph dates back to 1880, and most are from the early 1900s. Most of the images have been left unedited. Some show their age through blemishes and some are in good condition, while others have been digitally improved.

The CD-Rom is **£10.99** and is available from the museum, or from Sarah at **Beachcomber Photography**,  
Tel. No. - 01287 676 362

### Easington Cage

A poignant reminder of an East Durham village's industrial heritage has been unveiled.

Once used to plunge hundreds of miners into the dark depths of Easington Colliery, the pit cage is now perched on the crest of a hill overlooking the former pit site and coal-blackened beaches.

The 30ft-high structure was restored after being rescued from the scrapheap and has been reinstated as a piece of art above the surface of its original location.

But the 12-tonne pit cage is only part of a major transformation of the old colliery site.

### Coastal Project

Turning The Tide, an ambitious £10 million project to restore the Durham coastline after decades of colliery waste tipping, has landscaped the old pit site and is busy turning the area into a public park.

Only seven years ago, Easington Colliery employed 1,100 man and the area is still struggling to recover from the huge job losses. The colliery was the scene of one of the worst mining tragedies the area had seen when dozens of workers perished in 1951. But despite its chequered past, community chiefs are keen to remind the close-knit community of its rich mining heritage and the cage plays a large part in this.

Easington District councillor, Dennis Raine said: "This is only the first phase - we are hoping to gather pieces of mining equipment to create a kind of outdoor museum.

Eventually, we hope to lay a length of rope which will measure the depth of the shaft so people can walk along it and see just how far down we had to travel to go to work.

We now have bairns starting school that have no memory of the colliery.

We want to preserve this piece of heritage for generations to come.

Councillor Raine was one of dozens of people who gathered at the site to see the unveiling of the cage yesterday and said the occasion was particularly moving because he worked in the pit from the age of 14.

"I used to use the very same cage when I worked in the pit," he said.

"It was a bit of a shock to see it - although I had used it for years and realised it was made up of three decks - I hadn't seen it out of the shaft!"

"It was found in a council yard at Horden and was in a very sorry state so it was very good to see it in mint condition again."

The cage was dedicated by the Rector of Easington, Rev Neville Vine, and children from Easington Colliery Primary School led a procession up to the site with music and dance."

*Sunderland Echo*  
*Wednesday 16th August.*

### Salt Works

I was quite surprised to find that there was a salt works at **Lambton D pit** at Fence Houses. The salt came from a spring in the shaft and at one time the output was such as to threaten the livelihood of the salt pans at South Shields.

I found out about this as a result of a question from a lady in Australia which was in the Family Tree Magazine. Her ancestors had lived at Lambton and had operated the salt works. I corresponded with her for quite a while and eventually had quite a bit of information.

*Alan Vickers*

*The results of Alan's research on the Salt Works will appear in the next issue of 'Below'*



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, by Ivor Brown

This series of notes has already dealt with mines of clay, ironstone and coal around the outcrop of Silurian Limestone at Lincoln Hill.

Additionally, the tunnels to be found on the 'barren' western side of the Hill, those of Coalbrookdale, have also been discussed. Lincoln Hill itself, however cannot be ignored in any respect for it dominates the Gorge and its history has been so descriptively recorded.

George Price, c1758, saw the limestone workings as a vast pit, Young in 1776 described the inclined wagonways, Plumtre in 1793 mentioned its "many mouths", "fine arches" and "rough pillars". Plymley in 1794 saw it as a "vast cavern", Gilpin (1796) as a "tremendous cavern", Warner (1801) as "yawning caverns" and an anonymous writer in 1801 as "prodigious caverns supported by several stupendous pillars". This situation continued right through the 19th century and, as well as diarists, geologists and 'industrial spies' the hill was an attraction for artists.

James Fittler, the artist, in 1788, was followed by others, especially between 1795 and 1825, including Turner, Lewis and Dunn. The first known mining photograph in Shropshire by G.Maw in the early 1860's shows Lincoln Hill Quarries .

The geology and history of working of limestone at Lincoln Hill is recorded in the Club's Account No.13 "An Interim report on the Lincoln Hill Limestone Mines" produced by the present writer in 1981, and this was updated (including details of the investigations and infilling operations of the 1980's) in "The Underground Limestone Workings at Ironbridge, Shropshire", published in the Bulletin of the Peak District Mines Historical Society Vol.12 No.6, Winter 1995. It is not intended to repeat this information here but only to outline the situation with regard to the known mine entrances.

The methods of working have been studied by the writer and seem to follow the pattern:

- pre 1650** - pitting and adit working
- 1600's - 1760** Quarrying of the limestone outcrop
- 1760's - 1810** Excavation into the quarry faces
- 1780's - 1870** Underground mining beneath the upper quarry
- 1790's - 1890** Deep mining to the south east of the quarry
- 1880's - 1908** Robbing the pillars beneath the upper quarry.

The entrances to the limestone included caverns (used to remove the high quality ballstones), long adits from the bottom of the hill and short adits from the quarry itself and shafts. Evidence, or examples, of all of these survived until the 1950's and some of the shafts were still open until the 1980's.

For haulage, donkeys and sledges appear to have been used underground (seams of 'walkers earth' clay in the limestone tend to make transport routes very slippery), while ponies, rails and inclineways were used at the surface. There is a photograph of a conventional 19th century shaft top with headframe, 'rattle-chain' and steam winding engine at one of the shafts in the 'East Shropshire Coalfields' page 64.

As well as the mine plan of accessible workings produced by the Club in 1972 two earlier plans were located during the investigations of the 1980's. A sketch from one of these, taken from a report by Wardell-Armstrong, Consultants, showing also the workings and shafts surveyed by the Club in the 1970's, is attached (see Figure 1).

The original map showing the mine layout is undated, but must be pre-1900. It does not show the adit used for robbing pillars near the White Horse Inn in the last period of working.

A geological fault structure, which

may have a throw of up to 100ft, passes through the hill such that the limestone could be easily quarried to the west and yet had to be accessed by shafts over 100ft deep into underground workings to the east. The seam worked was up to 40ft. thick but also steeply dipping eastwards at about 30°.

There is a long record of surface collapses, despite the apparent depth of cover and the most recent occurred in 1982. The fear of collapse has also produced the abandoned modern bungalow which can still be seen on the hill.

At least one of the shafts on Lincoln Hill passed through the basal beds of the overlying coal measures and from this shaft both coal and limestone have been worked. Coal could actually be seen in the fault plane visible underground.

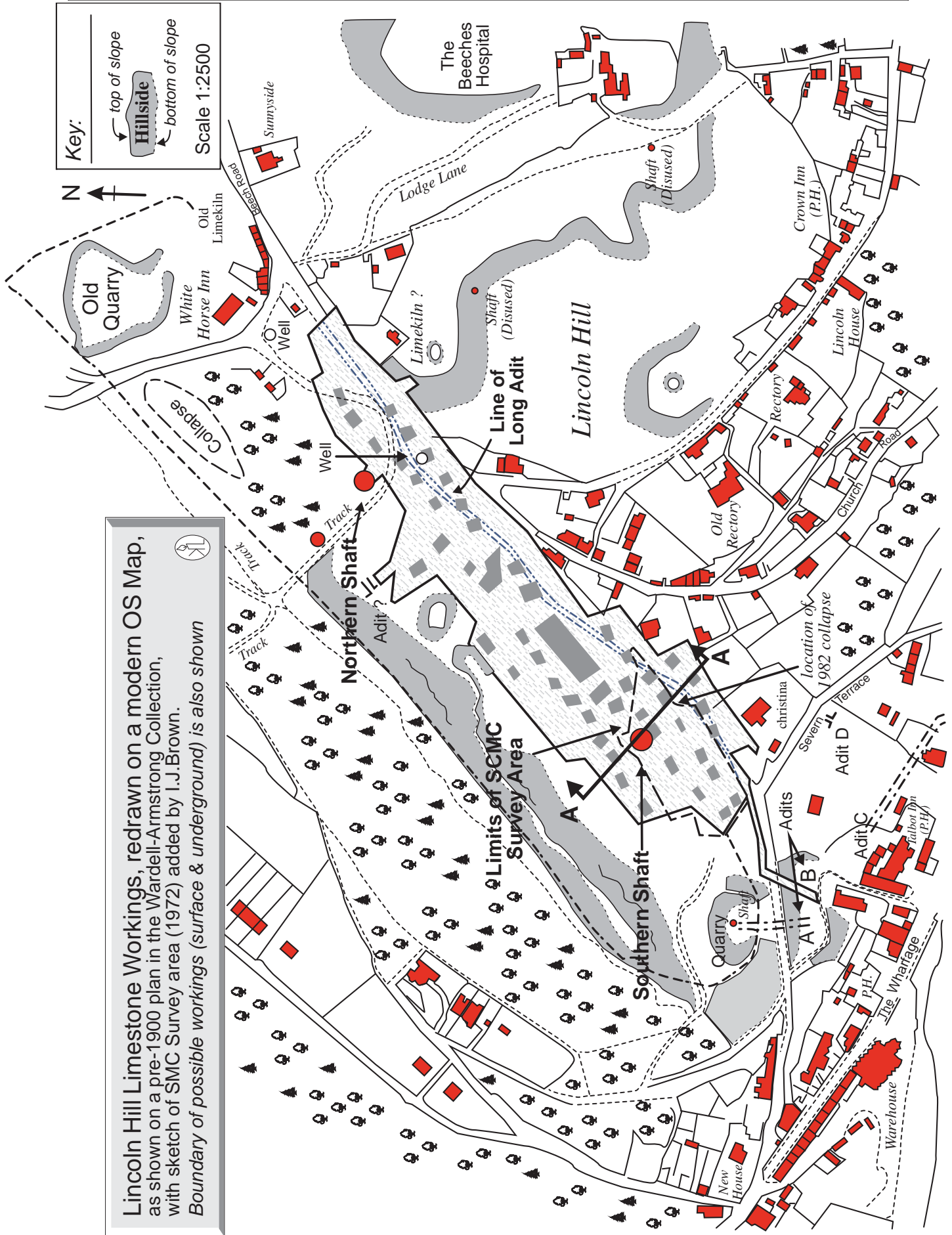
Parts of the abandoned limestone quarry are still accessible particularly near the White Horse Inn (although the 'hole' is more likely to be due to collapse of old workings) and at the southeasterly tip of the Hill. This latter location also gives a good idea of the geological dip of the measures and there is a shaft in this floor which leads to a tunnel (Adit A) that comes out just below in the hillside (see Figure 1 and 2). Before the quarries were filled with refuse and foundry sand in the late 1950's, the large 'ballstone' caverns could be entered from the sides of the quarry walls. The dip of beds in the quarry and the cavities can be seen clearly in the 19th Century engraving shown on p62 of "East Shropshire Coalfields".

There is also some rough ground behind the White Horse Inn (to the north) which contains the remains of a limekiln and this area may also have been disturbed by mining and quarrying.

At the southern end of the working area there are three recorded adit locations. Adit A ('mouth of level' on the 1849 Tithe Map) has already been referred to, it still remains



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, **Figure 1**



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, continued

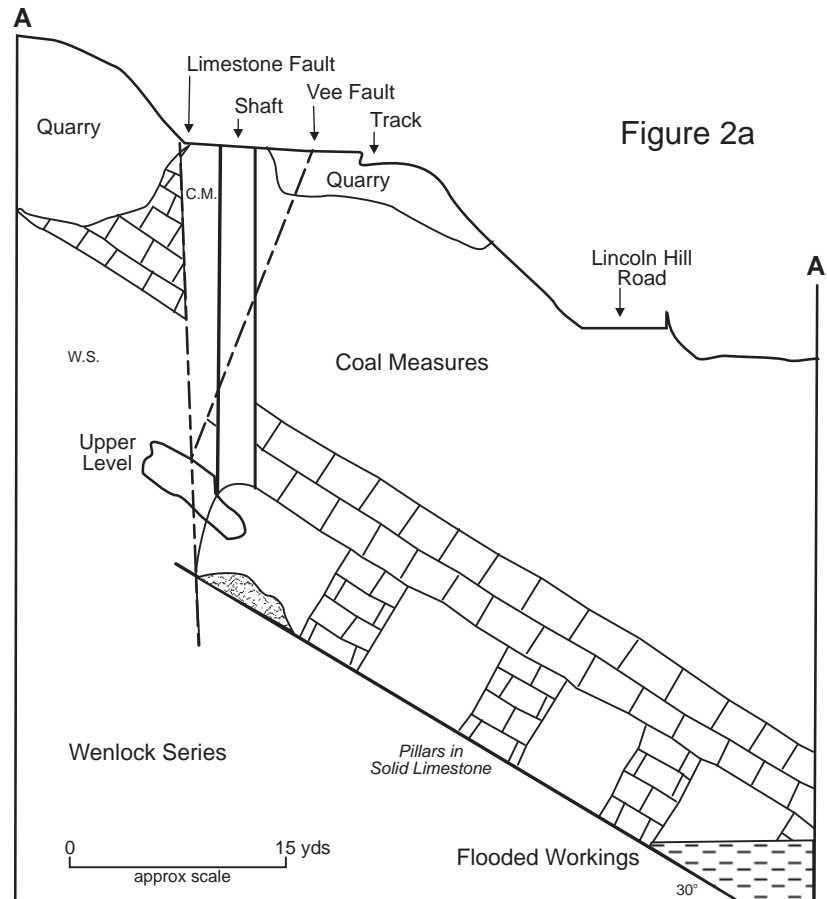
accessible for 40 yards and is believed to be the residence of bats. At its inward end there is a large heap of broken stone, whether the tunnel continues behind this is not known. It could be that material was dropped down the shaft from the quarry to be loaded here and then taken out to the limekilns directly below the adit mouth. These kilns have been cleared and conserved in recent years. A photograph of Adit A is shown on page 63 of "East Shropshire Coalfield".

Adit B is probably located at the far end of the bulging wall behind the present-day small factory and can be seen on the 1849 Madeley Tithe Map (Figure 3) at the position where a tramway enters the hill. This also seems to be the southern extremity of the long adit shown on both the early mine plans of the workings. This had not been appreciated at the time of recent investigations and treatment of the workings so that no work was done on this, the lowest known point of the workings.

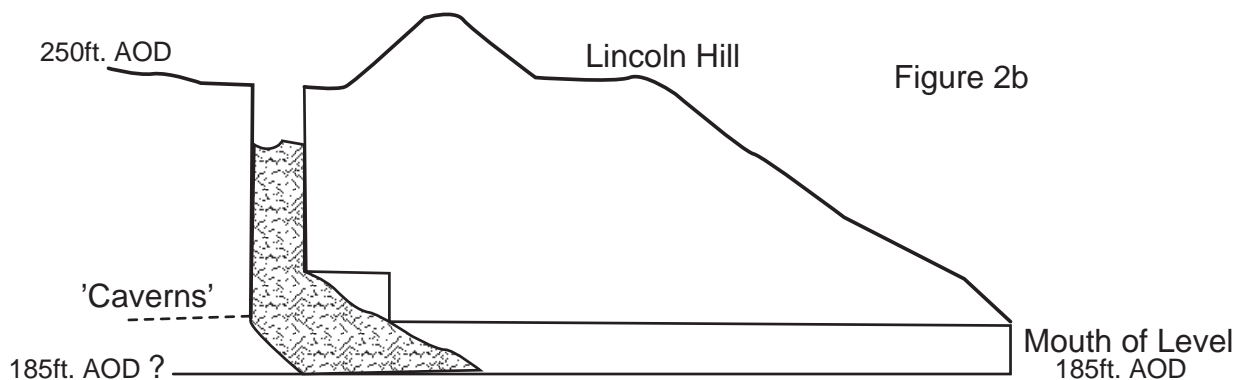
Figure 3 also shows the arrangement of the limekilns in this area in 1849. It is often difficult to differentiate between kiln "openings" and mine 'openings' at first sight. The long adit is shown to traverse the whole length of the Hill, to a point near the junction of Church Road and Beech Road (by the White Horse Inn) on the old mine plans, a distance of about 140 yards.

It meanders slightly through its length, but has not yet been located from either surface or underground. During the 1860's this adit was used as a "show mine" and an interesting account can be obtained from descriptions given by John Randall in 1863 and a Field Club in 1868 (see Note 2).

Adit C gives entry to an underground horse tramway which has been surveyed and is dealt with in the next part of this series. The adit has a caption dated "1800" and was obviously used for the transportation of stone from this mine towards the Iron Bridge. Adit D is not likely to be connected to the mine and is also dealt with in Part 14.



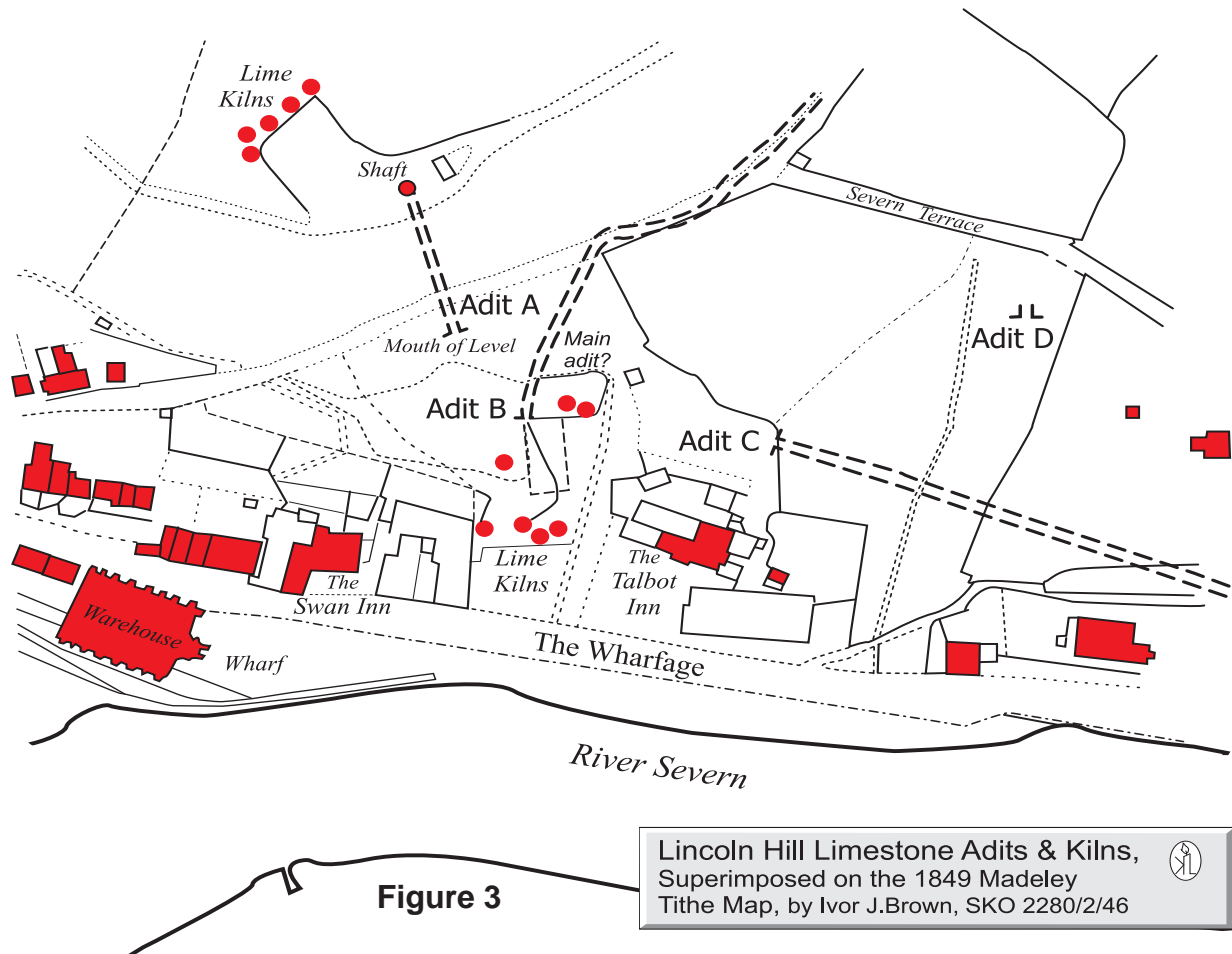
Lincoln Hill Limestone Mines  
Section AA from Shropshire Mining Club survey, 1974



Lincoln Hill Limestone Mines  
Section through the adit and southernmost shaft  
Surveyed by Shropshire Mining Club, 1974. Scale approx 1:400



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, continued



**Figure 3**

The quarry shaft at the southern tip of the Hill is now filled with debris but its location can still be identified. It is shown in Figure 2 and was probably no more than 65ft. deep. It is interesting to note that if this was a “glory-hole” shaft and tunnel quarry system, then its principle is being practiced, in a similar scheme developed in the 1970’s at the Criggion Quarries in North Shropshire. The 1849 Tithe Map also shows a group of limekilns in the vicinity of the quarry shaft.

### Southern/Middle Shaft

The Southern Shaft (or ‘Middle Shaft’ in the Club records), was the one which until recently gave access to the underground workings. The shaft was first descended, in modern times, on February 5th 1972 by a party of Club Members including the writer. It was 33.5m deep, the bottom 9.1m being in open chamber (the seam thickness taken being

accentuated by the angle of the beds). The top 15.2m of the shaft was lined with brick, about 2.4m diameter, but the remainder was in solid rock. The mine consisted of extensive pillar and stall workings dipping steeply at an angle of 30 to 35°, E 40° S. At the bottom of the dip the mine was flooded (but on other visits dry).

The workings appeared to be 8 to 9m high and there was slight evidence of a second shaft which had run in. An attempt to blast this shaft open, from the bottom up, using explosives, failed to move the filling. No surface indication of this second shaft has been found although the consultants believed, based on a circle on an earlier map, there is one. It is likely however that this circle represented a limekiln position as there is a bank of kilns and a short tramway shown on the 1849 Tithe Map in this location.

At the time of the writers later visits

(this time by consultant’s bosuns chair and winch) in the 1980’s it was seen underground that substantial collapses had occurred. A wider investigation, involving 11 boreholes to a depth of 73m was carried out to determine the extent of old workings. Cavities located by these were studied on closed circuit TV, or, where possible, examined from underground.

The problem areas were then classified into 4 groups according to the degree of risk to surface features. The treatment recommended for the areas of higher risk was for backfilling with bulk fill of the lower level workings and filling in the upper level voids with gravel.

In 1987 the lower level workings were backfilled using a PFA/cement paste through five boreholes. A gravel layer had been put in place previously to provide for drainage.



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, continued

Nearly 30,000 tons of material were used and the cost was about £308,000.

Next the upper workings were treated and this involved drilling 55 boreholes, increasing the diameters from 115mm to 215mm in all boreholes where cavities were located. Gravel was then poured down the boreholes through a 30mm aperture mesh. Some 3,600 tons of gravel was used at a cost of £237,000.

Great care was exercised to ensure that all cavities were filled to the top, this was done in part by monitoring the infilling on TV cameras and watching these, where fitted in the high spots, being engulfed by the rising fill.

The total cost of dealing with the old limestone workings at Lincoln Hill has been £1,307,000 this included all site works, investigation and administration costs. The engineers now claim that all crown-hole risks have been eliminated as far as reasonably practicable, the possibility of any future, significant, settlement affecting the public highway is remote and the 'blight' on some eight private houses has been removed.

## Northern Area

Alongside the track in the northern part of the site there were three shafts, the one nearest the Lincoln Hill Road is shown as a 'well' on OS Maps but photographs show it to be much more substantial than this. A picture, probably dating from the 19th Century (see Photograph 1), shows the junction with Hodgebower and an unusual gas-lamp (the White Horse Inn is off to the right of the picture). There have been collapses in this area and nothing remained visible here in the 1970's.

The middle shaft of the three is believed to have been the most important, with a steam winding arrangement, and was seen to be open to about 15ft when it was

blocked by an old car body in February 1972. Two iron 'curbs', as used when bricking shafts, were also found here. This shaft has since been covered with a concrete cap. The third shaft was identified, but filled with rubbish in 1972 and it is likely that it was used in conjunction with the shallow adit workings.

Near this latter shaft there was an adit, but the actual location has not been found although several early accounts refer to it. In 1894 the Caradoc Field Club visited the workings, then being operated by the Madeley Wood Company. They entered by a long, steep flight of steps, which led to large and lofty chambers where they met the miners working in candlelight.

A Mr. Perkin also wrote of a visit at this time remembering in particular a bell system that was used to indicate to the miners at the face that someone had entered this mine. At this time the mine employed about 3 men and produced about 500 tons per year. The stone was brought out by an antiquated steam engine and chain using men "borrowed" from

the M.W.Co's other mines for a few days or so at intervals. A photograph of this is given in "The East Shropshire Coalfields", page 64. North of this shaft there was also a bank of limekilns as shown on the Tithe Map.

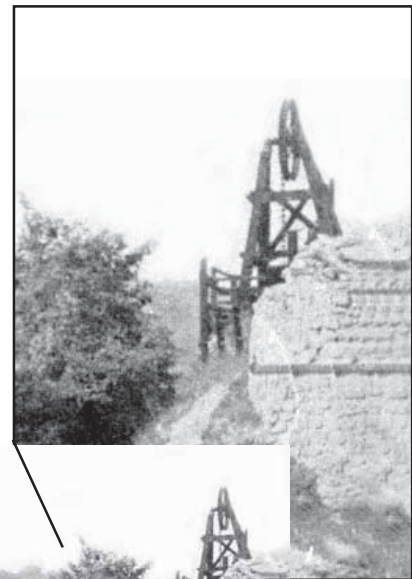
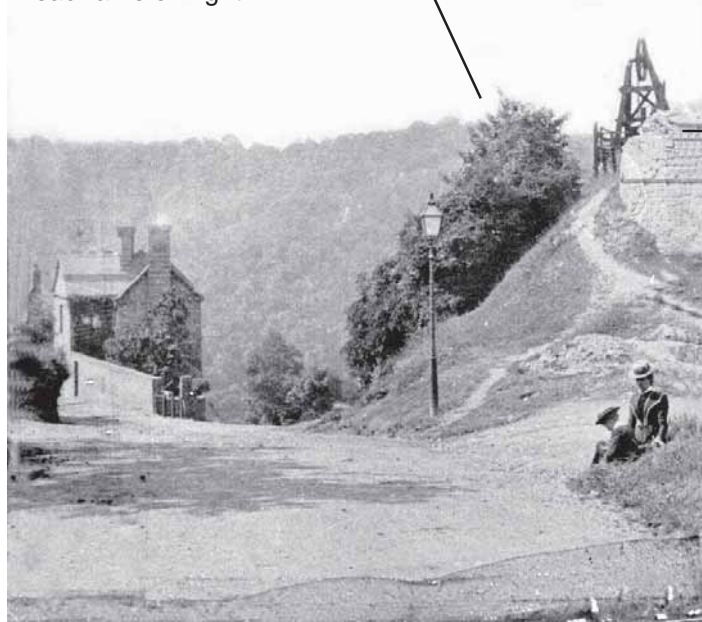
There are also at least three 'wells' shown on the 1880 OS map in areas possibly above the underground workings, these may have entered the mine but none are now accessible. In all probability these were just shallow wells, but a possible connection cannot as yet be ruled out.

## Other Remains

Other evidence of the limestone workings can be found around the White Horse Inn. There is a large collapse behind the roadside wall opposite the Inn and rough ground

### Photograph 1:

Junction of Hodgebower and Church Road circa 19th Century. **Note:** substantial headframe on right.



# Mines & Tunnels of the Ironbridge Gorge, 13: The Lincoln Hill Limestone Mines, continued

behind it which have already been mentioned. There is also a probable limekiln in the Lodge Fields south of the Lincoln Hill Road/Beech Road and local folklore mentions that the mines penetrated this area too. Boreholes put down by the writer in the 1970's for the Development Corporation did not however indicate any such workings for limestone.

Near the top of Church Road there is an outcrop of the Walkers Earth seam and local tradition has it that a shovel was kept in a cutting here so that workmen, returning to Madeley from the Coalbrookdale Works could fill their empty lunch boxes with the mineral to take home to their wives.

This would be used at home as soap, to soothe the baby's bottom and as a paste for cleansing skin. Also there is a gate which leads out the path along the Hill. This was made as a 'Sabbath Walk' by local employers, it was planted with unusual trees and arbors, seats and a 'rotunda' provided. A project is now underway to restore this walk.

There are still many questions to be answered regarding the Lincoln Hill workings, the 6 areas of limekilns

(and the single kiln in the lodge Fields) have never been properly surveyed, the two known engine houses have never been located and, despite the efforts of consultants, there are still doubts as to whether all adits and shafts have been "made safe". Further, despite the many boreholes the full extent of cavities is still questionable, although about £1.5 million has been spent on making them safe.

One wonders what the old miners would have made of this. In the 1770's the limestone miners were earning 16 old pence per day (6 new pence), in the 1840's it was about 3 shillings per day (15 new pence). This was generally about 75% of what the coal miner got and the limestone miner's job was considered much more hazardous. At its peak in the 1840's the cost of getting the stone and delivering it to the surface was a half crown per ton (12½ new pence). Even allowing for inflation the cost of putting back material has outstripped the face value of extracting it many times over.

*[It would also be interesting to compare the estimated value of the extracted limestone with the cost of filling in the 'holes', Kelvin]*

## Note 1

A full list of references is given in "The Underground Limestone Workings at Ironbridge Shropshire" in Bulletin of the Peak District Mines Historical Society Vol.12, No.6 Winter 1995.

## Note 2

### Lincoln Hill as a Show Mine

John Randall in 1863 described the mine in his "Handbook to the Severn Valley Railway" as being 'open to visitors', he invited passengers to alight at Ironbridge Station and assured them that the miners were 'highly instructive'. Visitors came from a distance in 1868, one group, the Caradoc Field Club arrived; the entrance door was opened and an "outward draught of intensely cold air from within" met them. They entered, candles were lighted and they admired the lofty chambers. In the dimness they could see chinks of light coming through distant openings to the surface and occasionally the glimmer of a workman's candle. A show was put on for the visitors using "blue, red and white lights" set alight by a Mr. Blunt. Later, gas lighting was installed and a charge of sixpence (2.5 new pence) made for entry, and on special occasions, a 'hermit', with hairy whiskers and a wig, was hired to meet the visitors.

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## New Landmark Book

**Lathkill Dale, its Mines & Miners,**  
J H Rieuwert, h/b 107pp 175 x 250.

Printed on high quality gloss paper, you should not dismiss this Derbyshire Collection of books as simple reprints they are not.

There many new photographs including 16 in colour, a very modern style has been adopted and it makes the book easy to read and use for research.

Lathkill Dale is well worth a Sunday walk and this book helps to explain many of the surface features and for the more adventurous is also a guide to the underground. £16.95

Mike Moore

WWW.moorebooks.co.uk  
Mike@moorebooks.co.uk

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## Gwennap Parish Council Buys Former Mine

The offer by Gwennap Parish Council to buy the site of the **Wheal Maid** site for £1 has been accepted by the owners Carnon Enterprises.

The council hope to acquire grant funding to help restore the 40-50 acre site and are meeting officers from the Cornwall County Archaeology and Planning Departments shortly.

Buying the site meant that the council could preserve the heritage of the area and help to reinforce the Cornish Way and Mineral Tramways projects that run through the valley.

*NAMHO Newsletter  
Special Truro International  
Conference Edition,  
14-17 July 2000*

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## Simpson's Unstable

The area below the Great Aven on the West Kingsdale System is dangerously unstable. A large number of boulders have fallen, threatening to block the way down into the Kingsdale Master Cave.

## Devonshire Cavern

A slab of loose rock in the roof was noticed in July. The DCA is investigating if it can be removed safely as the rock is approximately 30cm thick an 1m by 2m in size. It is on the main 'trade route' about 5m past the Miner's Pillar.

*Descent, 155*



## Extract from 'Shrewsbury Chronicle' Describing developments at Roman Gravels

I was recently continuing my Snailbeach work at the SRRC, and found the attached editorial piece in the Shrewsbury Chronicle concerning Roman Gravels in 1860. I thought it was excellent material for the Club, so I copied it down, and here it is.

*Andy Cuckson*

### The Shrewsbury Chronicle, 9th March 1860

#### Lead Mining In Shropshire

The district called the Gravels, situate in the parish of Shelve, in this county, and lying to the west of the Stiperstones, was worked in the Roman era, and large quantities of lead ore were raised from veins which cropped out very near the surface. These Roman workings are still open, and, amongst other articles discovered therein, the most curious are, two wooden shovels, made of cleft oak, and a pig of lead, weighing about 200 lbs., marked "Adrian II.," the mines at that period being always worked in the name of the Emperor. These interesting relics of a past age are now in the possession of the proprietor of the estate, the Rev. T. F. More, of Linley Hall.

An engine shaft was sunk many years since, which was eventually carried to a depth of 180 yards; and upwards of 30,000 tons of lead ore were obtained from the Roman and other veins. After working the mine for some time, the company got into quarrels and litigation, and the works were suddenly suspended, about 23 years ago, although the supply of ore was good to the last. A spirited and respectable company has been lately formed to work these rich mines, which extend from the Gravels as far as Shelve village; and the district again evinces substantial proofs of mining skill and enterprise. On the 23rd ult., a splendid forty five-inch cylinder steam engine, supplied and erected by Messrs. Absalom Francis and Sons, of Holywell, was set in motion for the drainage of the above mine; and to celebrate the event the shareholders, manager, and engineers, together with several of their friends, assembled at the Gravels; and the whole party, as well as the agents and workmen, were regaled in a sumptuous and substantial manner. The greatest satisfaction was expressed as to the movements of the machinery, and the erection and arrangements of the works generally. The waving of flags, and firing of cannon, accompanied by a band of music, created a most lively scene. A piece of galena (pure lead ore) was exhibited, weighing 168 lbs., which had been met with in the workings of the Roman vein, a short time previously. When first discovered this magnificent specimen weighed upwards of 2 cwt., and a portion was broken off during the operation of placing it in the mining waggon. The ample demand for lead, and the present high prices, coupled with the scientific and able management of Captain Skimming, augur well for the future success and prosperity of the company.

*Verbatim transcription from microfilm,  
with thanks to the Shropshire Records and Research Centre.*

### Cwmystwyth Mine - Proposed Safety Work

Ceredigion County Council has applied for planning permission to carry out safety work on 15 openings close to the county road (including Level Fawr), plus the mill tailrace, which will block or severely restrict access.

It is apparent that Ceredigion, or their contractors, have based their application on out of date info. They

have not taken in to account the extension to the Scheduled Ancient Monument area that was granted in December 1997. Instead of 6 of the 18 sites of intended work being within the Scheduled Ancient Monument area, as stated in the application, they are all within that area and consent will be required in each case.

Objections to the proposed work

would appear to be in the following areas - lack of justification for the work; lack of any proposal for preliminary archaeological survey or monitoring of intended work; and the visual impact of the closures. Some aspects of the work, particularly the removal of rubbish from the site, are, however, to be applauded.

*Welsh Mines Society  
Newsletter*





# Rescue Practice - Potters Pit

## 5th August 2000

### Shropshire Mines Trust Projects

The Shropshire Mines Trust has a number of ongoing projects:

- a. South West Shropshire Project. Part of the work is to help preserve the surface and underground parts of Snailbeach Mine. The other includes various jobs associated with preserving our machinery and equipment
- b. Tankerville Project. This involves preserving the buildings at Tankerville Mine and interpreting the area as an unmanned low key interpretation site. There are also plans to reconstitute the reservoir and make it hold water again.
- c. "Never on a Sunday" Project. The team has been collecting taped memories from people in the Snailbeach and Stiperstones area. They have obtained a grant to produce a book, and possibly tapes of the collection.
- d. Bersham Colliery Project. Preserving the surface buildings and other features of Bersham Colliery and interpreting them for the public.
- e. Blists Hill Museum Project. This is a new project to preserve an early 20th century mining display at the museum
- f. Pump Sump Shaft Project. This is a joint project with the SCMC. Permission has been granted to excavate a shaft which has been infilled to surface. It is believed that this shaft goes down to the Boat Level and the blockage in the level is caused by infill from this shaft.
- g. Hunthouse Mine Project. This is the restoration of a hand-windlass which stood over the now collapsed No 9 shaft.

*Shropshire Mines Trust  
Newsletter*

On Saturday August 5th, 10 SCMC members + 4 from Dudley met at the Bog car park for a "South Shropshire Rescue Practice". We were only told that we should be prepared for water and have our SRT kits!

Steve Holding (the organiser) had hoped for a bigger turn-out as he had planned a rather elaborate twin site incident. In the event, plan 'B' was initiated and the practice concentrated on Potter's Pit.

The scenario for the rescue was that a person had gone off "exploring" after leaving colleagues on a deep pitch in the mine. They had later exited the mine, de-rigging as they went, only to discover him missing on the surface.

Upon arrival at Potter's Pit, Neal was immediately deputised as Surface Controller, with Pete Eggleston as Radio Controller. While 2 individuals were assigned the task of paying out radio cable, a "Rapid Search" team of 3 (which included Club President Alan Taylor) were sent in with the task of doing a quick check of all the 'horizontal' levels. An SRT team was also assembled with a view to rigging the first winze and descending to the lower levels of the mine.

The "Rapid Search" team, checked all the upper levels within the first hour, including a dig near the far winze which Alan Taylor burrowed up at a great rate of knots until a very dodgy pack wall with limited headroom was reached. Examination of the wall and its precarious state, lead us to believe that the missing person had not passed here, but it was marked as a 'possible' for future reference. Completing the sweep, the team then exited the mine to report to Control - radio communications to surface had been lost after a few yards into the mine.

The "Rapid Search" team was then sent back in, with Brendon from Dudley substituting for Alan Taylor (who had been switched to comms).

The brief this time was to descend a small winze (the one furthest from the entrance) near to the dig mentioned above. Due to the lack of belays and sound rock in the pitchhead area a scaffold tube wedged across the level was used. Care had to be exercised on the pitch as it appeared that debris knocked down fell near to the SRT Team deeper in the mine!

However about 7m down this pitch after passing through a narrow 'window' into the top of a long near vertical stope, the casualty was discovered, stuck head first in a small level passing back under the pitch.

This is where the fun started! Due to the tightness of the stope, it was very difficult to get two people, plus the stretcher and casualty into the same place! For some time we were all relying on the scaffold tube and a lifeline.

Apart from the problems of moving the casualty, there were communications problems - the UHF radios just did not want to work with the guide-wire (possibly due to the depth of water in the entrance, although Pete thinks it is purely a frequency/wavelength issue) and we had to rely on field telephones (which worked well, but had initial operator trouble, and could only be heard by the operator). The passing of messages from the stretcher party to Control did not always happen, consequently Control had long periods without any underground information, while the stretcher party were waiting for additional ropes/belays etc..

The whole rescue took longer than Steve envisaged - he had hoped to bring Snailbeach into the scenario, but it was a very constructive exercise and those who took part felt that they learnt a lot.

Special thanks should go to Eileen and Mike for 'placing' the dummy the previous week - although this did mean that they could only act as observers!



## News Round-Up 2

### Winding Wheels

The latest winding wheels in Shropshire have just been erected in Highley. The wheels are half-scale replicas of the original 9 foot diameter wheels that served Highley Colliery and are part of new entrance signs on the main road at either side of Highley village.

Of particular interest is that the wheels are based on plans drawn up by Robert Evans, a Club member and were made by Ray Matthews, a member of the Shropshire Mines Trust.

Robert and Ray are life-long friends; Robert trained as a surveyor at Alveley Colliery whilst Ray trained as a fitter and engineer. Thus they knew the original Highley wheels very well!

Club members may recall visiting Ray's factory (Matt Pressings) at Ditton Priors a couple of years ago to see the stationary steam engine that was used by mining students at Walker Technical College and which Ray now owns (along with a traction engine and a steam roller).

The Club was regally entertained with sandwiches and steam demos by Ray during the visit.

The Highley wheels were fabricated by Ray working largely in his spare time. They are painted a similar shade of red to the originals and each is set in a replica of the top of a headframe. They are a striking reminder of Highley's mining heritage and have been well received in the village.

When was the last time a pair of winding wheels were made in Shropshire?

*David Poyner*

*[Don't forget there is another 'Sheave Wheel' monument over the other side of the River - although the preserved wheel there comes from Donisthorpe Colliery, Kelvin]*

### Washery Demolished

I just want to let the continental mining-historians know, that the coal-washery 'Lavage et Triage de Roton' in farciennes (Belgium, close to Charleroi) has been demolished.

I find it sad to have seen this impressive and beautiful building disappear. The building was a brick / steel-skeleton construction and had been in operation until about 1 to 2 years ago.

There was a colliery (Societe des Charbonnages Reunis de Roton Farciennes, Baulet et Oignies, Aiseau Puits Sainte Catharine No 1 and No 5) 1km away, which closed on September 30th 1984. It was the last working colliery in the Wallonie. Annual production 350,000t; 1,370 employees. After the closure of the colliery, the washery was used by a private company (Sechage Industriel de la Baisse Sambre SA, Groupe Roton).

The washery was located in the valley of the Sambre river just beneath the main railway line from Namur to Charleroi, whereas the colliery was a bit more up the hill. There is a huge tip just beneath the washery located on a 'cleaned' area which originally was fenced. There must have been more buildings (perhaps another colliery?).

Henk, another industrial architecture photographer, has a few pictures on his web-site:  
<http://home2.planetinternet.be/henk/farciennes.htm>

You will find more information about Belgian headgears in the book 'Belles-Fleurs de Belgique' by Pierre-Christian Goillard ISBN 2-9502503-1-9.

The book contains an (almost) complete list of headgears in Belgium (c1989). Unfortunately many of them have already been demolished. But it's still worth visiting the remaining ones!

*Harald Finster*

### Shrewsbury Tunnels

There are at least two underground passages now existing in Shrewsbury, though neither of them is accessible - one leading from a house belonging to a Mr Beacall on the Old Wall on the north side of Castle Street (a street which was called as of old High Pavement) towards St Mary's Church, and the other from Vaughan's Mansion, in which the museum was lately located, southwards, under College Hill towards the place where St Blaise's Chapel stood.

St Blaise's Chapel, we are told in the old chronicles, was in Murivance. Neither of these passages has been explored.

*Shropshire Notes & Queries 9  
January 1885*

### Java Bricks

A man in East Java was fined 4,000 bricks for committing adultery with his neighbour's wife. The village chief of Selokajang decided to impose similar fines on any other man found making love with someone other than his wife as a way of augmenting village income.

The unidentified villager had only 1,200 bricks, but the chief said he could pay the rest by instalments. His bicycle was also seized to keep him from repeating his offence in neighbouring villages.

*Shropshire Star, 1988*

### T.H. & A.S.

The Telford Historical and Archaeological Society meets on the first Thursday of the month, at Madeley Court School.

There is a speaker, and members can borrow a small collection of books and several historical periodicals. As there are only about 35 members, subscription is quite high at £14 a year. There is an annual Journal, and a quarterly newsletter. If you are interested come along to a meeting.

*Shean Bostock*



## Help Wanted

### James Skimming

I am currently researching the history of 19thC lead mines in Counties Monaghan and Armagh, Ireland/ Northern Ireland, and wondered/ hoped that somebody might be able to help with the following query:

In the list of metalliferous mines in Mineral Statistics, a James Skimming is noted as the Chief Agent, or Manager, of two mines in County Monaghan, Ireland: Annaglogh (1860: production records incorrectly list this mine in County Clare) and Tassan (1864-5: under the name Castleblayney Mining Company), after the assets of the short lived Tassan Mining Company Ltd had been bought out of liquidation in November 1857 for £300. The house he occupied at Annaglogh is still remarkably intact, albeit now used as a hay store.

Searching the 1859 list of metalliferous mines, which, sadly, does not include any mines in Ireland, I came across a James Skimming who was listed as the Chief Agent or Manager of two, if not three mines in Shropshire: Gravels (Roman) and Benree, while a "Skimmings" is listed as the Chief Agent of a third mine, East White Grit. All three mines were operated by "Palin & Co."

I would very much to learn more about James Skimming: where he was born, died, his career etc. Is the James Skimming involved with the operation of the Shropshire mines in 1859, the same as that involved with the Monaghan mines in the 1860s? Who were Palin & Co.? Were they involved with the Monaghan operations, or did James Skimming leave Shropshire and set up his own operations in Monaghan?

Any help or suggestions would be very much appreciated.

Many thanks,

John Morris

johnmorris@clubi.ie



### Oliver Davies

Do any Club members have any details of an Oliver Davies being killed in a mining accident in Shropshire post 1900?

We are researching our family histories, and know that Oliver was killed in a mining accident, the family was in the Hope area of Shropshire at this time. We wondered if you could shed any light, or suggest where to look.

Oliver's accident involved him being very badly burned by a mining lamp (the coroner stated that with better first aid and if an ambulance had been called sooner then he may have survived!!).

Did they use open lamps in metal mines in those days?

Thanks,

*Lynne and Sam Talbot*

*[Any responses to this request can be sent via the Editor]*

### Granville Park

Shropshire Wildlife Trust have lead over 1,000 Telford school children on trips around the Granville Nature Reserve during the past six months.

Funding for the educational project has been provided by SITA Waste Management Services, through landfill tax.

The park, based on the spoil heaps of the Granville Colliery and other Lilleshall Company mine sites that once adjoined Granville (eg: Muxton, Waxhill and the Lodge Furnaces) has been regenerated in recent years with woods, scrub, grassland and marshy areas.

The regeneration has been so successful that part of the area is now designated as a Site of Special Scientific Interest.

## News Round-Up 3

### Fall Pot

There has been some movement at the bottom of the Fall Pot boulder choke in Lancaster Hole. Great care should be taken when entering or leaving the Main Drain by this route.

The choke is being washed out by floods and is very unstable. The results of a collapse here could be dire!

*Andy Hall  
Red Rose Cave &  
Pothole Club*

[www.redrosepc.demon.co.uk](http://www.redrosepc.demon.co.uk)

### Geology Rebuilt

In early August, restoration of the geological tiled retaining wall at the Nabb, Oakengates was completed.

The wall was built over 20 years ago on what was then known as the Eastern Primary (now Queensway), near to the Greyhound Island (and site of the Lilleshall Company works).

Since its construction it has become a local landmark and has even achieved national fame in advertising campaigns. It is claimed to be the longest piece of public art in Britain!

Unfortunately in recent years a large number of the tiles had fallen off the wall and sections had become unsafe.

Telford & Wrekin Council commissioned the Babbie Group to repair the feature earlier this year. Over 30,000 tiles in three different sizes and 20 different colours have had to be replaced at a cost of £150,000. To ensure a perfect match with the originals the same manufacturer, Darwens of Lancashire made the replacement tiles.

In addition to replacing the tiles, work was also carried out to improve their weather resistance.

The finished result is quite good, so spare a glance at the wall next time you 'whizz' past it!

## More Books...

### **Kilton Ironstone Mine**

**Simon Chapman, A5 PB 56 pages.**

The definitive history & exploration of the Kilton Ironstone Mine. Simon has put together the troubled and somewhat mysterious story of Kilton Ironstone Mine. It began life in the late 19th century, when enormous cost was expended to find rather inferior stone. It languished for 20 years before working on and off for a further 70 years. All that remains of the village are a few houses, the school and the manager's house. A must for serious students of Cleveland Ironstone. £5.95

### **Upleatham Iron Mine**

**Simon Chapman, A5 PB 128 pp**

This is the history of the large and important mine which was the reason why the village of New Marske was established. Working started in 1851, and continued without a break until the mine became exhausted in 1923. Simon has put together a fact laden story which draws heavily on available documentary material produced when the mine was in operation. This is a substantial work and its value to the student of the Cleveland ironstone mining industry is immense. £6.95

### **California & South Eston**

**Richard Pepper A5 PB 70 pages.**

A large and imposing picture book of the town and industry of the first ironstone mine in north Cleveland. The historic and important landmarks of the past and present are illustrated in high quality prints on art paper. The narrative traces the history and explains each picture in detail. The quality of some of the prints is outstanding. A worthwhile addition to the library of any ironstone enthusiast. £6.00

### **Skinningrove**

**Simon Blake, A5 PB 28 pages**

Four walks in the vicinity of historic Skinningrove. It was here that Bolckow and Vaughan first started working the Main Seam of Cleveland Ironstone. The Tom Leonard Mining

Museum is the base for each walk and is a convenient location to enhance the knowledge and understanding of this once important industry. £2.80

### **The Art of Mining**

Many members will be familiar with Thomas Hair's illustrations of the coal mines of North East England c.1840, his original watercolours, on which the engravings were based, are held by the Hatton Gallery at the University of Newcastle upon Tyne. Twenty-two of these watercolours have now been reproduced in a book entitled '**The Art of Mining**', by Douglas Glendinning (ISBN: 1 85795 180 8), £6.99, plus £1 post and packing, from: Tyne Bridge Publishing, Newcastle Libraries and Information Service, City Library, Princess Square, Newcastle upon Tyne, NE99 1DX

### **British Mining No.66.**

**Adventures in Coal** by J. Goodchild  
In this monograph, coal mining history expert John Goodchild has used part of his own vast archive to document the family of Henry Briggs and their coal mining concerns and associated businesses between Pontefract and Leeds. Although unremitting Yorkshire capitalists, the Briggses were Unitarians by religion, and this undoubtedly led to their adopting a paternalistic attitude towards their workforce. Following disputes in the early 1860s they also encouraged worker participation in the company through shareholding schemes. This worked well when trade was good, but fell apart in a depression.

These events, together with the story of their diversification in trade and innovations in technology, make up an interesting account of a time when the Yorkshire coalfield was rapidly expanding to meet the needs of growing industry and increasing population.

A5, 96 pp., 14 figs., 8 plates  
ISBN 0 901450 53 7. £7.95

### **The Gale of Life**

The South West Shropshire Historical and Archaeological Society have recently published a volume of essays on this part of the county called "The Gale of Life" (I think!). This includes an essay on the Roman remains at Norbury (by Roger White of the Birmingham University Field Archaeology Unit, if memory serves me correctly). It is some time since I looked at this (I was flicking through it in a book shop...) hence the vagueness of the above information. From what I recall the article was still pushing the interpretation that the aerial photos were showing Roman hushing activity. I assume Roger White can be contacted by e-mail at Birmingham University. The book should be available from booksellers in Shropshire (I saw it in the Castle Bookshop, Ludlow).

*David Poyner*

### **Tempus Books:**

**Mining in Cornwall Volume 3, Penwith and South Kerrier**, by LJ Bullen, p/b 128pp 165mm x 235mm, this is a completely new edition and compliments the previous 2 volumes by Trounson and Bullen, £9.95

**West Yorkshire Coalfield**, John Goodchild, p/b 128pp p/b 165 x 235, the author has a phenomenal collection stored in the Basement of Wakefield Library, as a result his researches and purchases of material the unpublished work is now available. There are many photos of surface and underground, plus supporting evidence of share certificates, plans, sections tokens etc £9.95

**The Early British Tin Industry**, Sandy Gerrard, p/b 160pp 175 x 250, A serious study giving an account of the Tin Industry until AD 1700. £14.99

Interested in any of these? Contact :

*Mike Moore*

WWW.moorebooks.co.uk  
Mike@moorebooks.co.uk



## Books, Videos and Events

### NAMHO Mining Heritage Guide

Edited by Rob Vernon, Price: £6.00 plus P&P

Launched in July this year at the Inter-NAMHO conference, this is the third NAMHO Heritage Guide and while it retains its original format, the contents have been updated and expanded to cover the increased number of members, societies, museums and affiliated bodies. It also includes, for example, the internet sites of many of its members. It is intended that the Guide should be of value to a wide range of individual students, historians, teachers and all interested in Britain's heritage.

The Guide is available from the Club NAMHO rep or direct from the Peak District Mining Museum, The Pavilion, Matlock Bath, Derbys DE4 3NR. Telephone (01629-583834) first to determine the cost of postage and packing.

### “Guidelines for the Leisure Use of Mines”

A new and revised ‘Access Code’ for the use of disused mines. This document has been prepared by NAMHO, not only for the use of its members, but also to assist all who have an interest in ‘old mines’. Their leisure interests may vary widely, but the safety, legal and conservation aspects are the same.

The Code has been produced with the cooperation of the Health and Safety Executive's Mines Inspectorate. It is intended to be used by those who visit mines for leisure purposes and does not cover activities where there is an element of work and payment.

The Code is available, price £2, from most NAMHO member-representatives or from the Peak District Mining Museum (address above).

### New Shropshire Mining Book ?

Until the mid-19th century at least 2 of the 11 parishes where the Thick Coal Seam (now called Staffordshire Thick) was worked, where in Shropshire, namely Halesowen and Oldbury. The earliest Mines Inspectors report lists a fatality at Oldbury under “Shropshire” and a well known ballad ‘The Shropshire Colliers Humble Petition’ was written for ‘Shropshire’ miners seeking work when 500 lost their jobs by the closure of Brades

Colliery, Oldbury.

Nigel Chapman's new book “**Coal Mining around Halesowen**” acknowledges that this was once Shropshire, then goes on to describe the collieries of the area. The region past to Worcestershire - and is now known as the West Midlands. The last pit to close was Beech Tree in 1958.

The book is published by Heartland Press and costs £9.00

*Ivor Brown*



### Mining Videos



all available from the Club at a discount,  
*see Alan Robinson*

If you are interested in doing a bit of armchair mine exploration the following videos, produced by I.A.Recordings with help from Club members, may be of interest to you.

#### **A Tour of Clive Copper Mine**, £14.95

A comprehensive guided tour of Clive, with Edwin Thorpe acting the ‘experienced’ expert and Kelvin Lake the ‘novice’. The tour covers both the upper and lower levels, plus the Northern stope (the access to which is now a bit dodgy).

#### **Clive Rescue Practice**, £9.95

An action packed ‘head banging’ record of a Club rescue practice, featuring the ‘infamous’ maypole winze traverse!

#### **Snailbeach**, £14.95

The rise and fall of Snailbeach, once renowned as the “richest per acre of ground in Europe”, is traced in this production through the use of historic photographs, animated plans and sections, and unique underground video footage.

#### **Glengowla**, £6.58

A tour around this amazing mineral rich lead mine in Ireland, complete with commentary and diagrams.

[12 mins.]

#### **Collections from the Archives**

The following tapes contain almost all the footage recorded at the given mine, and are intended as a resource base, not a finished production:

C.15:Dudley Tunnel '88 to '89,£14.10

C.18:Donisthorpe Colliery, £11.75

C.20a:Snailbeach - Final Frontier, £9.87

C.23: Bagworth Colliery, £11.75

C.28: Morse's Level, £9.87

C.29: **SCMC in Cornwall**, £16.45

C.32: **SCMC in Ireland**, £14.10

C.37: Dudley Tunnel - Wrens Nest East Mine, a rare trip into the workings during stabilisation works.£9.87

C.41: Hem Heath Winders, £9.87

C.42 **The SCMC at Onslow Park** - a record of the 1998 Club and Trust display. £ 9.87

C.45 Twelve Mines of Ireland - made for the first AGM of the MHSI it contains excerpts of C.32 with **added commentary**. £11.75

C.46 Astley Green Colliery - shot during the 1999 engine rally at the Museum site (including views of the huge winding engine) £9.87

C.48 Draglines - features the moving of “Oddball” at St.Aidans Opencast site, plus bigger draglines at work in the North East of England. £14.10

For more details about videos contact:

I.A.Recordings, PO Box 476, Telford, TF8 7RH

e-mail: [info@iarecordings.org](mailto:info@iarecordings.org) or visit their web site at:

<http://www.iarecordings.org/>



## Club Officers

**President: Alan Taylor**

**Chairman: Neal Rushton**

**Vice Chair & Assistant Secretary: Eileen Bowen**

**Secretary: John Priest**  
*scmc.secretary@factree.org.uk*

**Treasurer: Bob Taylor**

**Tackle Officer: Andy Harris**

**Training Officer:**  
**Steve Holding**

**First Aid Officer:**  
**Alan Moseley**

**Librarian: Alan Robinson**

**Conservation Officer:**  
Post Currently vacant

**Bat Officer: Mike Worsfold**

**Rescue Officer:**  
*Role undertaken by the Rescue Wardens: Neal Rushton, Steve Holding, Alan Robinson, Andy Yapp*

**'Below' Editor: Kelvin Lake**  
*e-mail: scmc@factree.org.uk*

## Diary Dates

For organised Club trips please refer to the Monthly Meets lists.

**28th Oct.:** Formal Re-opening of Tankerville Mine, Shropshire by the Shropshire Mines Trust.

**27th -30th Oct.:** Speleological Union of Ireland Symposium, Co. Clare, Ireland. Contact Mary Ahern [aillwee@circon.net](mailto:aillwee@circon.net)

**15th - 17th Nov.:** International Conference on Cave Lighting, Budapest - from prehistoric man to modern cavers + caving trips. Contact e-mail: [mkbt@matav.hu](mailto:mkbt@matav.hu)

**1st Dec.:** BCRA Research Fund Deadline.

**31st Dec.:** Sports Council for Wales - closing date for expedition grant applications.

2001

**1st Jan.:** Columns Open Day, Ogof Ffynnon Ddu

**12th - 14th Jan.:** ISSA Workshop & AGM Mendip

**6th Sept.:** 40th 'Birthday' of the Club and the 39th AGM

## Smidgin: The Joys of exploring foreign caves ....

