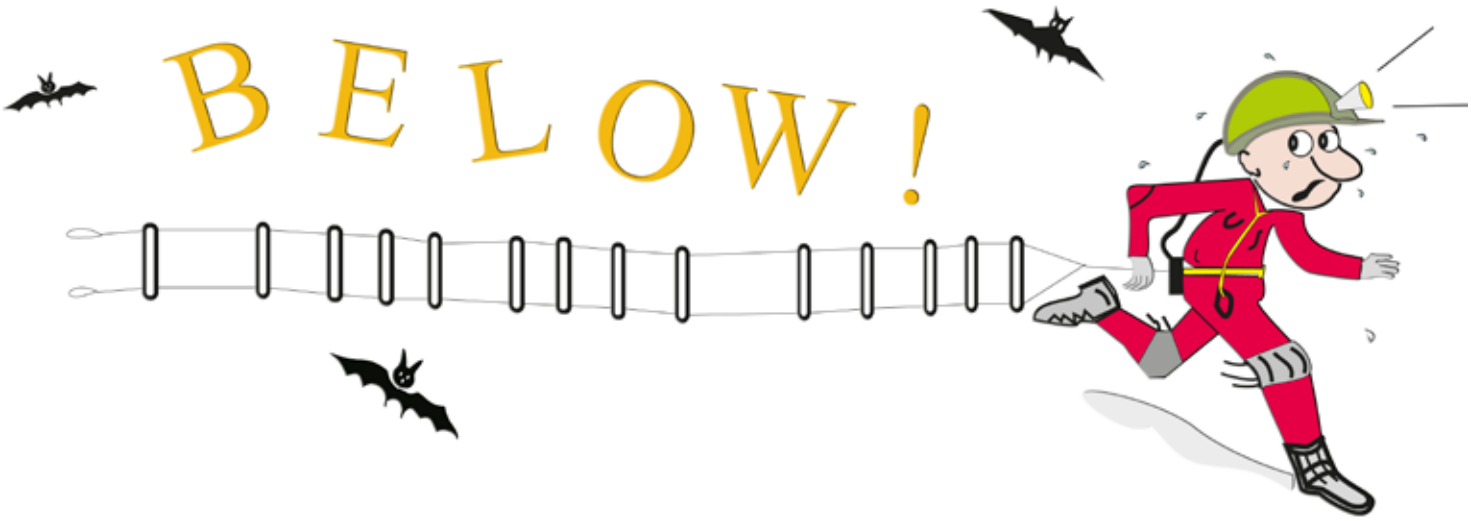


Quarterly Journal of the Shropshire Caving & Mining Club Summer Issue No: 2024.2

Electronic BCA Membership Cards

The BCA have introduced electronic membership cards for 2024, although there have been some 'teething' problems with the roll-out. You should have received a link from the BCA to your eCard - if you haven't then check with Julian that he has sent them your correct email address.

The electronic cards can be saved to your mobile device or printed as a hard copy.

While stocks of the old plastic cards still exist, you can, if you want, request a physical plastic card. However, fewer than 2.5% of BCA members have requested a plastic card this year. As a result the BCA are selling off their plastic card printing machine!

If you don't have internet access or a smart phone etc, by request, the BCA will send you a 'paper' card, which will be more environmentally friendly and cost effective to produce.


BCA
British Caving Association

Membership Card
Expires 31/12/2024

Ann Onymouse
Membership Number: 0000
Fee paid: £20

- Club Individual Member
- Caving Member
- PL Insurance Scheme

Issued via Eldon Pothole Club

The holder of this card is insured for Public Liability to a limit of indemnity of £20M for surface and underground activities

british-caving.org.uk
Old Methodist Chapel, Great Hucklow, BUXTON, SK17 8RG

An example of the 2024 paper BCA membership card.

BCA Membership price changes

The BCA council has approved increases in membership prices for 2025, to take effect after 31st December 2024. The increases are needed to counter the increased insurance premiums BCA faces, and dwindling reserves.

	2024 fee	2025 fee
Caving member	£20	£24
Non-caving member	£ 6	£ 8
Student member	£ 8	£10
Under 18	Free	Free

Colonel Stephens Society at Snailbeach

Members of this society visited Snailbeach on the 17th May tracing the remains of the Snailbeach District Railways (SDR). The society consists of enthusiasts of the railways engineered and/or managed by Colonel Holman Fred Stephens (17 in total). He assumed control of the SDR in 1923 until it was taken over by the County Council in 1947. It closed in 1961.

During the visit one of them produced an interesting SDR item that they had recently tracked down - the original works plate off the SDR Baldwin *No.3* locomotive built in 1916 by the Baldwin Locomotive Works, Philadelphia (Works number 44383). It was rebuilt by Bagnall in 1918-19 and purchased by Colonel Stephens in 1923. It had to be re-gauged before it could run on the SDR line. It was cut up for scrap at Snailbeach in 1950. The plate will be put on display at the Colonel Stephens Railway Museum, Tenterden, Kent.

This picture is for Gareth and Ben - the SDR No.3 works plate.
(Courtesy The Colonel Stephens Society, Kelvin Lake)

Congratulations
to
Club member
James Hobson &
Stacie Palmer-Young
on their recent wedding.

Snailbeach Updates

There have been a number of changes at Snailbeach over the past few months. In Landing Level (aka Day Level) the top part of a pump rod has been mounted by the side of the shaft to give visitors an idea of what a pump rod looked like. Over the winter SMT volunteers spent some time rust proofing and painting the metal work of the rod.

Nick Southwick sourced some lengths of 4”x4” timber which were bolted between the side plates of the rod to give the ‘correct’ look of the top of a pump rod.

Nick Southwick by the fragment of the pump rod in Landing Level.

Receding flood water at the entrance of Landing Level in March.

Flood Water

Following several days of heavy rain, the first open day on 31st March was greeted by flood water over ankle deep at the entrance of Landing Level, which caused a few problems, requiring over 50 visitors to be kitted out with wellies for the walk into the level! Luckily the water started receding after lunch time.

Alan’s Alcove

During an inspection trip in the Big Stope of Perkins Level Alan Robinson spotted a bat disappearing behind a large rock leaning on the wall near to the route to Sheep Shaft.

Looking behind the rock on a subsequent visit, suggested that there was a small level behind it. The entrance was a little tight, but after a bit of gardening Alan was able to squeeze past the rock. Once inside a short level about 10m long was discovered - possibly an original part of the stope that has been partially back filled?

The innocuous looking rock, hiding the entrance to Alan’s alcove.

Alan attempting to enter the void behind the rock . . . almost there!

After a bit of gardening, it is an easy, but tight squeeze.

The end of the ‘void’ is about 10m from the entrance.

Alan inside “Alan’s alcove”. No bats were in there on this occasion.

SCMC Trips - Tixall, 9th March 2024
Ian Cooper and Kelvin Lake

Investigation and Survey of Tixall Water System

Members present: Andy Harris, Ian Cooper, Graham Smith, Alan Robinson, Vicky Robinson, Peter Eggleston, Kelvin Lake.

We finally managed to arrange a date to visit this water system on the site of the former Tixall Hall. Unfortunately due to the endless rain over the previous month or so the water system was doing what water systems are designed to do - hold water! It was not possible to survey the chamber that contained the ram pump – only the top of it was poking out of the water! So, we made do with setting up a surface survey line and although there was a strong flow of water in the rest of the system we were able access most of it. Ian Cooper took a number of photographs starting with the waterwheel chamber. The rest of us undertook a survey of the features, Alan and Vicky doing the bulk of the underground survey work.

Graham, Peter, Vicky and Alan laying out the surface survey line, while the others were underground. *(Kelvin Lake)*

Alan and Vicky taking a bearing along the survey line from the lowest chamber (the ram pump chamber). *(Peter Eggleston)*

There is not much ground cover over the top of the system, less than a metre in places. Only the entrance to the waterwheel chamber has a properly constructed entrance, with a set of eight steps giving access to the chamber and the main tunnel.

There was some concern over the state of the large sandstone blocks above the entrance steps - one of which has fallen out and crushed one of the 4 inch pipes which run the length of the main tunnel from a cistern to the ram pump chamber (see plan on the next page).

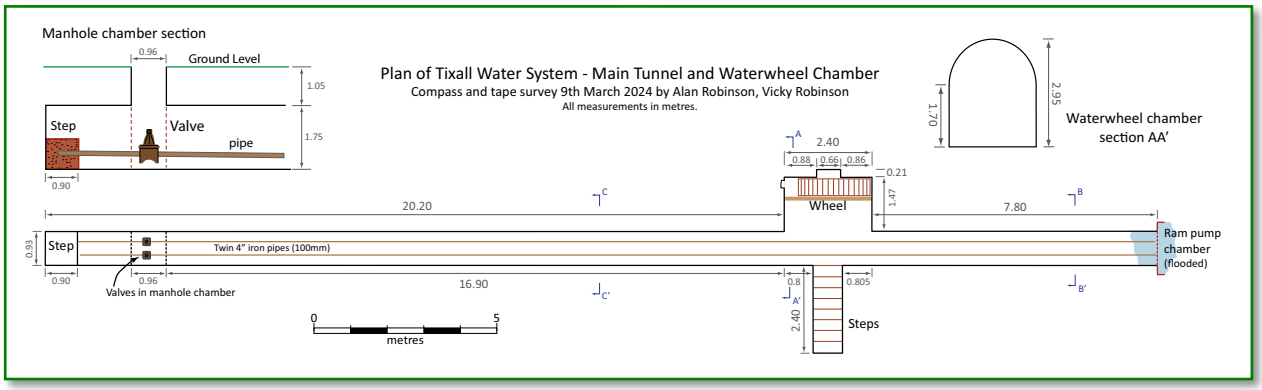
View down the entrance steps to the waterwheel chamber and main tunnel. *(Ian Cooper)*

The 1.85m diameter overshot waterwheel in the chamber off the main line of the tunnel. Water for the wheel came in from the void middle left - possibly via the large loose iron pipe lying bottom left of the picture. *(Ian Cooper)*

SCMC Trips - Tixall, 9th March 2024
Ian Cooper and Kelvin Lake, continued ...

The 0.29m x 0.06m (~11½" x 2½") gear wheel on the waterwheel axle. The bearing on the near-side is missing, but portions remain on the far side. *(Ian Cooper)*

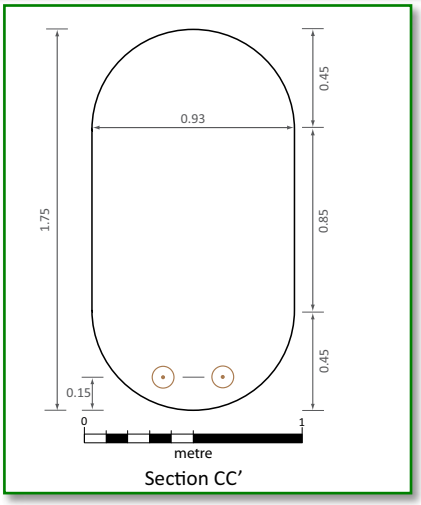
View south towards the grilled aperture into the ram pump chamber. Entrance steps to the waterwheel chamber on the right. *(Ian Cooper)*



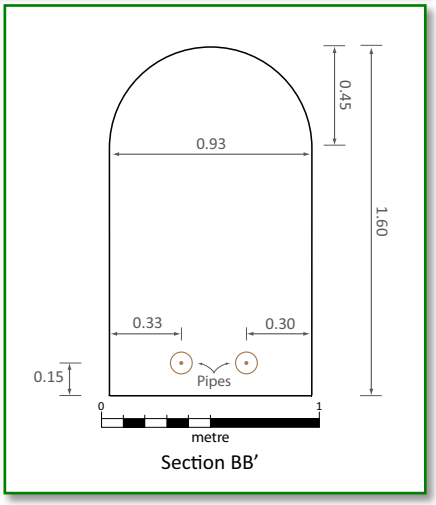
The two cast iron 4" pipes passing through the waterwheel chamber, carried water to the ram pump from a cistern located about 20m further up the hillside (and tunnel). The line of the tunnel from the ram pump to the cistern is approximately South-North (335°)

The main tunnel north of the waterwheel chamber is a long straight brick tunnel (see section CC' right). It presumably dates from when the ram pump was installed to replace the waterwheel powered pump. This newer tunnel has broken into the waterwheel chamber through a rough hole made in the northern wall of large nicely dressed stone blocks. Some brick infill has been added where the stone walls have been damaged.

During our March visit there was quite a bit of water spurting into the tunnel from the right hand side and up through the floor in places as well. Strangely, it was dry during the recce last July!



Section CC'

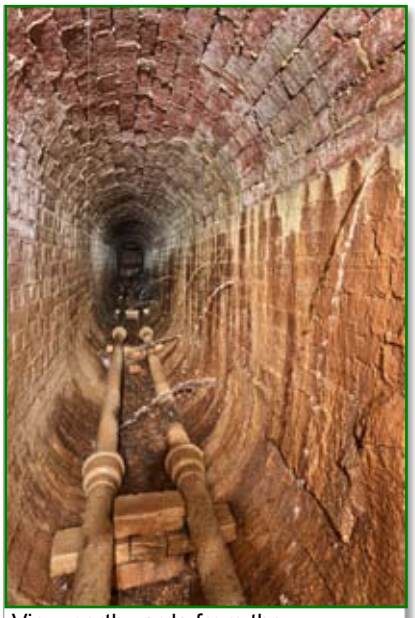


Section BB'

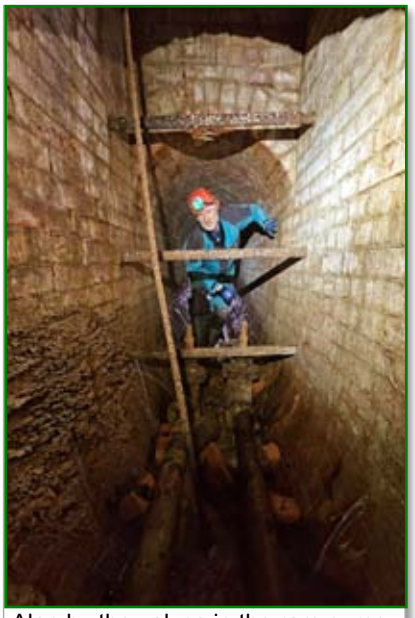
View from beside the waterwheel of the ram pump pipes coming through the hole in the north side wall.

The entrance steps are on the left and the pipes continue to the ram pump behind the camera. *(Ian Cooper)*

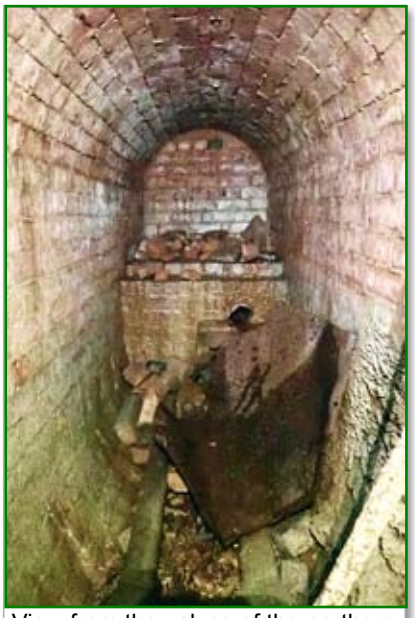
SCMC Trips - Tixall, 9th March 2024
Ian Cooper and Kelvin Lake, continued ...



View northwards from the waterwheel chamber towards the cistern. Note the water spurts! *(Ian Cooper)*



Alan by the valves in the ram pump delivery pipes. The vertical bar was for operating them from the surface. *(Andy Harris)*



View from the valves of the northern end of the main tunnel, the cistern is behind the bricked up end. *(Vicky Robinson)*

About 3m from the northern end of the main tunnel are a pair of gate valves in the ram pump delivery pipes. Above these is a manhole or access 'shaft' to surface. A series of steel horizontal bars span the tunnel here, could they have been inserted to act as an in-situ ladder? A long bar with a square socket at the end probably once sat on one of the gate valves, allowing it to be operated from the surface.

Although there are 2 delivery pipes for the ram pump only one pump (a Blake's "HYDRAM") was actually installed in the ram pump chamber. It was not clear from the current layout where the water supply for the waterwheel and it's associated pump came from - perhaps it used the same cistern?

A very large chamber 9.7m long by 2.32m wide at 90° to the line of main tunnel and 22m north of the cistern was also examined. Sounds of rushing water could be heard in this chamber. What was curious, was that the wall at the western end of this chamber is neatly stacked 'rubble' - certainly not the high quality dressed stone forming the side walls below the arched roof. Part way along the chamber there is a break in the arched roof. This squares out and reaches the surface where once again a steel plate and lump of concrete covers the access hole at ground level. Under the water there seem to be foundation walls from something - could this have been associated with the waterwheel operation?

Before leaving the site we went to the top of the hill where the reservoir(s) the ram pump and waterwheel pumped to are located. They are on the side of an old marl pit that includes an ice house in the middle of it as well.

The 2 gate valves near the cistern end of the tunnel. *(Vicky Robinson)*

View west along the large chamber, 22m north of the cistern. Did it once continue beyond the far wall? *(Ian Cooper)*

Thanks to the landowner for allowing us access to the site – he has said that we are welcome to return to complete the survey when the water levels have dropped. A fuller report will then be compiled.

SCMC Trips - North Wales Underground, March 12th to 15th

Alan Robinson

Alan and Vicky Robinson along with Paul Thorne and Wealden club members Robert Hall and Matt Clarke managed a few days in mid-March in North Wales. We were using Porthmadog's Premier Inn as our base, which was just as well with the abysmal wet weather. The repeating feature of all our trips in Blaenau Ffestiniog was being drenched both ways on our trips underground.

Llyn Cwmorthin. *(Vicky Robinson)*

It was very damp and misty! *(Vicky Robinson)*

Mist and torrential rain meant that Llyn Cwmorthin was very high and the entrance channel between the spoil flooded to over welly depth. The way on to Rhosydd was impassable.

12th and 14th March - Maenofferen Slate quarry.

We made two visits to Maenofferen with the permission of J.W.Greaves. On the first visit we were looking for a possible connection over to Votty quarry from the New Cooke's level. This involved damming the flow of water down a manway sufficiently to allow Paul to descend on electron ladders into a chamber, which was probably the top of Votty. Unfortunately, the lower section of the chamber was completely buried, and it wasn't possible to reach a lower level.

Our second trip took us in through the top chamber entrances to a new route down to the fan room, then a tour of west side of the quarry to visit the various inclines and miners' pathways. We spent quite a bit of time exploring along the horizon of standing water trying to find routes to the parallel veins.

Attempting to dam the flow of water down a manway. *(Vicky Robinson)*

The brine tubs for a haulage engine. *(Vicky Robinson)*

The incline haulage engine on our second trip. *(Vicky Robinson)*

A line of trucks which looked like they had been used for maintenance - due to the vice and haulage winch fitted to them. *(Vicky Robinson)*

SCMC Trips - North Wales Underground, March 12th to 15th
Alan Robinson, continued ...

13th March 2024 Cwmorthin Slate quarry. After a very moist ascent to the lake and wading round to the entrance, we were relieved to find things fairly dry underground. We had arranged the visit specifically to do the zip wires and via ferrata installations developed by *GoBelow*. Paul had previously done the routes, so we thought we had half an idea of what to expect.

Alan traversing an old tramway bridge. *(Vicky Robinson)*

Warning of being killed to death! *(Vicky Robinson)*

On the whole the zip wires aren't too lively with some requiring a bit of pulling in over the second half of the run. There are 2 main sections in the Old vein and Back vein, with the Back vein route being a bit more challenging. Two important things to remember are that you must be able to reach the zip wire whilst hanging from the pulley and that the abseils in the route require you to take your own rope. Probably useful to have a thin rope as a pull cord or tag line across the zip wires.

Alan & Vicky ready for the zip lines! *(Matt Clarke)*

Alan practising his via ferrata skills. *(Matt Clarke)*

Some of the fixed aids are useful. *(Matt Clarke)*

15th March 2024 Bwlch y Plwm Lead mine.
For Vicky and myself our last visit to this site was in 1991, so our memory of it was pretty vague. We didn't aim to do the through trip as we hadn't enough rope for a pull through, so we went in at Deep Adit, explored this horizon then climbed on in-situ ropes up to Level 4.

The exit out of Level 4 was sumped so we had to return the way we came. We then followed this with a surface walk to locate the top way in, plus a stroll around the copper workings on top of the hill, where there are both open casts and stoping coming all the way to surface.

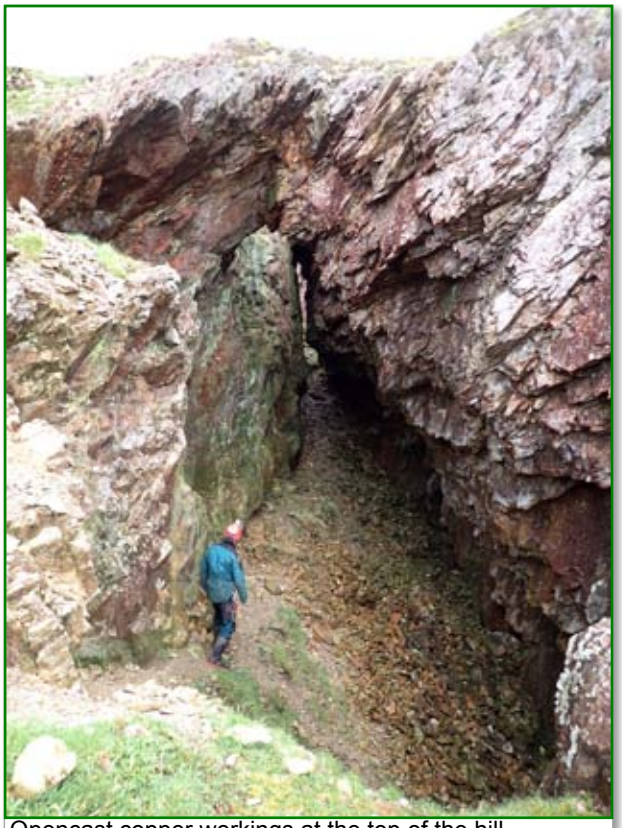
Deep Level at the junction with the vein. *(Vicky Robinson)*

SCMC Trips - North Wales Underground, March 12th to 15th
Alan Robinson, continued ...

'I didn't know there was a boat trip' exclaimed Paul. 'Yes' said Alan 'but, it's a long wait for the train. *(Vicky Robinson)*

Boards left at the end of a blind drive. *(Vicky Robinson)*

Short level on the hillside above Bwlch y Plum. *(Vicky Robinson)*



Opencast copper workings at the top of the hill. *(Vicky Robinson)*

Alan, Robert Hall, Paul Thorne and Matt Clarke exploring the hill top workings at Bwlch y Plum. *(Vicky Robinson)*

SCMC Trips - Cwm Dingle Dig, March 17th

It has been thirty years since the Club last visited Cwm Dingle mine, near Priestweston. Even then it was necessary to dig through some rubbish at the adit entrance to reach the level. Following on from a visit to the site last year by Oliver Beard the current landowner agreed to allow the club to dig out the entrance to the mine with a view to determining its extent. He is intending in the future to acquire a small excavator to actually excavate the cutting leading to the adit, however on this occasion we had to make use of shovels and picks!

In a lull between rain storms Oliver Beard, Andy Wood, Ben Morris, Julian Bromhead, Steve Holding, Nick Southwick, and Kelvin Lake visited the site. To reduce the number of vehicles making their way down the track to the mine, we left a couple of cars parked at the Miners Arms pub in Priestweston (which meant that we were forced to return there later!).

Steve, Ben and Oliver digging out the entrance. *(Kelvin Lake)*

Nick, Andy, Julian, Steve, Ben and Oliver - nearly there! *(Kelvin Lake)*

Most of what we were digging through seemed to be bits of wire, compost and old bottles (mostly dating from the 1960s). It took us some time to reveal the top of the portal, but once it had been exposed enough Oliver shot in there like a greased weasel.

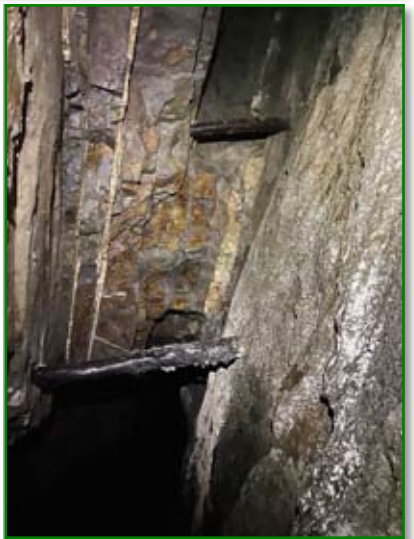
After he had done a quick recce, Ben followed him into the chest deep water taking a tape measure with him to do a quick survey. He was shortly followed by Julian, while the rest of us continued digging to enlarge the entrance.

About an hour later the three (Oliver, Ben and Julian) finally emerged from underground having completed a hasty survey and exploration of the workings.

Julian wading back towards the adit entrance. *(Kelvin Lake)*

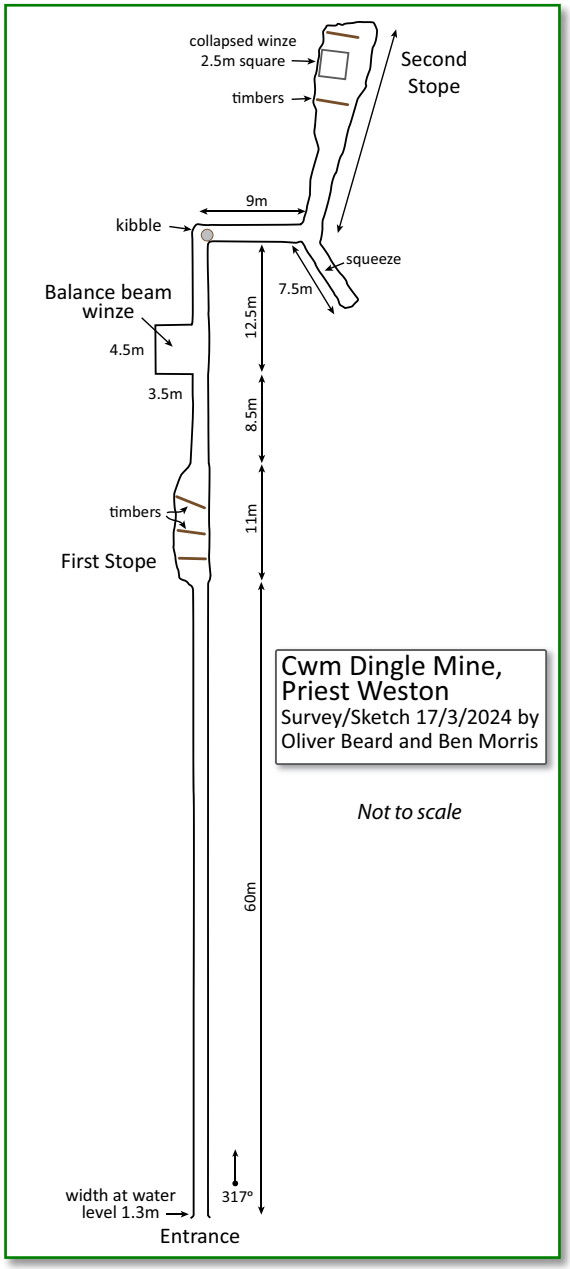
Measuring the entrance section. *(Ben Morris)*

Oliver in the first stope. *(Ben Morris)*



Overhead timbers in the first stope. *(Oliver Beard)*

SCMC Trips - Cwm Dingle Dig, March 17th
Continued ...



Once everyone was out from underground we then made the entrance safe using an old pallet and some of the wire netting that we had previously dug out.

The aim was to secure it to prevent the landowners sheep from wandering or falling into the adit.

The landowner invited us to return when he has purchased/hired a mini-excavator and opened up the entrance. Fingers crossed it won't be another 30 years before we return to the site!

Pillar in the second stope. *(Ben Morris)*

Flooded winze and balance beam. *(Oliver Beard)*

Measuring the entrance section. *(Ben Morris)*

Oliver crawling onto the 'squeeze'. *(Ben Morris)*

Oliver in the 'squeeze' section. *(Ben Morris)*

Third International Early Engines Conference, Scotland
March 21st to 25th

Several club members (Steve Dewhirst, Edwin Thorpe, Peter Eggleston, Roger Gosling, Kelvin Lake, Mike Moore, Jeremy Stopford, Beverley Cooper) made the trip northwards to attend this conference based at the Summerlee Museum of Scottish Industrial Life (on the site of the former Summerlee Ironworks) in Coatbridge, near Glasgow.

Two and half days of lectures and events at the museum were scheduled. As part of the talks programme Steve Dewhirst gave a talk on 'Early engines in the Ironbridge Gorge', while Kelvin Lake talked about the club's excavations at Pitchcroft Limestone mine. Both talks seemed to be well received and elicited a few questions. Site visit days were planned, one either side of the lecture programme, to allow delegates to visit some of the early engine and mine sites in central Scotland.

Thursday 21st - Auchenharvie

The first of the site visit days was 'blessed' with torrential rain. Starting from Summerlee it saw delegates car sharing and heading to the west coast to visit the Auchenharvie Engine House on Auchenharvie Golf Course at Stevenston. When erected in 1719 it was the second steam engine to be set-up in Scotland. The engine house is thought to be oldest surviving above ground remains of a Newcomen type beam pumping engine house in Scotland.

The original engine had an 18" diameter cylinder, but it proved too small and couldn't cope with the volume of water entering the mine. In 1721 "there happened a Great Inundation occasioned by a violent storm" causing an inrush of sea water. Despite sea defences being built the mine still suffered from sea water seepage. This small Newcomen engine was later replaced by a Boulton and Watt engine made by John Nelson of Glasgow. This new engine had a 60" diameter cylinder and an 8 ft. stroke and operated 15 ½" bore pumps, discharging 4 tons of water a minute. It was possibly the first of its size in Scotland.

Auchenharvie Engine House with the loch behind. The shaft was on the right of the picture. *(Kelvin Lake)*

Forming a huddle to shelter from the rain while Dave Hardwick explains the site. *(Kelvin Lake)*

Thursday 21st - Caprington Colliery

The second visit of the morning was Caprington golf course near Kilmarnock and the site of Blacksyke Engine House. Known by several names, including Capprington Colliery Engine House or Lusk's Folly the engine house is a Scheduled Monument. It was built in 1781 in the manner of a tower house, with rubble-built walls, and dressed stone quoins.

The tower measures ~6m by 8m, with walls ~0.7m thick and has crowstepped gables. It housed an atmospheric Newcomen pumping engine, with a cylinder of about 33" diameter made by the Carron Ironworks.

Nearby is a pair of lime kilns, also a Scheduled Monument. They are marked as disused on the second

Blacksyke Engine House, built 1781. Note the boiler/cylinder arch.

Remains of a chimney turret on the North-east corner of the building.

Edition OS map (1897). They have an inclined charging embankment to the kiln top. The kiln eyes are in good condition and retain the rectangular iron box and grate bars from which the quicklime was removed.

Twin lime kilns near the Blacksyke Engine House of Caprington Colliery. *(Kelvin Lake)*

The 'eye' of one of the lime kilns, part of the Schedule monument listing for Caprington Colliery.

While returning to the cars we came upon a second tower engine house, known as Caprington engine house water tower, or Riccarton, Blacksyke. It appears to be an early 19th century pumping engine house on the Caprington estate, now surmounted by an iron waster tank.

A pair of bolts survive on the bob wall, and inside evidence for the internal stairs can be seen in the plasterwork.

It is depicted as roofed and named 'Coal Pit' on the OS 25-inch map (Ayrshire (Riccarton), surveyed 1857, published 1858, sheet XXIII.1). However it is labelled 'Tank' on the 1908/1910 OS map.

The grate of one of the lime kilns, complete with bars.

Rear of Caprington engine house water tower, Blacksyke.

Bob wall of the engine house. The shaft was in the foreground.

Detail of the bob wall and bolts on the water tower.

After spending some time examining the water tower engine house we returned to Summerlee Museum for lunch, before setting off for the east coast and the afternoon visits.

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

Thursday 21st - Kinneil House, Bo'ness

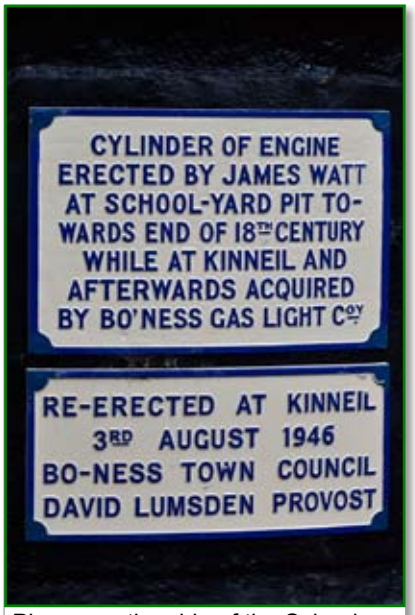
Kinneil House, a 1677 symmetrical mansion was once the principal seat of the Hamilton family, and it was saved from demolition in 1936 when 16th-century mural paintings were discovered.

In the 1760s the industrialist Dr. John Roebuck (founder of Carron Iron works), was living here. He built a small building in 1769 to the rear of the house for James Watt to carry out, in secret, his early steam engine experiments on a Newcomen engine cylinder (1765-1770).

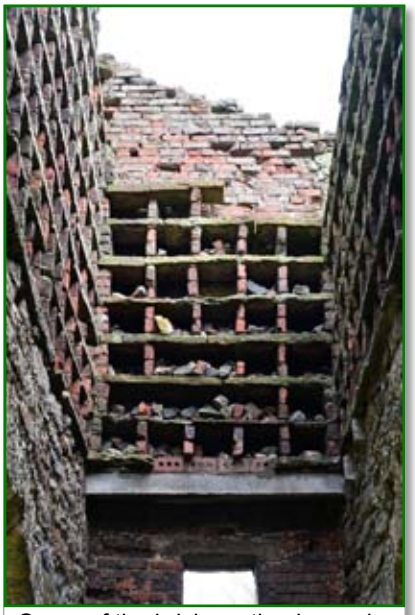
In 1946 Bo'ness Gas Company donated the 5ft 3ins diameter cylinder from the Schoolyard Pit Newcomen engine to be erected here and the cottage 'rebuilt'.

James Watt's Cottage, Kinneil House, Bo'ness, Falkirk with the donated Newcomen engine cylinder.

The donated 5ft 3ins diameter Newcomen cylinder.



Plaque on the side of the School-Yard pit cylinder.



Some of the brick nesting boxes in the Kinningars Park engine house.

Thursday 21st - Kinningars Park, Bo'ness

The final visit of the day was to the c1725 atmospheric engine house in Kinningars Park with it's adjacent shaft. When the mine closed the engine house was converted to a large lectern type rectangular plan dovecote with 415 brick nesting boxes.

Across the road from the engine house is Bridgeness Welfare Society & Social Club, the former Bridgeness Miners Institute, which now operates as a pub and club.

The Kinningars Park atmospheric engine house - note the twin arches, possibly for a Haystack boiler.

Bob wall and capped shaft (left) of the Kinningars Park engine house.

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

Friday 22nd - Sunday 24th - Summerlee Museum

These few days were spent at the Industrial museum, mainly in talks, but with chances to explore the ironworks site, museum exhibits and tour the museum stores. In the stores there were several mining related artefacts, including parts of the Farme Colliery engine - the jewel in the crown of the museum.

Parts of the Farme Colliery rotative Newcomen engine in the museum stores.

Steve Dewhirst delivering his talk on '*Early Engines in the Ironbridge Gorge*'.

The Farme Colliery engine was a combined pumping and winding atmospheric engine built in 1810 and worked at Old Farme Colliery in Rutherglen (about 3 miles from Glasgow city centre). It finally stopped work and was taken into preservation in 1915. At the time it was the last rotative Newcomen engine to remain in regular use as a winder. Two other survivors now preserved in the Henry Ford Museum USA, were no longer operational in 1915.

However, the early custodians were not kind to it and it was another 75 years before work to reconstruct it began after it was moved to Summerlee Museum in 1990. Unfortunately, a lot of the parts had been lost over the years when it had been moved from one museum to another and wooden parts, such as the flywheel spokes and winding drum had rotted away.

However, the partial reconstruction in a replica engine house based on old photographs such as those in *The Engineer* (30 Oct. 1903 pages 436-437) works well and gives a good idea of how the installation would have looked - even though it raises lots of questions such as:

How did it reverse direction when winding if it was pumping at the same time?

Did it really wind from two shafts that were different depths (as the different diameters of the winding drum suggest)?

Views of the reconstructed Farme Colliery rotative Newcomen engine in the grounds of the museum.

The reconstructed winding drum of the Farme Colliery engine - with different diameters for each rope.

The cast iron beam and heavy con-rod of the Farme Colliery rotative Newcomen engine.

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

Monday 25th - Beam Engine House Coach Tour

The conference concluded with an all day coach tour around East Lothian, Clackmannanshire and Fife areas on another delightfully wet day!

Prestongrange Museum, Prestonpans, East Lothian

The museum opened in 1993 on the site of Prestongrange Colliery and was our first stop, where the visitor centre was opened especially for us, before we had a guided tour of the Cornish beam engine house and railway sheds.

The Category A listed pumping engine house houses Cornish beam pump (70" diameter cylinder with a 12ft. stroke) made by J. E. Mare & Co of Plymouth to a Hocking & Loam design. The engine had worked at various mines, before it was bought by Harvey & Co. of Hayle. They then sold it to Prestongrange Colliery in 1874 with a new cast iron beam. It pumped water in 3 stages at 2,955 litres a minute, it finally stopped in 1954. Prestongrange sank their first shaft in 1829, the mine finally closed in 1963.

The Category A listed pumping engine house, complete with it's Cornish beam pumping engine.

The cast iron beam made by Harvey & Co of Hayle in 1874.

Top of the 70" diameter cylinder of the Category A listed Cornish beam pump.

IEEC3 delegate and historian Peter King studying the cylinder top and valve chest of the beam pump.

IEEC3 delegate Edward Potts working the valve gear of the beam pumping engine.

Sirocco-type centrifugal fan from Lingerwood Colliery, Newtongrange, on display outside at Prestongrange.

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

NCB Lothians Southern region No.17 & Prestongrange No.7 steam locos in the new Prestongrange workshop.

12 ton Ormiston Coal Co. Ltd. coal wagon, 117 in the new Prestongrange railway workshop.

Devon Colliery, New Sauchie, Alloa, Clackmannanshire

We were granted special access for the second stop on the tour, which was Devon Iron Company's *Devon Colliery* where a Cornish beam pumping engine house c1854 survives along with the beam of it's engine. It was an unequal beam engine having a 9ft. stroke in the 72" diameter cylinder and a 10ft. stroke in the shaft.

Cast into the sides of the beam is the makers name and details: "*No. 189, Neilson & Co. Glasgow 1854, Alloa*". The pit closed in 1857, then re-opened in 1879 as the Alloa Coal Co. The beam pump was replaced by electric pumps in 1932 and most of engine was scrapped, but for some reason the beam was retained.

The colliery closed in 1960 and the engine house abandoned. Between 1991 and 1993 Clackmannan District Council converted the engine house into offices for Countryside Rangers Service. Sadly, it is now abandoned again and the engine house is within a secure compound of the Scottish Society for the Prevention of Cruelty to Animals, Fishcross.

The Devon Colliery Cornish beam pumping engine house with it's cast iron beam and pump rod.

The outdoor end of the beam with a dummy owl sitting on top of the pump rod to keep pigeons away!

An unusual feature of the engine house is a 'spiral' stone staircase to reach the beam floor.

The indoor end of cast iron beam made by Neilson & Co of Glasgow, works No. 189, 1854, Alloa.

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

Kennetpans Distillery, Clackmannanshire

The third stop on the tour was a site that was formally a salt panning community but became the largest distillery in Scotland by the 1730s. The exact date when whisky making at Kennetpans began is unknown. It was started by John Stein, while his brother James Stein opened another distillery nearby at Kilbagi in the 1770s. The scale of these two plants had never been seen before in Scotland. Production rose to such levels that the duty paid by the two distilleries was greater than all the land tax collected annually in Scotland. Kilbagie was the first Scottish distillery to export spirit in bulk, effectively being the forerunner to a market now worth £4.25 billion to the Scottish economy.

The view of the engine houses at Kennetpans Distillery from the approach road.

Bill Whitehead (right) explaining the engine set-up, with the first engine house and flywheel 'curve' on the left.

In 1751 John Haig married John Stein's daughter and their sons were responsible for the well known Haig Brand (Haig dimple bottle 1888). Around 1780, John Stein owned two of the largest distilleries in Dublin. John Jameson, originally from Alloa, Scotland, was related to the Steins and Haigs through marriage and moved his family to Dublin where he later became general manager at Stein's Dublin Bow Street Distillery before eventually taking it over and renaming the distillery *John Jameson and Son*.

Present day famous whisky brands Haig (Haig dimple bottle 1888) and Jamesons linked to the Steins.

Kennetpans ceased operations in 1825, the distillery and extensive warehouses became "ruinous" and overgrown. At one time the buildings were three stories high. The site also had its own pier on the River Forth, remains of which can be seen at low tide.

So, why the visit to an abandoned distillery? The Steins were very innovative and in 1786 they installed the first Bolton & Watt rotative condensing steam engine in Scotland, hence the reason for the visit.

The site was designated a scheduled monument in 1991 for its role in forming both the Scottish and Irish whisky industries.

After touring the distillery and warehouse site the landowner Bryan Frew took us out to the river bank and a memorial that he is building to a Lancaster bomber (see picture right).

On 7th July 1943 whilst taking part in a cross country flight Lancaster I ED548 of No.12 Squadron crashed into the River Forth near Kincardine Bridge all the seven of the flight crew died. They were:

Sgt. W.H.Bartlett (air gunner), Sdn Ldr. R.G.L.Baxter (pilot),
Sgt. S.J.Betts (air gunner), Sgt. J.D.Butterly (flight engineer),
Sgt. J.E.Hindmarch (wireless operator),
Sgt. L.Hopkinson (Navigator),
Flying Officer F.M.Smith (air bomber).

Third International Early Engines Conference, Scotland
March 21st to 25th, continued ...

Culross, Fife

The final stop on the tour was the small picturesque village of Culross, although several delegates opted to stay on the coach rather than brave the wind and rain exploring the village.

During the 16th and 17th centuries, Culross was a thriving port and centre of the coal-mining industry, at least 20 shafts are known to have been sunk around the village. Sir George Bruce of Carnock, established a coal mine at Culross in 1575. In 1590, he constructed *The Moat Pit*, the first coal mine in the world to extend under the sea. The mine worked the Upper Hirst coal seam, and used ingenious contrivances to drain the constant leakage from above. This mine was considered one of the marvels of the British Isles in the early 17th century, unfortunately it was destroyed in a storm on 30 March 1625. Traces of the pit can still be seen at low tide, 600 metres from the village square.

The town's rôle as a port declined from the 18th century, and by Victorian times it had become something of a ghost town. The harbour was filled in and the sea cut off by the coastal railway line in the very early part of the 20th century. The outer pier has recently been the subject of restoration work.

View along the Firth of Forth at Culross with Culross pier (wooden) and the site of the Moat Pit off the shore.

Site of the flooded St. Mungo's Pit between the Low Causeway and the East Car Park

The Tron with the 1626 Town House in the background.

In the village square outside the town house there is a Tron dating from the 19th Century. The original Tron, the official burgh weighbeam for weighing coal and salt was erected in 1625. The weighing was supervised by a Tronmaster. The Tron was also used by customs officials to weigh cargoes and to calculate the export tax to be paid by the merchants.

Those of us that braved the weather to explore Culross took the opportunity when returning to the coach to call in at the Red Lion for a quick coffee and possibly a beer, returning to Summerlee and the end of the conference.

Thanks

Thanks must go to the conference organisers; Steve Grudgings, Chris Jones, Dave Hardwick and Paul Stephens for a fascinating conference. Plus Justin Parkes and all the staff and caterers at Summerlee Museum of Scottish Industrial Life for all their hard work in making things run smoothly. It was nice to meet up with old friends, especially the international delegates from the world heritage mining town of Banská Štiavnica, Slovakia.

Office building (1859) of Summerlee Ironworks now the reception/ticket ofifce/shop of Summerlee Museum of Scottish Industrial Life, Coatbridge.

SCMC Trips - March and April 2024

Thursday March 28th - Burgam. Oliver Beard and Andy Wood explored Upper Burgam and also visited Lower Burgam. There were several bats, they didn't seem to have any rings, but they were both hanging in the roof of low lying passages and flying around. This was reported to Mike Worsfold who expressed some concern and has said he will write some advice notes for future visits here.

Sunday April 7th - Cwmystwyth. Seven club members; Oliver Beard, Andy Wood, David Heavey, Lois Dennis, Dan Griffiths and John Wilkinson, plus Richard Timms (UCET)

The day dawned dry, sunny and windy and all participants remarked on the pleasurable and scenic spring drive to site for a 10am start.

Oli had planned visits to Queen's adit, Taylor's adit plus Herbert's and Alderson's levels so we walked along the road before struggling up the steep hill to Queen's adit. With all the recent rain, the walk into it was over knee deep – a fresh experience for new members Dan and John! Oli rigged the top pitch using a bag at the rub point on the edge of the shaft but it proved difficult to keep the rope in place on it. The back up bolt could easily be pulled out, but I monitored it while people were on the rope and, because of the pull being at right angles, it was actually perfectly stable. However, it does need replacing sometime. Oli, Richard and Lois had descended the second pitch, but the water level was high and they were very soon coming back up so the rest of us only managed the first pitch.

On exiting Queen's, storm Kathleen was driving heavy rain at us. After a short wait the three of us, Dan, John and I, went and looked around Herbert's and Alderson's levels, as previously arranged. I had made a tactical error in wearing my old wellies with drainage holes but they were so worn that I kept slipping on wet grass, moss and rocks. So much so, that I twice wound up sitting in the stream running past these adits as my boots slid off the slimy rocks. This was a tad unnerving, as I could have been washed down the steep watercourse by the raging torrent. A learning point for bad weather!

We ate lunch in the shelter of Alderson's while the others caught up, but David and Lois decided to leave after they had eaten. Dan and John had no protective gear so were soaked through, frozen and shivering, so we left promptly. However, it was a waste of time trying to put dry clothes on in the gale and my clothes and the car were soon drenched so I had a damp drive home and had to slip a load of wet and dirty gear into the washing machine once Sarah had gone to bed!!

Oli and Richard completed the trip by doing Taylor's and Cross Roads adits after we left.

Report: Andy Wood

Sunday April 21st - MCRO at Snailbeach. Midlands Cave Rescue Organisation undertook an underground rescue practice at Snailbeach using the Big stope and Baryte stope. Several club members who are also MCRO members took part. Originally planned for Huglith, the exercise was moved to Snailbeach due to the problems with the Forestry England access agreement and very boggy ground where team members would have parked.

The scenario was that a solo urban explorer had enter the mine and suffered an injury while dodging a roof fall - by sheer coincidence during the practice while the casualty was being recovered from the Baryte Stope there was also a real fall of rock from above the right-hand training area. The SMT are investigating the area further and looking at possible safety solutions.

Thursday April 25th - Maddox Coppice trip. Oliver Beard and Al Braybrooke and his dog "Jason" were involved with this evening trip into this small and very wet mine. We both enjoyed exploring this relatively extensive trial which may connect to flooded lower levels. I managed to practise my techniques for swimming across the flooded winze, plus I retrieved an old DMM carabiner that had been sat underwater for 14 months (see Oliver's pictures right)!

Report: Oliver Beard

The flooded winze in Maddox Coppice - just ripe for a swim.

SCMC Trips - Nenthead Easter 2024

Alan Robinson

Thursday 28th March - Scraith Holes

Those present: Alan & Vicky Robinson, Steve Holding and Julian Bromhead, Nick Green, Lloyd and Karl.

A return to Nick's dig in the bottom Level saw considerable progress from our last visit in 2023. The digging team had managed to complete the breakthrough in the main collapse and now had a good section of clear passage drained. Previously we had only been able to peep down into the flooded level from the stope above. Now they had moved the funicular hoist onto a new location and were clearing out the level floor inbye. The next couple of hours had the Shropshire labour force hauling full trugs of spoil up to the stope for temporary disposal. The plan is that once the dig advances again, this route can be sealed-off and filled as the hoist is again advanced towards the next sump connecting to the level. As ever we adjourned to the Barney Craig Arms (Carr Shield social club) to a warm welcome from the locals.

Julian and Alan working on the funicular chain gang to lift spoil into the overlying stope. *(Vicky Robinson)*

Alan at the top of the funicular hoist - made of timber and Dexion. *(Vicky Robinson)*

Friday 29th March - Smallcleugh

Those present: Alan & Vicky Robinson, Steve Holding, Julian Bromhead, and Nick Green.
A tour of some of the more photogenic spots in the near portion of the mine so that Vicky could try out her new torch with a combination of other lights. It was pleasant to have a day that was both dry underground and had a minimum of crawling.

The North End flats, Smallcleugh. *(Vicky Robinson)*

Julian in the mini Ballroom, Smallcleugh.*(Vicky Robinson)*

Saturday 30th March - Smallcleugh, Baron's Sump

Present: Alan & Vicky Robinson, Julian Bromhead

A quick return to Smallcleugh saw three of us heading out to Baron's Sump Engine house by the crawling route. Alan and Vicky had been there fairly recently, accessing it via Middlecleugh using SRT. Going from Smallcleugh takes a more complicated route and it soon proved that Vicky's memory of the way was best. It was Julian's first visit so he was relying on us, but he had been warned it might take one or two false starts.

The crux of the route is two very low crawls which are prone to being blocked as loose material is dragged in by the

passage of bodies. The first crawl was negotiated without much difficulty, but the second required about ten minutes of clearing when Vicky couldn't even get her helmet in. Eventually it was passed as a snug fit for all.

Julian emerges from a tight crawl. *(Vicky Robinson)*

Alan disappears….. *(Vicky Robinson)*

After short distance down the passage a crossroads is met with, our way being to the right and up a short rise to a higher level. A couple more climbs up and down, bypass a collapse on the main level to emerge at the Engine house which is built into an excavated chamber. Very little is known about what engine operated here, but it must have been significant as the chamber is about four storeys high. There are also some very impressive flats nearby which are only partially backfilled.

Above and right: Baron's Sump Engine house. *(Vicky Robinson)*

Ventilation fan & compressed air pipe. *(Vicky Robinson)*

Truck base and arching in adjacent flats. *(Vicky Robinson)*

SCMC Trips - Nenthead Easter 2024
Alan Robinson, continued ...

Monday 1st April - Guddamgill

Present: Alan Robinson, Steve Holding and Julian Bromhead
What better April Fool than being persuaded to go to Guddamgill level.


Ochre and formations. *(Julian Bromhead)*

A wet walk to the entrance followed by waist deep ochreous wading to the ends of the level with dubious air quality. An oxygen meter is essential for this trip, as we had two areas where it dipped below 16.5 percent. The colours of the formations are quite stunning albeit very orange. There are also a few remains, including a nice double hopper and part of what appears to be a sheave wheel.


Following the compressor pipe. *(Julian Bromhead)*

This trip was Steve's suggestion, but he couldn't squeeze past the first significant constriction so left the rest of this rather ochreous trip to just Alan and Julian.

Tuesday 2nd April - Brownley Hill

Present: Alan & Vicky Robinson, Steve Holding and Nick Green

Another photo trip. Went out to Blue Hole sump then over to Guddamgill Vein. A little bit of thigh deep wading,


'Blue Hole' Sump. *(Vicky Robinson)*


Stopes, Guddamgill Vein, Steve in the distance.


Steve traversing across a drop. *(Vicky Robinson)*


Orange waterfalls on route to Scaleburn connection.

plus a scramble up from the level to the stope. There was the normal drop of oxygen at this point, but Steve's carbon dioxide meter was misbehaving so we were unable to get a direct correlation. Plenty of photo opportunities in the massive stope, with lots of hydrozincite and ochre staining.


Steve ready for the chop. *(Vicky Robinson)*


Alan at the top of Proud's Sump. *(Matt Clarke)*


Dave after crossing rails over a drop heading to Carrs. *(Matt Clarke)*

Wednesday 3rd April - Smallcleugh to Carrs

Two groups made this trip, 1: Alan and Vicky Robinson, Paul Thorne, plus Dave Cushing and Matt Clark (KURG). **The second:** Steve Holding plus Nick Green.

The first group undertook an SRT trip down the start of Proud's sump but diverting onto a level that connects directly to Carrs. This involved crossing a couple of holes in floor and lots of short crawls before eventually emerging in the main drive level through Carrs. Here a further short crawl and a few minutes walk should have taken us to the inner gate at the end of the show mine. Unfortunately, there had been a significant run in of material where the hands and knees crawl would normally be!


'Alston, we have a problem!'. *(Vicky Robinson)*


Steve's view from outbye. *(Steve Holding)*

After discussing options of retracing our route or descending down to Rampgill we decided to have a closer look at the collapse. Fortunately, at this point, Steve turned up on the other side with a spade and we could just about see his light, on one side of the fall. After feeding a rope through from our side we were able to pull the spade back. In the meantime, Nick Green joined Steve with more tools. Steve had seen the collapse prior to our arrival and had gone to fetch spades and alert Nick.

As a first stage we drove in a few 'found' planks horizontally from our side so that they were wedged under in situ crosspieces that hadn't been damaged. Nick managed to place an additional upright his side. With the extra support in place, we were more confident of being able to dig a slot down the good wall where the roof was intact. In total this took about an hour or so as we took turns to dig.

Big enough to squeeze through with planks. *(Matt Clarke)*

Nick Green looks in to the dig. *(Matt Clarke)*

Finally, the space was big enough for Paul to slide through followed by Vicky, the rest of us and all our SRT kit. Matt brought up the rear with the trusty spade.

To prevent further deterioration of the loose ground we went out for boards and bridging timber so that we could provide sufficient horizontal support until it can be properly cleared and supported.

Another team of volunteer diggers returned that weekend to civilise the area back to something more stable.

Paul, the first person through... *(Vicky Robinson)*

Temporary shoring put in after escape. *(Matt Clarke)*

Thursday 4th April – Scraith Holes

Alan and Vicky Robinson, Paul Thorne, Matt Clark, Roy Fellows and Nick Green.

The plan was to continue the dig we visited the previous Thursday until we had cleared all the debris as far as Sump B3. We all had a chance to wade our way up the drained section of level to the next collapse. A short crawl across the top led to some hefty boulders, but no obvious way on yet. However, Nick and Lloyd were happy with progress, whilst they contemplate a method of attack on the obstruction.

Above and right: Exploring the former flooded level beyond the main dig. *(Vicky Robinson)*

SCMC Trips - Nenthead Easter 2024
Alan Robinson, continued ...

Friday 5th April - Barney Craig via Rampgill

Alan and Vicky Robinson and Paul Thorne.

We took a route along Rampgill then Hardshins Veins over the county border and into the Rampgill extensions to a point where we could descend a sump that carries a water pipe down from Coalcleugh 60+m above to the horizon of the Barney Craig level. This involved a 22m descent through a tight slot in timber and rails. The pitch was a bit damp and there was a lot of hanging timber.

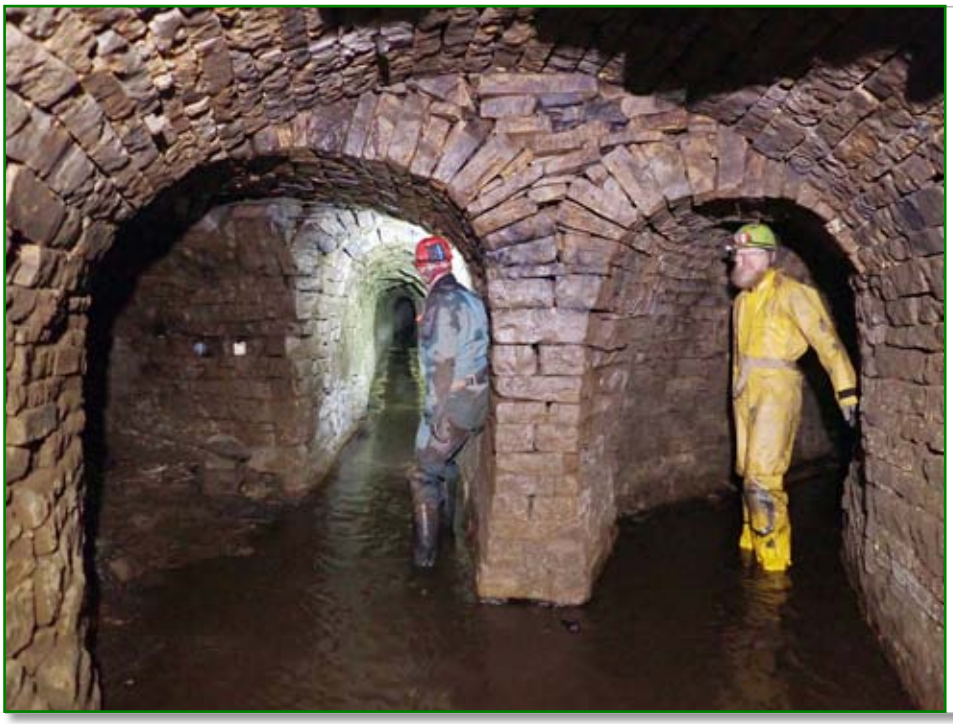
From the main level we went outbye (downstream) for some distance through superb arching. Emerging from this back into shales seemed to coincide with low oxygen, so we turned back before it became too wet or dodgy.

Close to our descent point were the remains of the base of a compressor fed by the water pipes and presumably driven by a pelton wheel. Inbye (under Rampgill) we went up to the Barney Craig underground shaft with the remains of an old cage. Going further on the passageway and arching become increasingly iffy, so caution in this remote area seemed prudent. A careful return was made back up the shaft and the 2 mile walk back to Cumbria and the Rampgill portal.

Paul and Alan at the Barney Craig compressor.
(Vicky Robinson)

Paul Thorne by the cage at Barny Craig internal shaft.
(Vicky Robinson)

Steve and Dave Cushing were also in Rampgill Vein and Scaleburn Vein of Rampgill mine that day and recorded gas measurements at locations previously used. Scaleburn Vein was pushed to a dig with scaffolding, where the oxygen was slightly over 15% and the carbon dioxide at 3%.



Alan:
"Ok, Paul where next ?"

(Vicky Robinson)

New Light on Mining and Clay Working in Dowles

David Poyner

Dowles lies on the eastern border of the Wyre Forest Coal and just south of the main part of the forest itself (Figure 1). Historically it was once part of Shropshire. It is bounded on the south by Bewdley and Ribbesford (both in Worcestershire) and to the north by Kingswood, originally a detached part of Shropshire. Opposite Dowles, on the east bank of the Severn is Wribbenhall, a suburb of Bewdley but historically in the parish of Kidderminster Foreign.

Dowles sits on what is now classed by the British Geological Survey as the Pennine Coal Measures, although this covers numerous rock types. The older classification of the sequence as "productive coal measures" better describes the geology; this includes the high-quality coal mined at Billingsley, Highley and Alveley as well in East Shropshire and South Shropshire. However, in the older publications, the Geological Survey considered that the strata actually belonged to the Etruria Formation. This post-dates the Productive Coal Measures and consists of clay and sandstones but is devoid of any workable coal. It is succeeded in the geological succession by what is now classed as Pennine Lower and Middle Coal Measures but was perhaps more usefully once known as the Upper Coal Measures. This contains workable coal seams but which have an appreciable sulphur content. Small patches of this are now shown around the upper reaches of the Dowles Valley, north-west of Bewdley. The various coal measures and the Etruria Formation are all of Carboniferous age and rest on the St Maughan's Formation, from the earlier, Devonian, period. To the east are rocks of later Permian or Triassic age; the Alveley and Bridgnorth sandstones.

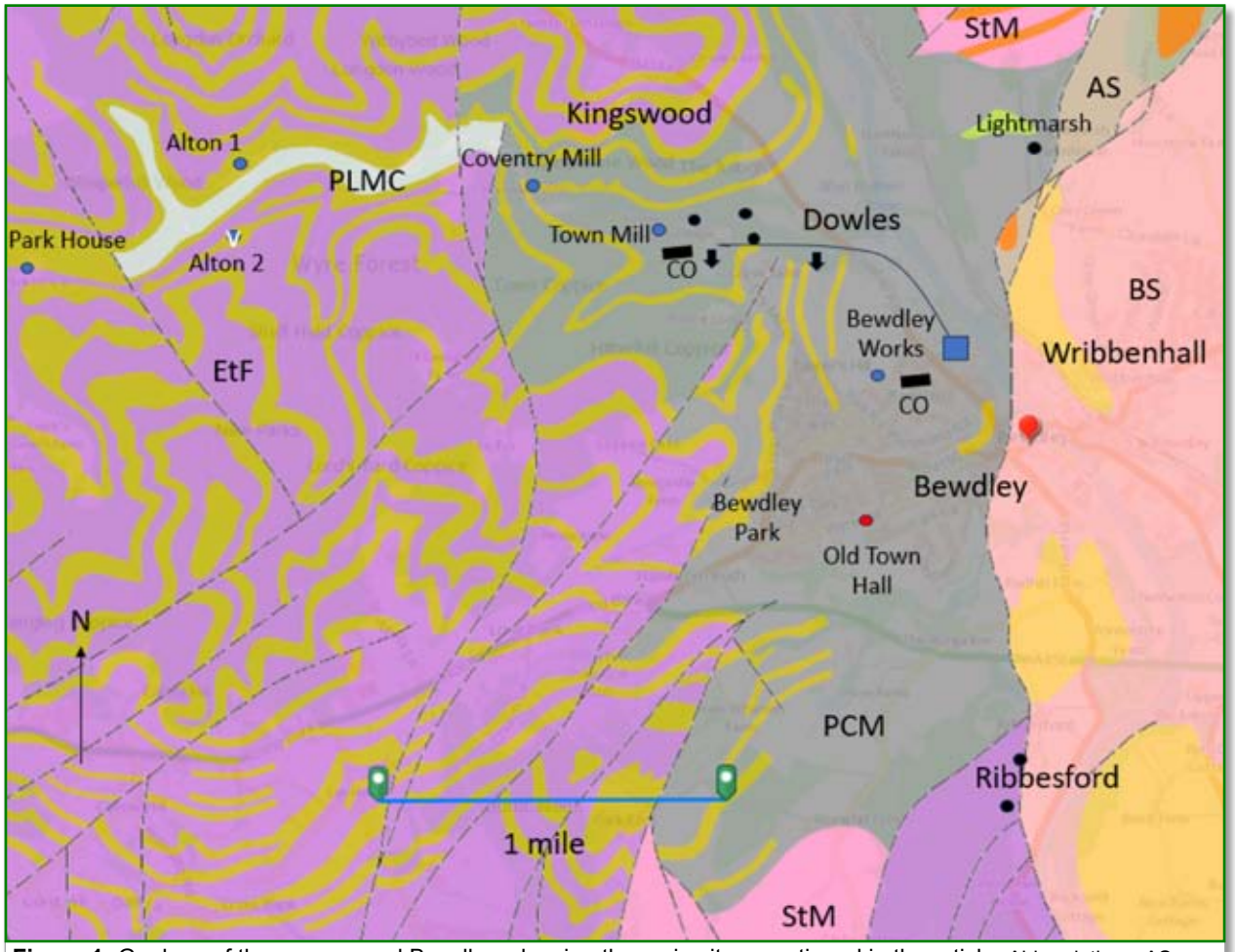


Figure 1: Geology of the area around Bewdley, showing the main sites mentioned in the article. Abbreviations: AS Alveley Sandstone, BS Bridgnorth Sandstone, EtF Etruria Formation, PCM Pennine Coal Measures, PLMC Pennine Lower and Middle Coal Measures, St M Saint Maughan Formation. CO by black rectangles, coal outcrop; blue circles, bore holes; red circle, well; black circles, shafts; black arrows, levels. Yellow and orange areas show sandstone outcrops within the respective geological formations. Broken lines indicate faults. The solid black line shows the tramway from Dowles to the Bewdley Works.

Major industrialisation came to Dowles in the late 1750s when Samuel Skey, a Bewdley grocer, opened a sulphuric acid works on the banks of the Severn, although prior to this the parish had been home to a number of brickworks. The opening of the chemical works is associated with a marked (if temporary) increase in people living at Dowles, at least as judged by the entries in the parish registers (Figure 2). Skey and his brother Jonathon also worked clay and made bricks and Jonathon ground logwood to make dyes. These activities were all concentrated at the same site, Dowles Works, close to the parish boundary with Bewdley. Jonathon eventually moved his dye business into Bewdley itself with the firm of S. Skey, Son and Co. operating the Dowles Works. A guide of 1824 mentioned the chemical and clay works at Bewdley[1], indicating how the two businesses were linked.

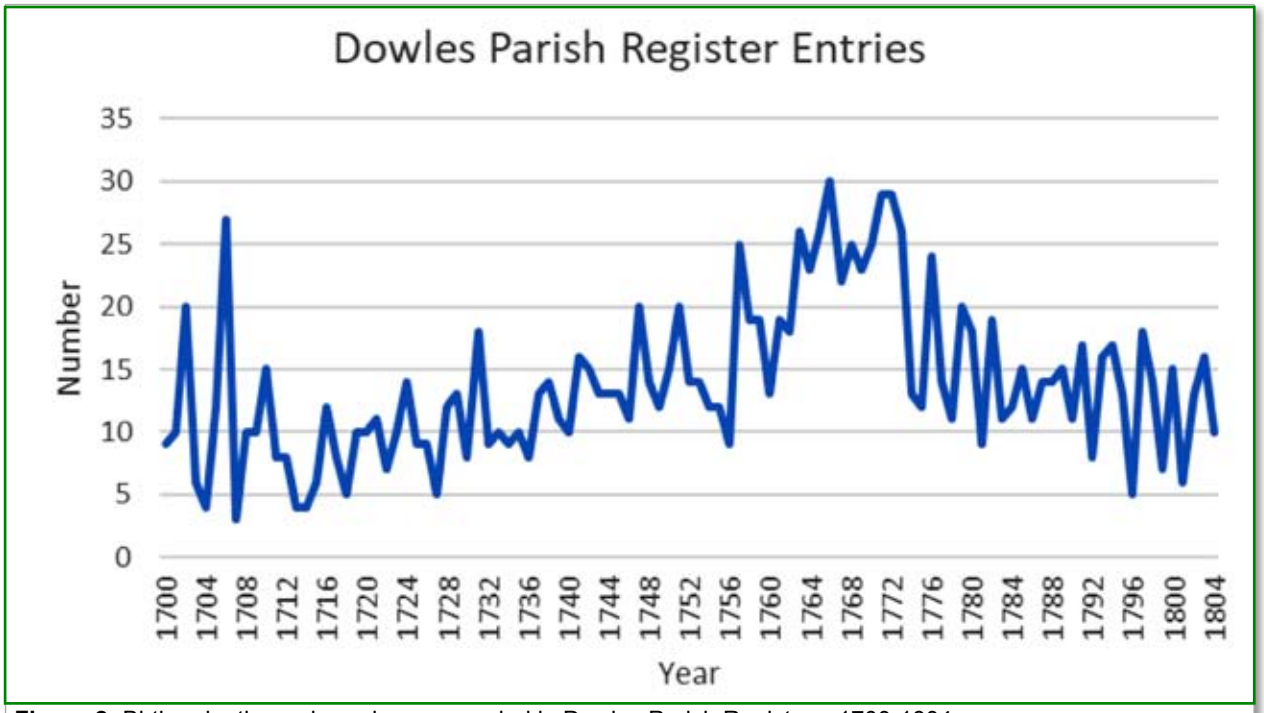


Figure 2: Births, deaths and marriages recorded in Dowles Parish Registers, 1700-1804.

In a previous article on Dowles, I wrote about a fireclay adit, which is still open and was on Skey's land. This was linked to the main road leading to Bewdley by a tramway; I did not know how far it continued beyond that. I also described references to a missing map apparently showing more shafts and a brickworks, on the Shropshire side of the Dowles in Kingswood (then part of Stottesdon)[2] and belonging to Thomas Foley. More information has now come to light about these features.

Mining in Dowles Valley

Jannion Steele Elliott, a naturalist and local historian who lived at Dowles Manor published a history of Dowles in 1918[3]. The missing map seems to be one he drew for his book, showing shafts and buildings around Dowles manor. Comparison with the most recent LIDAR (Figure 3) confirm his locations for these. On the north bank of Dowles Brook, close to the boundary of the Kingswood brickyard is a series of shafts. These shafts sit just above a leat that fed Dowles Mill, abandoned by 1845 and are all on Foley's land in Kingswood. On the south bank of the brook is a further shaft, to the east of the adit.

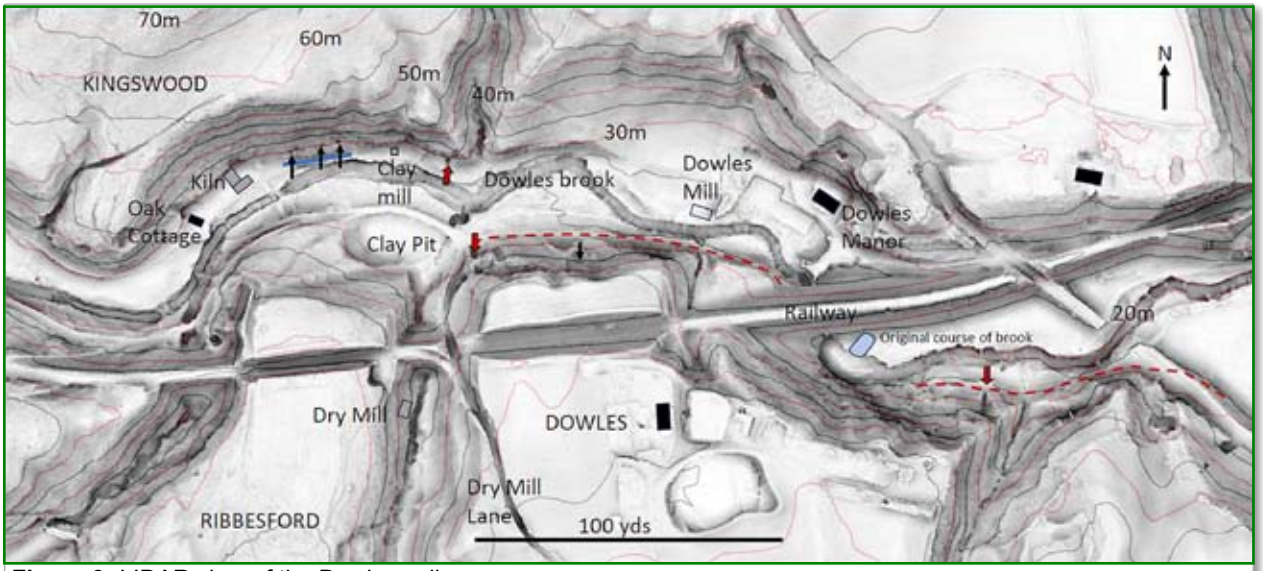


Figure 3: LIDAR view of the Dowles valley.
Black arrows point to probable shafts, red arrows mark adits. The blue line shows a surviving part of a leat leading to Dowles Mill, the blue oblong shows the former course of the brook, diverted when the railway was built. The broken red line shows the surviving sections of the tramway. The brick kiln and clay mill, as shown on railway surveys, are indicated in grey. The demolished Dowles and Dry Mills are empty rectangles; solid black rectangles show surviving buildings. Contours are in metres.

New Light on Mining and Clay Working in Dowles
David Poyner, continued ...

Further east, by the boundary with Dowles parish, what he marks as a shaft is probably a level going into the hillside; it is almost opposite the open adit on the south bank of the brook and must have worked the same fireclay seam.

In my previous article, I noted a claim made by Mrs N.M. Barrett, writing in the 1970s, that the railway embankment for the Tenbury Railway covered the site of a number of shafts[4]. This line was authorised in 1859 and followed the Dowles valley to Tenbury. However, neither its plans or those for its precursors (see below) confirm this and it seems unlikely. Regardless of any issues with stability of the embankment, any shafts it covered would have been inundated as soon as the Dowles overflowed. A more realistic account of events is contained in a 1923 newspaper article on Dowles, which stated that several fireclay workings were filled in when the railway was built; this seems to have been the fate of the shaft on the south bank of the Dowles[5]. Further east, just after the railway crosses the brook, the LIDAR shows a series of platforms on the valley side. These lack any convincing evidence for shaft depressions but there is what seems to be another adit going into the hillside.

The Dowles parish registers give information about the miners themselves. In 1824, Joseph Allchurch, a clay miner, baptised a child. He is also mentioned as a miner in 1826 and 1828, although in the 1841 census he is simply described as a labourer. He presumably worked either for Foley or Skey in their clay mines. It is harder to interpret 18th century references to colliers, as they could be either charcoal burners or coal miners. For what it is worth, the men are John Davies of Stottesdon (1716, 1719), Humphrey Winwood (1716), Thomas Hodgkiss (1717), Thomas Davies (of Stottesdon, 1719), Allen Wagstaff (Stottesdon, 1719), and Samuel Cook (of Bewdley, 1719).

It is unclear if coal, as opposed to clay, was ever worked in Dowles. As noted in the previous article, a thin outcrop of coal is visible in a cutting in a car park next to the railway line and four feet of coal was found in a well at The Old Town Hall Inn in Bewdley. A seam of perhaps 2 feet thick has recently been exposed in an excavation for a new house in the ground above the former Dowles work, although three 10m boreholes 120 yards west of this show only clay and mudstone[6]. The 19th century boreholes up the Dowles valley found no more than a few inches of coal, but boreholes may underestimate the thickness of coal as it can crumble and compact during drilling. When the Dowles estate was offered for sale in 1818, it was claimed to have coal, limestone and clay; it certainly had the latter two. However, sales in the 1850s only claimed fireclay[7]. My suspicion is that one or more shafts was sunk in the early 19th century for coal and a small quantity may have been found, but mostly the mining was restricted to fireclay.

The Foley Brick Works

The brickworks in Kingswood are not marked on the OS 2" preliminary drawings of 1816 but are shown on the printed 1" OS map, which was surveyed in 1828-30 (Figure 4, A and B). At this date, Kingswood was owned by Thomas Foley, 4th Baron Foley of Kidderminster, who must have established the works. In 1827, the ledgers of William Childe of Kinlet Hall show £3-2-6 was spent on firebricks from the "Dowles Brick Company" to repair the estate brick kiln. This purchase may have been from Foley's brickworks, as the Skey works traded as S.Skey & Son.

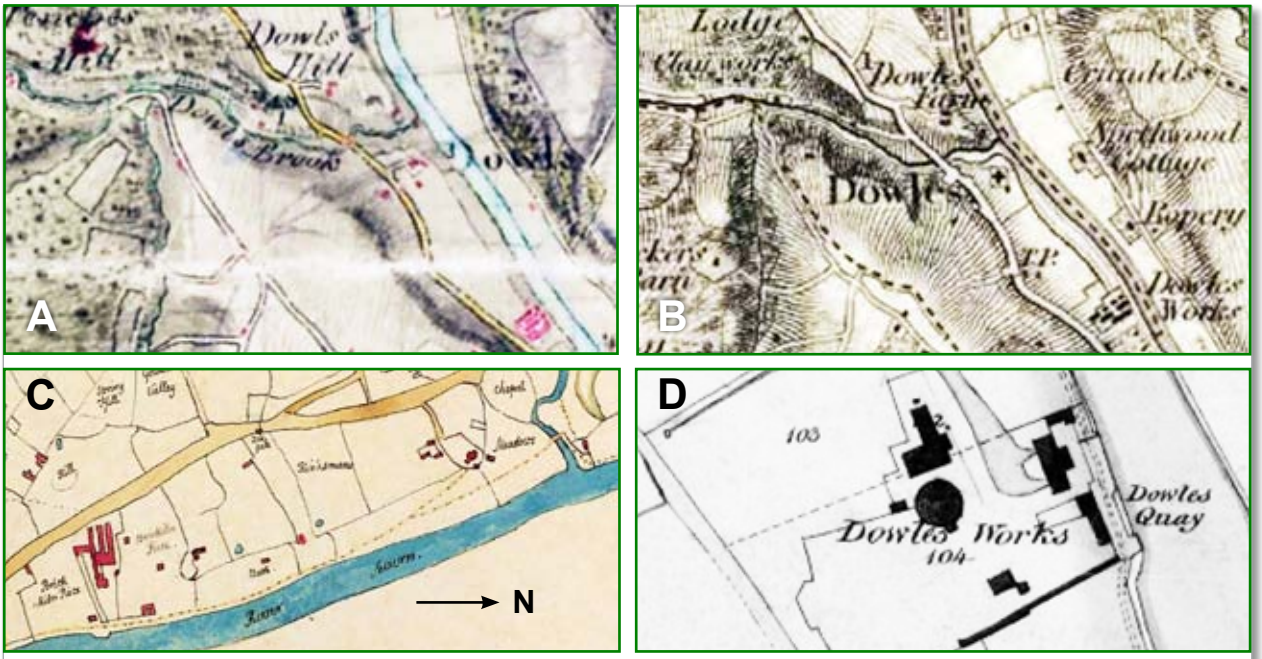


Figure 4: Dowles on early maps. **A)** 1816 OS 2": 1 mile preliminary drawing. **B)** 1832 1st edition 1":1 mile OS map (resurveyed 1828-30). **C)** Snape's map of 1786. **D)** 1840 tithe map, showing the rotunda, the clay and gas works.

The plans and book of references of the abortive Direct East and West Junction Railway from Kidderminster to Hereford, show the Dowles valley in 1845[8]. They confirm the identifications of the buildings of Kingswood brick works as a clay mill and a brick kiln. The kiln and Oak Cottage, thought by Elliott to have been the offices, were both occupied by Thomas Weaver, a miller, and so presumably were disused; the clay mill was on land directly occupied by William Ward, Earl of Dudley who purchased Kingswood from Foley in 1833. Careful examination of the first edition printed 1" OS map shows the kiln and clay mill are marked (Figure 4B). The clay mill appears as a roofless building on the 1882 and 1902 1:2500 OS maps and the LIDAR suggests that the base of the building still survives. The kiln is L-shaped; possibly representing a down-draught kiln with associated chimney.

The shafts and adits on the north bank of the Dowles would have been on the Foley/Ward land and presumably supplied the Kingswood brick works.

Dowles Tramway

The printed 1" OS map shows that the tramway crossed the road to run to Dowles Works. It swung round the north of St Andrews, the now demolished parish church of Dowles and crossed a leat that supplied water to Dowles Works to run parallel to this and the river; presumably it was used to supply brick kilns with clay (Figure 4B). It is also clearly shown on the 1845 railway map and is described in an 1852 sale of Dowles[9]. The leat but not the tramway can be seen on the 1816 2":1 mile OS preliminary drawings of Dowles (Figure 4A); however, its surveyors did not always record industrial features. Much of the leat can still be identified on the ground and with the help of LIDAR (Figure 5).

Clay working and brick making in Dowles

The new sources also provide more detail about the working of mines and the associated clay works. Brickmaking seems to have been established in the vicinity of Bewdley by the late 17th century; the first consignment of bricks recorded in a boat coming down the Severn from Bewdley is in 1684[10]. The Dowles parish registers record Robert Hande (1717) and John Levyton (1721) as brick makers; Robert married Mary Harrington in Ribbesford church in 1694 and his will shows that he was a wealthy man when he died. As noted previously, there were two main areas

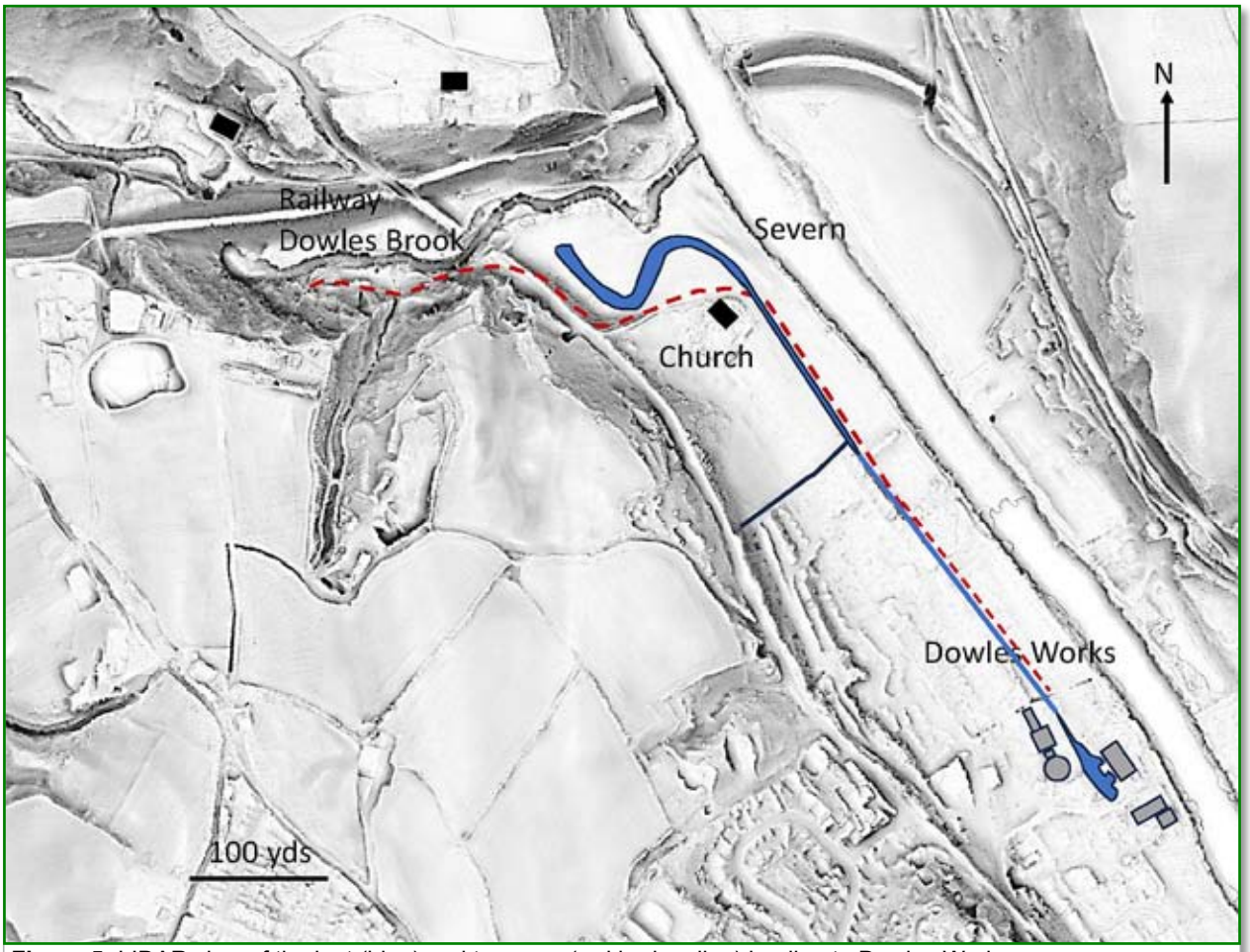


Figure 5: LIDAR view of the leat (blue) and tramway (red broken line) leading to Dowles Works.
The buildings at the works are taken from the 1840 tithe map are shown in grey.

of brick making in Dowles, shown clearly on a 1784 map by John Snape[11] (Figure 4C). Skey's chemical works was surrounded on the north and south by two fields both called "Brick Kiln Piece". The next field north is not named but has some unusual bulges in its boundaries which could represent active clay pits; a 1775 valuation showed that Samuel and Jonathon Skey held a brick kiln with 7 acres of land as tenants-at-will (allowing either landlord or tenant to withdraw without notice) for a rent of £16pa[12]. The land is adjacent to a number of fields that are named after the Handley family and are probably close to where Robert Hande had his kiln at the start of the 18th century. The 1784 map shows a second brickworks at Painsmore, north of the confluence of the Dowles with the Severn. This must correspond in the 1775 valuation to the kiln and 6 acres let to William Allen, for 21 years from Ladyday 1761 at £30 pa. Painsmore may have been the site of the brick-kiln leased to James Vobe, a Bewdley maltster, in 1794[13]. Coal measure clay was dug from the riverside by Dowles works but Painsmore seems to have quarried alluvial clay. My guess is that fireclay (or white-firing clay) was largely restricted to the Dowles valley.

It seems likely that some fire clay had been worked from at least the middle of the 18th century; "white bricks" were despatched in a boat from Bewdley in 1736[14]. In 1752 John Allen and Samuel Corker were offering Bewdley bricks and tiles at 13/- per thousand for common bricks, 18/- per thousand for tiles and 20/- per thousand for "wire" bricks; the latter is likely to be a printer's error for "white" or "fire" bricks as wire-cut bricks belonged to the 19th century[15]. In 1780, the Reading Mercury picked up a story that a "new china ware manufactory" was being established in Bewdley.[16] It is doubtful if anything came from this, but particularly once Samuel Skey purchased the manor of Dowles in 1783 it is likely that clay working in the valley became more intense. As noted in the previous article, brother Jonathon sent a clay sample to the Worcester Porcelain Works in 1794 and attempted to charge the company for the privilege of testing it[17].

At some point after 1824 the chemical works closed, leaving just the clay works and a water-operated grinding mill at Dowles Works. In 1838 this mill was known as the "Logwood Mill", clearly showing it was used for grinding logwood to give a dye. Logwood grinding was mainly the preserve of Jonathon Skey who used a steam engine housed in a building next to his warehouse in Severn Side, in the town of Bewdley[18]. However, "heart lath" belonging to S.Skey, Son & Co. was stored at Dowles Works[19] and so it seems they probably did grind this. The mill perhaps saw multiple uses, grinding sulphur or other raw materials needed for the chemical works[20], as well as driving a clay mill at some point.

Dowles Works were put up for sale in 1838; the effects being sold included "Blocks of marble, weighing machine, Tram Carriages, Fire Clay, Clay Mill, Dye Wood, and other Effects, the Property belonging to the Firm of S.Skey, Son, & Co., consisting of driving, fly, bevel, and upright cast iron Wheels, Oak Shafts, Screws, Burs, and Spikes; large quantity Cast Iron, Fire Brick various descriptions; Timber, Tram Carriages, Weighing Machine, Clay Mill, Fire Clay, Lead, Crucibles, Barge Masts, Yards and Rigging, Blocks, Tackles, &c."[21]. This is predominantly the portable working plant of a fireclay works; kilns would not be included as they were fixed plant. Whilst there is no mention of a steam engine, the mention of a driving and fly wheel imply that one must was used, probably to drive the clay mill. The layout of the site can be seen in the 1838 deeds drawn up for sale of part of Dowles Works to the Bewdley Gas Company. There was a large bottle kiln, "the rotunda" (see below) together with the mill and what may have been a drying shed. Other buildings including the grinding mill were either converted for use in the gas works or demolished. The sale marked the end of the Skey involvement in clay production and processing. The leat would no longer have served any useful purpose with the abandonment of the mill, but the brickyard remained in operation. By 1852 the drying shed seems to have been altered and a new clay mill and "stove" (kiln) were erected[22]. Reconstruction may partly have been driven by a severe storm in 1845 that damaged the brick works[23].

After 1838, the brickworks and clay mines and quarries were worked by tenants. The 1840 tithe survey shows both the Dowles Works brickyard and Painsmore were leased to Samuel Jeffries, described as a brick maker in the 1841 census. In 1845, the Direct East and West Junction Railway book of reference shows the tramway was leased by William Davis; from the same year, the Cambrian and Grand Junction Railway book of reference indicates that the kiln at Painsmore was occupied by John Goodwin [24]. In 1852 the Dowles Works brickyard was held by Charles Lloyd, an innkeeper, carrier and coal merchant from Severn Side, Bewdley at a rent of £9pa. Lloyd also had the tramway and leased red and fire clays alongside the river and up the Dowles valley for £25 pa dead rent and a royalty of 2/- per thousand bricks sold in excess of 25,000. Lloyd still leased the tramway in 1859 but he died in 1860 [25]. His wife may have continued as tenant for a period but this is also when Mobberley's of Stourbridge appeared to have at least made trial firings with the fireclay [26]. It is unlikely that workings of the fireclay up Dowles valley survived long once the Tenbury Railway had been constructed. Samuel Boraston leased the Dowles Works brickyard from at least the 1870s to his death in 1886 and then operations were continued by Thomas Gardner and his son until after the First World War. However, Boraston and the Gardners dug their clay from the riverside meadows and presumably only ever made common bricks. The last tenant at Painsmore was Thomas Elcock, who died in 1880 [27].

The Bewdley Rotunda

One of the many mysteries of the Skey's operations at Dowles is a brick cone (i.e. a bottle kiln) known as the Rotunda. This was built between 1784 and 1803[28] and for years formed a prominent feature on the Bewdley skyline (Figure 6). It survived long enough to be shown on the 1840 Dowles tithe map (Figure 4D) and features on maps as late as 1852, although according to one source, it actually fell down in 1840[29]. As it was associated with the clay works my guess is that it was eventually used for firing bricks. However, its original function is a mystery. It resembles a pottery kiln and there has been speculation that it could have been built when there were hopes that the Dowles clay was good enough for china. The late John Nunn, who first drew my attention to it, wondered if it could have been a lime kiln; he had evidence that Samuel Skey had written to William Reynolds in 1789 about a double lime kiln and he was of the opinion that this was around the time it was built. Unfortunately John never published any of his findings and whilst flint was calcined in cones at pottery works, I know of no case where limestone was similarly treated; open-topped kilns were easy to operate and worked perfectly well. The most striking feature about the kiln is its size; it was 22 yards in diameter and must have been over 100 feet high. The largest pottery kilns that I know are around a third of this size[30]. However, kilns of this magnitude were being built around 1800 at glass works. From around 1772 to 1778, Skey was a partner with James Keir and John Taylor at a glass works in Amblecote[31].

My suspicion is that Skey built the kiln with a view to making glass at Dowles, although it is possible the scheme was abandoned as soon as the kiln was built. But, once built, a kiln can be used to fire almost anything, and so I would guess it was turned over to brick production. The great height would have encouraged a fierce draught and so would have been particularly well suited for the production of fire bricks, which need to be fired at a higher temperature than normal bricks.

Figure 6: The "rotunda" seen in a painting of Bewdley by John Wood (1803).

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New Light on Mining and Clay Working in Dowles
David Poyner, continued ...

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15. BWJ 30-7-1752. Corker was a barge owner (Bewdley in its Golden Age, pg. 7). Allen, mysteriously described as from Dowldy, Worcester, may have been part of the Allen family who made bricks in Dowles.
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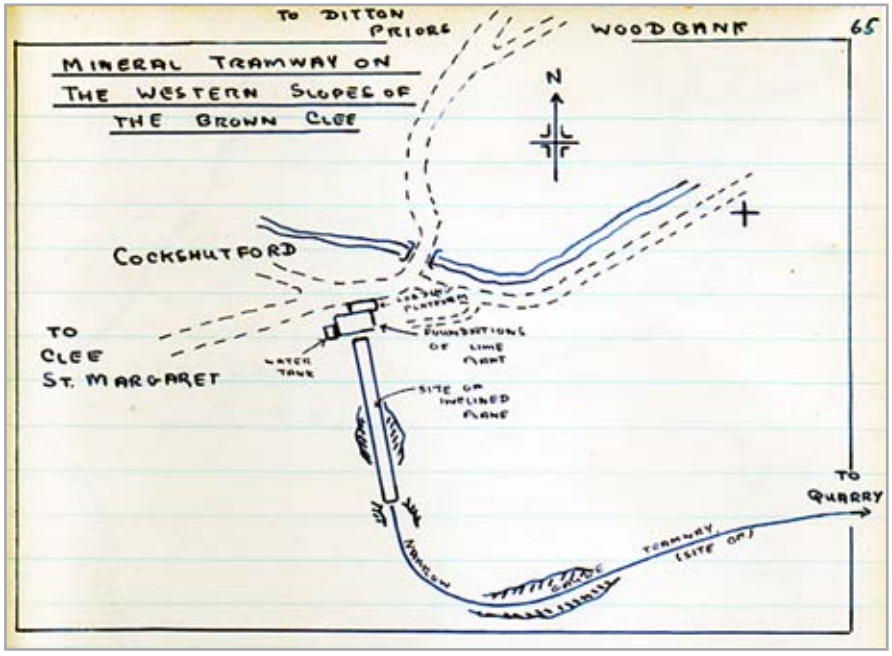
Cockshutford Quarry in 1956
John Tennent

I visited Cockshutford way back in 1956, but did not climb the incline and seem to have got the direction of the track at the top wrong. Nothing much seems to have changed, save for the increase in ground cover. This is a copy of my notes which club members might find of interest:

The Quarry, Plant and Tramway closed in 1944.

The top soil was removed by a mechanical navy and the stone put into skips which were propelled by men to the top of the incline where they were let down to the plant.

The lime was processed and bagged to be taken away by road. The site was visited on 23/9/56.



The information was given to me by an old man I met at Cockshutford.

SCMC Trip - Windrush Stone Quarry
Kelvin Lake

Only three members, Oliver Beard, Ian Cooper and Kelvin Lake took up the chance of a visit to this underground stone quarry about 15 miles south-east along the A40 from Cheltenham in the little village of Windrush. Organised by Oliver, we were guided by Jann Padley a member of the Royal Forest of Dean Caving Club.

The A40 runs along the top of the ridge heading into Oxfordshire and there are a number of white oolitic limestone quarries on the slopes of the ridge. In the area of Windrush there are several smaller old quarries marked on the 1891 O.S. Map, and these are thought to have been worked from the 15th century at least.

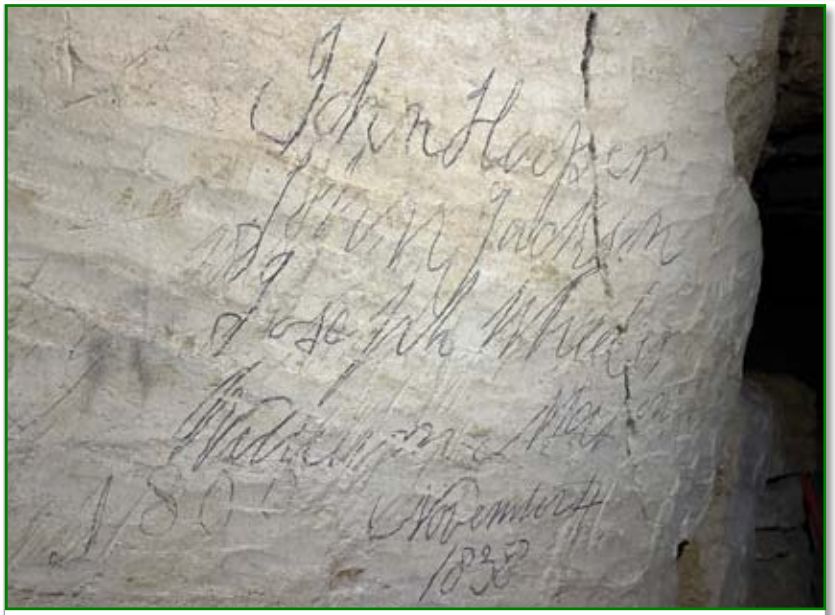
The gate into Windrush where we entered. *(Ian Cooper)*

In the 18th century a lease was issued on 25 March 1782 by James Dutton of Sherborne, Esq.[1] to "Thomas Jackson of Windrush, stone mason, of 1a. of land near the stone quarry, for a term of 99 years", also in 1777 a lease was made to "Thomas Hooper of Windrush, yeoman, of a cottage, garden and orchard". These names are significant as the family names 'Jackson' and 'Hooper' are marked on the walls in several places underground with dates (that we saw) of 1838 and 1842.

Graffiti on the walls, made by the quarrymen not only records their names and the dates, but also calculations on volumes and prices quarried and even cartoons.

Wheel rut with regularly spaced 'nail' heads imprinted in the track. *(Kelvin Lake)*

Jann and Oliver discussing the route in one of the main cartways. *(Kelvin Lake)*



Names of John Hooper, John Jackson, Joseph Wheeler and William Morgan on a pillar in Windrush, dated November 4 1838. *(Kelvin Lake)*

Kelvin in the 'Dig bypass' crawl connecting Windrush 2 to 3. *(Oliver Beard)*

SCMC Trip - Windrush Stone Quarry
Kelvin Lake, continued ...

The underground consists of a maze of passageways, typically 2 by 1.5 metres in size, many lined with impressive pack walls filling the gaps between pillars. Time has taken its toll with collapses and large blocks dropping from the roof. The stone was moved with carts which have left a series of well-preserved ruts along the passages and scrape marks on the walls. While the carts may have been manually pushed or hauled by horses (hoof and boot prints are visible in places) there are sections where rope or wire haulage has taken place, cutting deep grooves into the corners of rock pillars.

The quarry closed about 1900, because parts had become unsafe and expensive alterations would have been required, to comply with new government regulations. Surface quarrying and stone dressing for walling stone continued until 1911, when the site was finally abandoned.

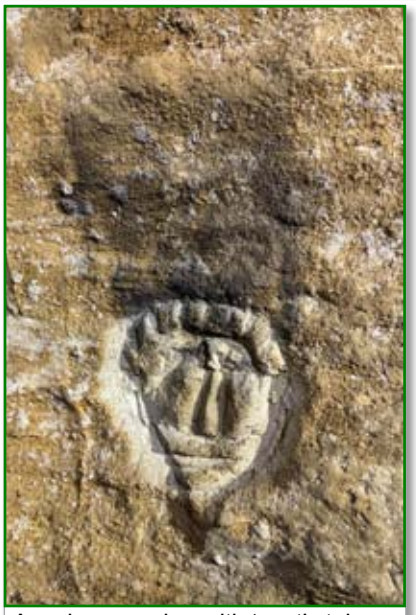
Windrush stone was used for St. George's Chapel, Windsor, in 1478. The best example of Windrush stone today is the front of Oriel Library (Oxford). The stone quarried from this area appears to have been grouped under the generic term of 'Burford Stone' (a town 6 miles east of Windrush).

The quarry was reopened by Gloucester Speleological Society (GSS) in 1981. To help with their surveys they have divided the mine into 4 sections, with 'Windrush 1' being the first area that they re-entered and surveyed. The other

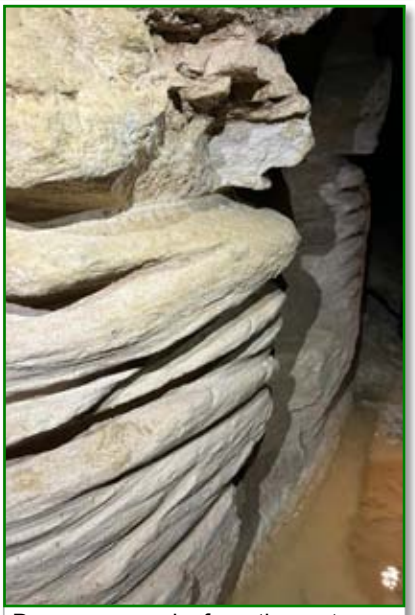
View down one of the main Windrush cartways. *(Ian Cooper)*

Pack walls and fallen blocks were common in Windrush. *(Ian Cooper)*

View down a cartway with Oliver in the distance. *(Kelvin Lake)*



A curious carving with 'soot' stains for hair. *(Kelvin Lake)*



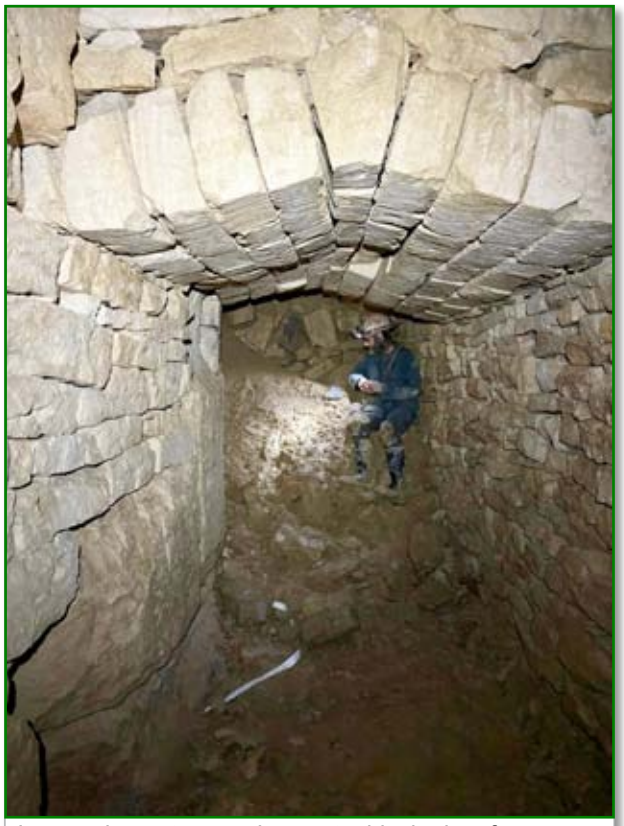
Deep rope marks from the cartway on a pillar. *(Oliver Beard)*

SCMC Trip - Windrush Stone Quarry
Kelvin Lake, continued ...

Tobacco pipe fragment spotted on a ledge. *(Kelvin Lake)*

areas (Windrush 2, 3 and 4) were added after they dug through various roof falls. We entered the complex via the 'Windrush 2' entrance, more a collapse to surface, which has had a sturdy wall and gate fitted by the GSS. We set-off exploring the system by following each left-hand passage we encountered until we reached its end, then backtracking to its entrance and on to the next.

This allowed us to comprehensively explore the areas of the mine known as Windrush 2, 3 and 4. Oliver crawled through to Windrush 1 and did a quick recce. This area has the bulk of the graffiti and artefacts. However, we decided to return to surface and enter that section via its gated entrance - mainly because we had left the gate key by the Windrush 2 entrance, so wouldn't have been able to get out.



Jann under a stone archway at a blocked surface entrance, at the end of Windrush 4. *(Oliver Beard)*

Unfortunately, when we got round to the Windrush 1 entrance gate we were not able to release the lock - so it was a good job we hadn't tried coming out that way! That area will have to wait for the next visit.

Thanks

Thanks to Oliver for arranging the trip and thanks to Jann for giving up his Sunday to guide us round the workings.

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Interesting yellow coloured formations near the end of Windrush 4.
(Ian Cooper)

New Round-up 1

Woodsmith Mine in Doubt

After rejecting a £34bn takeover bid by the global mining giant BHP Group Ltd the owners of Woodsmith mine near Whitby, Anglo American, have announced plans to break itself up.

It intends to sell or demerge its 85% stake in De Beers - the world's biggest diamond miner. The company also plans to sell its steel-making coal assets and will demerge its shareholding in Johannesburg-listed Anglo American Platinum, known as Amplats (where it is in the process of cutting 3,700 jobs). Anglo says it will focus in future on its copper, iron ore and crop nutrient assets.

However, it warned that job losses were possible amid plans to slow work on the development of Woodsmith fertiliser mine by reducing capital investment.

Woodsmith is staggeringly expensive. Anglo has been spending about $1 billion a year on it. Capital expenditure will now be cut to about $200 million next year, and nothing in 2026, as it looks for outside partners to invest. The mine was due to open in 2027. That's now been pushed back indefinitely.

Woodsmith Mine aerial view, August 2019.

(Image courtesy of Sirius Minerals)

The deep potash and polyhalite mine currently employs over 1,600 people. The mine was started in 2017, and was acquired by Anglo American when it took over Sirius Minerals in 2020.

The mine is below the North York Moors National Park and is constructing a tunnel, the *Woodsmith Mine Tunnel*, for an underground conveyor belt to transport mined nutrients to a processing plant at Wilton in Teeside, some 23 miles away.

Polyhalite is a naturally occurring mineral containing potassium, sulphur, magnesium and calcium – four of the six key nutrients required for plant growth. It will be sold as a multi-nutrient fertiliser suitable for organic use that can boost crop yields and aid more sustainable farming.

Based on various News Reports from Sky, BBC and assorted websites, May 2024

NAMHO Conference 2024

Thursday, 27th June to Wednesday, 3rd July

(These dates include field trips outside the weekend.)

The theme for Conference is "The Mineral Wealth of Europe", Covering minerals ranging from Tin, Copper and Gold to China Clay and Lithium.

It is being held in Cornwall at the *Kernow Resilience Hub*, Redruth, TR15 3BU (**kernowrh.com**) - one of the largest martial arts centres in the West Country. Should keep Roy Fellows happy!

Camping is being arranged about 1 mile from the venue.

In a break from tradition the host for the Conference is NAMHO itself.

More details can be found on the **NAMHO website** and specifically the **NAMHO Conference Website**

A lot of Club members are planning to attend the conference and Gareth is organising a number of trips around the event to visit other mine sites. However, there is still no news of any visits to South Crofty.

Toxic Mines in Wales

A Welsh Affairs Committee is undertaking an inquiry into the potential human health risks of pollution from abandoned metal mines in Wales amongst claims that the three rivers of the Ystwyth, Rheidol and the Clarach in Ceredigion are some of the most heavily polluted in the UK.

A Welsh government spokesperson has said that there could be a lot of contamination in and around housing, where chickens are kept, where kids play, and those low-level exposures are what you need to worry about.

Spoil heaps from Cwmystwyth, which are extensive have been identified as containing high levels of zinc, cadmium, and lead, and that these toxic metals have polluted the river below. The Welsh government has said that enforcement action could be taken by local authorities if the maximum levels of lead in food were exceeded.

Farmers have to bear the brunt of the cost for testing, which MP for Ceredigion Ben Lake says is not fair.

BBC News, 8th May 2024

New Round-up 2

Underground Ludlow Project

An archaeological investigation of underground features in Ludlow has been started as part of a dissertation for and archaeology BSc degree at Worcester University. The study aims to identify tunnels and hidden entrances that remain under Ludlow.

A number of cellars under buildings in the historic centre of the town have been investigated, specifically the area enclosed by the medieval town walls and ditch. However, the initial study found that the best examples of cellars were outside this core area towards the river Teme and Lower Broad Street. The best preserved were found underneath the Broad Gate, the last extant medieval gate through the town wall and the Wheatsheaf Inn (built over the town ditch). The Wheatsheaf cellars comprised two cells formed within the bridge's arches and blocked off with rubble stone.

Documentary evidence suggests that during the Civil War and the 18th century there was a dungeon beneath the Broad gate.

From an article by Leon Bracelin in Shropshire Archaeological & Historical Society, Newsletter No.97 - Spring 2024 (Submitted by Joe North)

Aberpergwm Colliery Continues

In February climate activists failed to convince the Court of Appeal that the Welsh government had the power to intervene to stop the expansion of the UK's last coal mine.

Last year, the High Court agreed that Welsh ministers had no right to overturn a licence first granted for Aberpergwm coal mine near Glynneath, South Wales, by the Coal Authority in 1996. The licence pre-dated the powers over mining operations which the Welsh government gained in April 2018.

The campaign group Coal Action Network (CAN) went to the Court of Appeal to challenge the interpretation of the legislation after their bid for a judicial review failed. Lawyers for the group argued that consent was still needed from Welsh government ministers for future mining operations, and they had to give their authorisation to the Coal Authority. CAN had urged the Welsh government to intervene to prevent further mining.

The mine's operators, Energybuild Mining Ltd, has planning permission for the underground extension covering 1,131 hectares, lasting until December 2039.

Lord Justice Lewis, sitting with two other senior judges to hear the appeal, agreed that the interpretation by the High Court judge last year was correct. He ruled that the authority of the Welsh government does not apply to licences that had already taken effect before 2018.

BBC News Report, 23rd February 2024

Aberpergwm Colliery

The site at Aberpergwm had been worked since 1811 as a series of drift mines, full commercial working beginning in the 1860s when W.Williams opened a mine on the site. It was consolidated with the nearby Pwllfaron drift mine in 1880, under one owner Morgan Stuart Williams. Nationalised after World War 2, the various drift mine workings employed 855 men. By 1969 the mine faced severe geological problems. As a result, only the White Four Feet and Cornish seams were worked. As a possible final act, 'robbing' of the pillars left within the Victorian workings of the Eighteen Feet seam took place. A £750,000 investment in the early 1970s led to extraction from the Pentreclwylla Fault. The National Coal Board closed Aberpergwm on 7th October 1985.

Reopened in 1996, the drift mine was estimated to have recoverable reserves of 7.6 million tonnes of high-grade anthracite. At this time, most of the coal was delivered to Port Talbot Steelworks.

After a period of closure from 2015 to 2018 following the bankruptcy of the American owners, the mine was re-opened by a group of UK investors trading as Energybuild. Today Aberpergwm is the only producer of high-grade anthracite in Western Europe. Although some product is still transported to Port Talbot Steelworks, most of the output is finely crushed (to sizes from 0.2mm to 65mm) to produce a product suitable for use in carbon filtering.

Carbon filtering is a method that uses a bed of activated carbon to remove contaminants and impurities using chemical adsorption. Anthracite and sand dual media filters have become the standard for water treatment plants internationally. These filters remove the particulates from potable water from reservoirs and other sources.

The mine currently employs 160 people, and it has a full complement of room and pillar equipment manufactured by JOY (Komatsu), including a 12CM15 continuous miner, two 10SC32 shuttle cars, a feeder and four quad bolters.

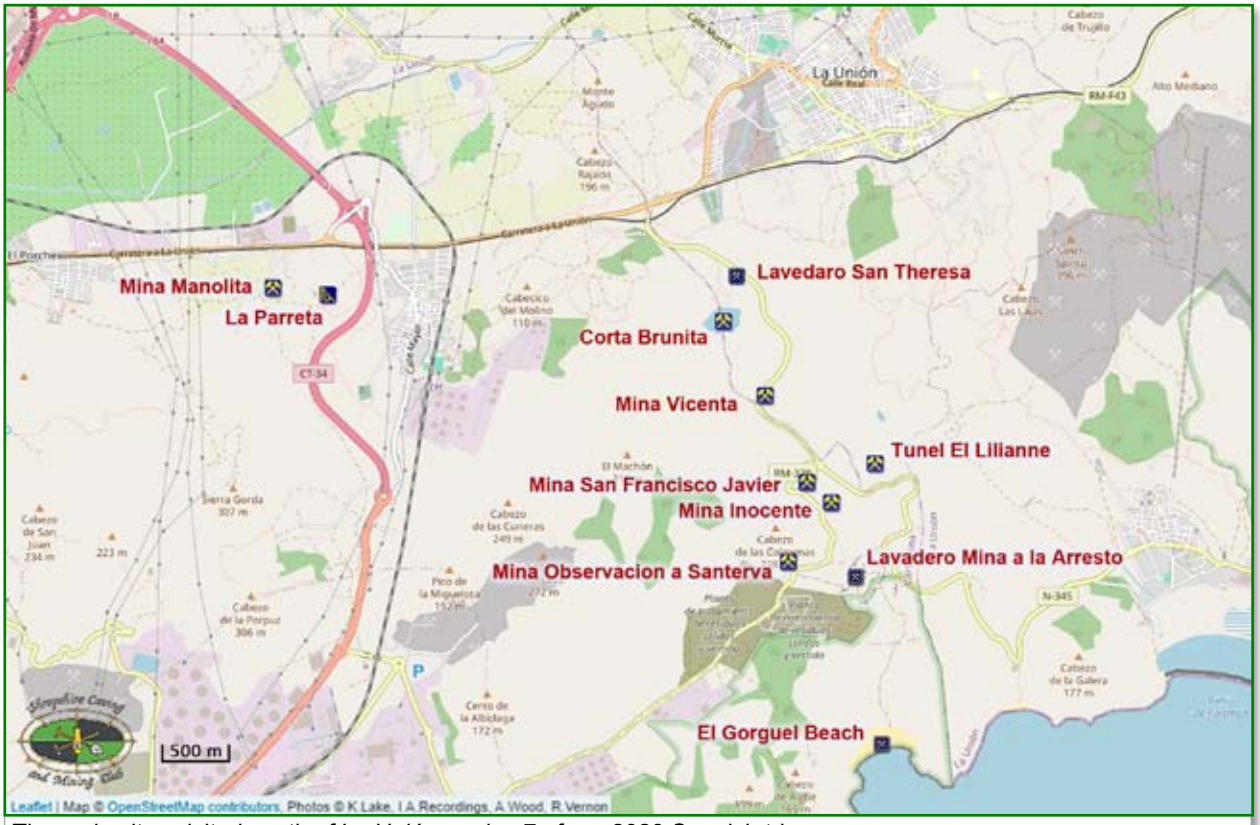
Sources: Wikipedia and Energybuild websites

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5

Andy Wood and Kelvin Lake

Day 7 - 1st May

Another hectic, but varied day was on the cards today. Our first stop was the large open cast pit of Corta Brunita (Brunita Quarry). Worked for Zinc, pyrite and blende it closed in 1990 and is now flooded. At the northern end of the open cast is the processing works of Lavedaro San Theresa (also known as Lavadero Eloy Celdran - Santa Teresa).



The main sites visited south of La Unión on day 7 of our 2023 Spanish trip.

This map has been simplified from the 590-site interactive map developed by Peter Eggleston for the Spanish trip.

You can access the map at **https://www.iarecordings.org/maps/Spain_2023_v03.html**
Username: **SCMC**, Password: **s8z75qu8t7**

Like many of the mine sites we visited, the buildings were empty, vandalised and covered in graffiti. In the upper section of the plant there are still some interesting remains. These range from smashed wooden flotation cells and a row of intact wooden tanks stained a pale green colour, to 3 rusting Hardinge ball mills. The mills appear to have been attacked with sledge hammers in attempts to break bits off them (largely unsuccessfully), presumably by people after metal scrap.

As we explored the works, once again we found discarded pink rubber shoes that we had spotted at other sites!

View looking north across the large open pit of Corta Brunita. *(Kelvin Lake)*

Andy Harris looking towards the upper processing works of Lavadero Santa Teresa. *(Kelvin Lake)*

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5
Andy Wood and Kelvin Lake, continued ...

The 3 Hardinge ball mills near the top of Lavadero Santa Teresa with Andy Wood in the background.

The row of 4 wooden tanks stained pale green (on the level above the ball mills. *What caused the green stains?*

Mina Vicenta

A couple of miles south of Corta Brunita we stopped at the small mine site of Mina Vicenta.

The surface remains are limited; there is a masonry hopper for feeding ore to the now non-existent dressing plant, a few building ruins and a walled shaft in front of the engine house. After a bit of a search we found hidden beneath the branches of a substantial tree and covered by a wire fence a narrow, steep, dusty, manway with a compressor pipe running part of the way down it.

Club members couldn't resist the lure of an open level, so dived in, only to find that it didn't go very far!

Reasonably intact Hardinge ball mills in Lavadero Santa Teresa. *(Kelvin Lake)*

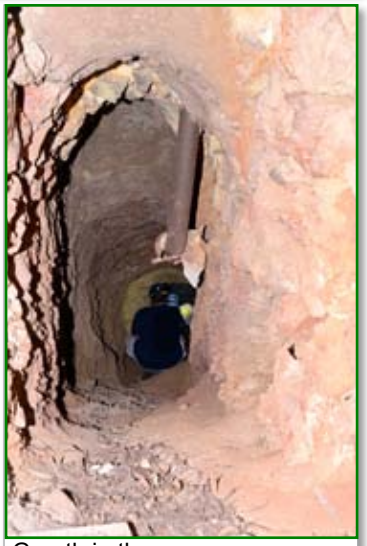
Andy Wood wrote a report on a visit to this mine in *Below! 2020.2* pages 25 and 26. He concluded that report with the statement "Not a site to re-visit." I think we agree with him!

Mina San Francisco Javier

Continuing southwards we reached the head of the *Rambla del Avenque.* Dotted around the area are a number of mining remains with Mina Oportunidad (aka: Mina Nelson) and a large wall of tailings from Mina Santa Antonieta (known as Depósito de Santa Antonieta) high on the hillside above the road.

We opted for the easy route following the mine workings along the river bed, starting with Mina San Francisco Javier.

Oliver entering Mina Vicenta.



Gareth in the manway.

There are a number of remains at this mine; ruined buildings, a shaft with a fallen wooden headframe and a calciner.

Lavadero Demasia a Buena Suerte

A few hundred metres south of San Francisco are the remains of a bank of wooden flotation cells at this washery - whose name translates as *Too much good luck*. Alongside the flotation cells are the remains of a transformer or power house, and concrete foundations of an electric engine house or ball mill house.

Yet another stray pink rubber shoe was spotted here. Was there something special about them? Are they resistant to the chemicals used at the washeries?

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5

Andy Wood and Kelvin Lake, continued ...

The remains of Mina San Francisco Javier.

Oliver Beard by the Mina San Francisco Javier calciner.

Flotation cells at Lavadero Demasia a Buena Suerte.

Masonry headframe and engine house, Mina Inocente.

Julian by the Masonry headframe block, Mina Inocente.

Shaft under the masonry headframe at Mina Inocente.

Office building at Mina Observacion a Santervas.

Walled compound and possible explosives magazine.

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5
Andy Wood and Kelvin Lake, continued ...

Mina Inocente
On the western side of Rambla del Avenque opposite Lavadero Demasia a Buena Suerte is the large masonry headframe and a block of engine houses. Due to erosion from the river bed it appears that the shaft was built as a tower to reach the higher ground level, but this is now getting undermined and looks precarious.

However, when you get up to the engine houses (there seemed to be 2 of them) there is a substantial ore hopper and a series of arched areas around the open shaft. This suggests that ore was raised to this level, before being sent for processing. Another calciner exists on the south side of this complex.

Mina Observacion a Santervas (aka Mina de la Cruz)
Another small mine site, this one is on the hill above a shrine and at the top of the road (more like a track!) down to El Gorguel beach. In addition to an office building and a partially capped shaft with a collapsed wooden headframe and sheave wheel, there is a walled compound with two small buildings. These are probably an explosives magazine with the smaller building being for the detonators.

Attempts to access these buildings were hampered by extremely sharp thorn bushes, although several took the plunge - despite the risks to those wearing shorts!


Mina Dios te ampare engine house and headframe.


Oliver by the remains of the flat rope winding drum.

Mina Dios te ampare (‘God help you’)
A few hundred metres down the road towards El Gorguel is a little horizontal winding engine house with a steel headframe complete with 2 flat rope sheave wheels over an open shaft. The engine house still contains parts of the winding drum - the large drive cog and the flat rope spools. The spools have been attacked with sledge hammers and had their side plates smashed off.

Lavadero Mina El Arresto (“The Arrest”)
Below *Mina Dios te ampare* the road takes a 360º loop around this washery which is squeezed into the narrow valley of Rambla del Avenque. The road passes over itself on a tall bridge with narrow arches leading to Playa de El Gorguel (El Gorguel beach).

Amongst the ruins of the washery dressing floor is a Hardinge ball mill and an Archimedes screw conveyor.


Hardinge ball mill at Lavadero Mina El Arresto.


Archimedes screw conveyor, Lavadero Mina El Arresto.

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5
Andy Wood and Kelvin Lake, continued ...

View up the Rambla del Avenque from Lavadero Mina El Arresto, with the tailings heaps on the hillside.

The narrow arched bridge for the track to El Gorguel Beach, you pass over this before looping down to it.

Looking up the valley from Lavadero Mina El Arresto towards Mina Dios te Ampare, you are aware of the huge tailings heaps on the hillside above. These are distinguished by a series of horizontal layers formed by the deposition of the tailings. Due to Spain's warm climate wooden boards were set-up to contain the tailings that were pumped/ run into the area. After the water had evaporated, the boards were moved up and a fresh layer of tailings deposited, giving rise to the distinctive slope-sided, flat topped, rectangular heaps.

Playa de El Gorguel (El Gorguel Beach)

Carefully navigating the narrow bridge we headed down the valley to the beach. Not a beach of lovely golden sand but one made entirely of mine tailings from Lavadero Mina El Arresto and other processing plants further up the Rambla del Avenque. Most of the bay is covered in tailings, but this hasn't stopped people visiting the site - there was even a community of camper vans, tents and 'shops' at the eastern end.

Oliver took the opportunity of a dip in the sea to try and remove the ochre from his legs, the result of wading up several ochery levels over the previous few days!

View east to the 'village' along El Gorguel beach.

Oliver after his El Gorguel dip, with Julian behind him.

Mina Gloria and Túnel El Lilianne

From El Gorguel we headed back up the Rambla del Avenque and on to Mina Gloria. At the entrance to the site is a power house with the letters: SMMP (Société Minière et Métallurgique de Peñarroya) on the front and adjacent compressor house. This was the main source of power and compressed air for the underground workings of Mina Gloria and the Gloria opencast pit operated by the Peñarroya Company.

There is not a lot left inside the power house, but the compressor house contains the remains of an Ingersoll-Rand Co. New York U.S.A. Imperial Type 10 oil engine and two compressors. Andy Wood has previously written an article on this site, see *Below! 2014.2* pages 3 and 4. Since, then a few more items have disappeared, however the are still things to see here. Walking towards the Túnel El Lilianne which was used to access the underground workings of Mina Gloria there are several buildings, along with what appears to be the remains of a blacksmiths or engineering workshop, plus another power house and a second compressor house with remnants of two more Ingersoll Rand Imperial Type 10 oil engines.

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5
Andy Wood and Kelvin Lake, continued ...


The main Peñarroya power house at Mina Gloria.


The Ingersoll Rand engine in the compressor house.


Oil bath switches in the second transformer house.


The second compressor house near the Túnel Liliane.

Mina Gloria was worked underground via Túnel Lilianne until the washery (Lavadero) where the ore was treated closed in 1965. It then switched to being worked as an open cast pit. The tunnel is knee deep in ochre (Oliver topped up his ochre stains by wading in), has a cross section of approximately 2.5m x 1.8m and is 1,000m long but is blocked and doesn't seem to access any workings. Andy Wood took the plunge into the ochre in 2018 and his report and photographs appear in *Below! 2020.4* pages 30 and 31.


Graham Smith outside Túnel Lilianne.


View into the tunnel. *(Andy Wood)*

Mina Manolita and La Parreta Area

The final stop of the day was towards Cartagena and an area that we visited during our 2008 trip to Murcia. A lot of 'conservation' work appears to have taken place on the various mining remains, sadly often to their detriment.

At the start of the track to the La Parreta complex is Mina Manolita. It retains it's tall wooden headframe over the shaft with two flat rope sheaves with a third sheave part of the way up. The flat rope winding drum is still in the engine house although the electric engine has been removed, but the power house/transformer house at the rear still seems to be in use. The mines of the La Parreta area were active from 1860 to the 1950s. They were acquired by Société Minière et Métallurgique de Peñarroya in 1960.

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5

Andy Wood and Kelvin Lake, continued ...

Mina Manolita, part of the La Parreta complex.

The tall wooden headframe of Mina Manolita.

Lavadero San Ignacio, processing plant for La Parreta.

Flotation cell area with roof girders in 2008.

Main offices for the La Parreta complex in 2023.

The company logo as it now looks (2023).

The processing plant for the La Parreta complex of zinc mines was Lavadero San Ignacio. On our 2008 visit the name was visible in a bent steel. It had 2 levels for flotation cells (which had been removed) and the roof girders still existed. Following conservation the girders have gone and the tops of the walls have been covered in a very white cement, presumably to prevent water ingress damaging the walls.

Opposite the processing plant is the main La Parreta offices. In 2008 the building was 2 storeys high (to the roof line) and the Company logo on the front was intact and read: “Montañera S.A. Grupo Minero La Parreta”. Unfortunately, only the lower part of now remains (see picture right).

The company logo as it looked in 2008.

Club Trip - Murcia, Spain, 25th April to 4th May 2023, Part 5

Andy Wood and Kelvin Lake, continued ...

Another casualty of 'time' is Mina San Simón on the western side of the La Parreta complex. In 2008 it had a tall wooden headframe with 2 flat rope sheaves and a high level tub, which ran on to brick pillars above an ore chute (see below).

This feature and method of working was seen at other mines in the La Unión area, such as Mina Los Burros, and Mina Lo Veremos Viejo. When visited in 2023 all the woodwork had been destroyed or collapsed and was lying in a heap by the shaft.

Only fragments of the winding engine house foundations survive.

Andy Wood and Kevin Baker by Mina San Simón. (2023)

Mina San Simón as it looked in 2008.

The shaft top arrangement at Mina San Simón. (2008)

Fire at the ROC Centre, Madeley

On Saturday 25th May at 01:07 four fire appliances including the Aerial Ladder Platform were mobilised from Telford Central, Tweedale and Wellington fire stations to deal with a fire at the former school behind the Fletcher Methodist Chapel in Court Street, Madeley. Police and ambulance services were also in attendance.

The school, prior to COVID had been used as ROC (Redeeming Our Communities) Centre where the Council ran weekly drop-in sessions for people to get advice, share hot meals and make new friends. Since the pandemic the centre has been boarded up, like the historic Methodist Chapel that it is connected to.

A Police and a fire appliance were still on scene at 17:00 on Saturday and the Police were still there at 18:00 on Sunday!

The Methodist Chapel is known as 'the Miners' Chapel' and has been the scene of several commemorative mining events organised by Ivor Brown. On those occasions the school was used for refreshments and displays of mining photographs by the Club.

The chapel, built in 1841 is dedicated to the Reverend John Fletcher, vicar of Madeley, one of the founding fathers of Methodism. Following vandalism in 2017 it was boarded up. It is to be hoped that it doesn't suffer the same fate as the school.

The burnt out school in Court Street, Madeley.

The Fletcher Methodist Chapel is now in a sorry state after being boarded up for over 7 years.

Snailbeach Deep Mine Abandonment

Julian Bromhead

Introduction

This article presents some of the events leading up to the abandonment of the Snailbeach deep mine below the 112yd level. It covers the period from 1900 when the mine's fortunes were in decline to 1911 when equipment was sold off following the cessation of pumping in 1910/11. It is largely based on documents in the Price family private collection which have recently been catalogued and photo recorded by members of Shropshire Mines Trust. The article supplements details on the deep workings at the mine in *Below! 2022.3* pages 17 to 21.[1]

Period of Decline 1900-1910

In July 1900 there were 79 men working underground in the deep mine with stoping on multiple horizons down to the 522 yard (yd) level and the 552 yd level was also being driven[2]. There was also extraction going on within Perkins level.

As consequence of a poor financial position in the second half of 1900, on 5 Mar 1901 Directors of Snailbeach Lead Mining Company (SLMC) decided Wm Edwards was to be instructed to commission an independent valuer to value the lease, plant and machinery[3].

In May 1901 Captain William Oldfield, the mine manager, produced an inventory (extract as Figure 1) of both surface and underground plant and machinery to help this task along[4]. In terms of underground materials and equipment the following were recorded by Oldfield:

- Pair of horizontal hauling engines 10 in. cylinder 12 in. stroke link motion, and iron drums 3ft diameter (dia)
- Pair of vertical hauling engines, 6 in. cylinder 8in. stroke link motion, and iron drums 2ft di
- 2 Plough steel round wire ropes, 260 yards long 2 ½ in. circumference
- 1 Cameron Donkey (CD) pump 8in cylinder 5 ¾" Ram, and 1 CD pump 6in cylinder 5in Ram
- 6 Minera rock drills and 11 stretcher Bars
- 318 yards of air pipes 1 in. dia, 320 yards of air pipes 1½ in. dia, 1085 yards of air pipes 2 in. dia, 85 yards of air pipes 2 ½ in. dia and 130 yards of air pipes 3 in. dia.
- 150 yards of cast iron socket pipes 4 in. dia
- 430 yards of cast iron flange pipes 4 in. dia and 320 yards of cast iron flange pipes 6 in. dia
- 740 yards of T tram rails 16 lbs section and 2180 yards of T tram rails 22 lbs section
- 1020 yards of Bridge rails 18 lbs section
- 480 yards of Saddle rails 14lbs section
- 6 Wood tram wagons
- 4 Iron tram wagons
- 4 Iron Kibbles

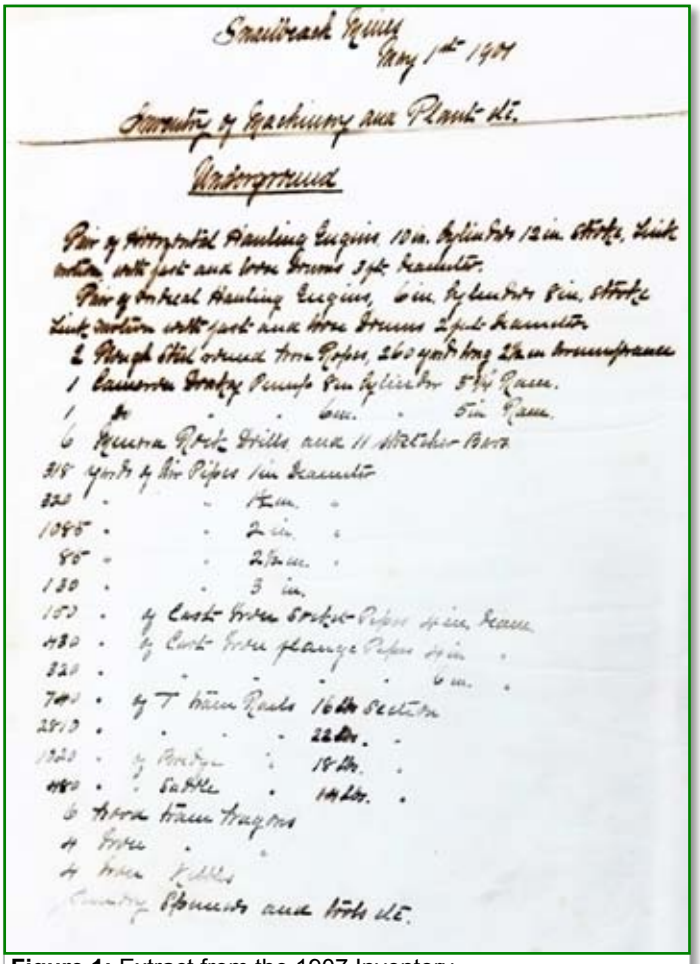


Figure 1: Extract from the 1907 Inventory.

The deepest tramming level accessed by engine shaft was the 432 yd. Below that, material was raised up to the 432 yd level using the hauling engines noted in the inventory.

Pumping below the 432 yd level was achieved using the Cameron donkey pumps also noted in the inventory.

The layout of the various levels is shown on a long section of the workings thought to be dated 1909 reproduced as Figure 2. It is noted the dates alongside some of the levels in Figure 2 do not necessarily tie-in with the chronology in the newly examined Price documents.

Snailbeach Deep Mine Abandonment
Julian Bromhead, contunued ...

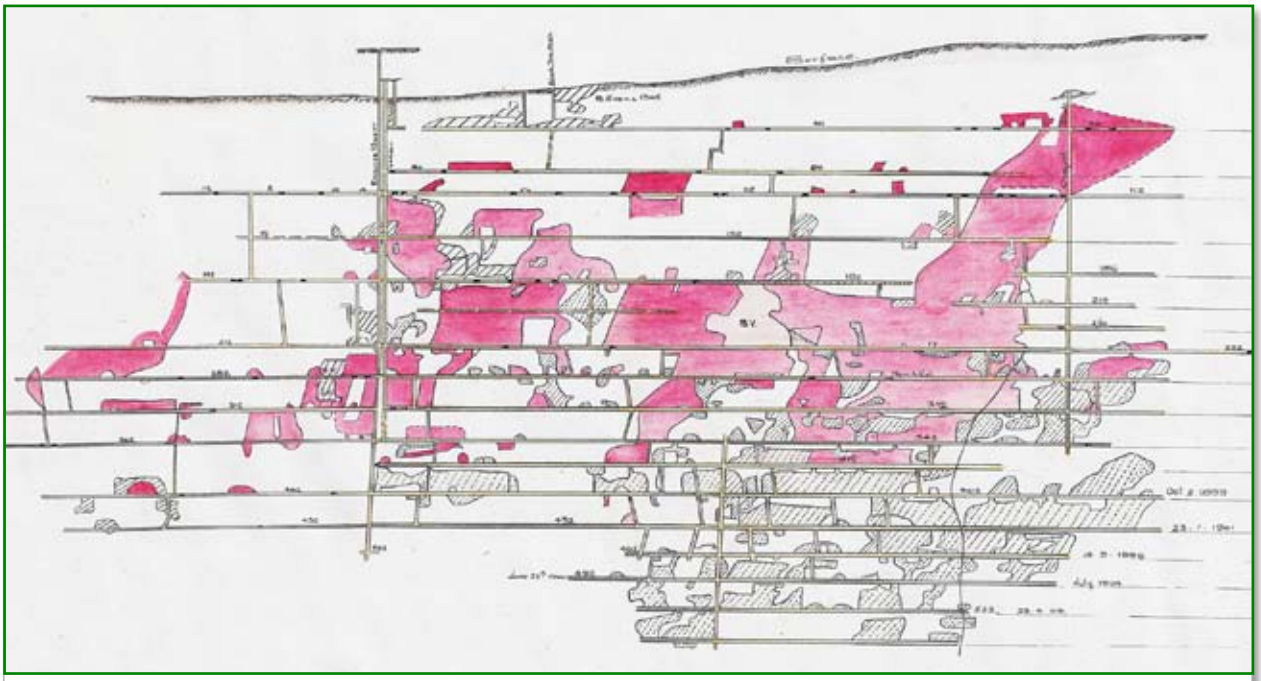


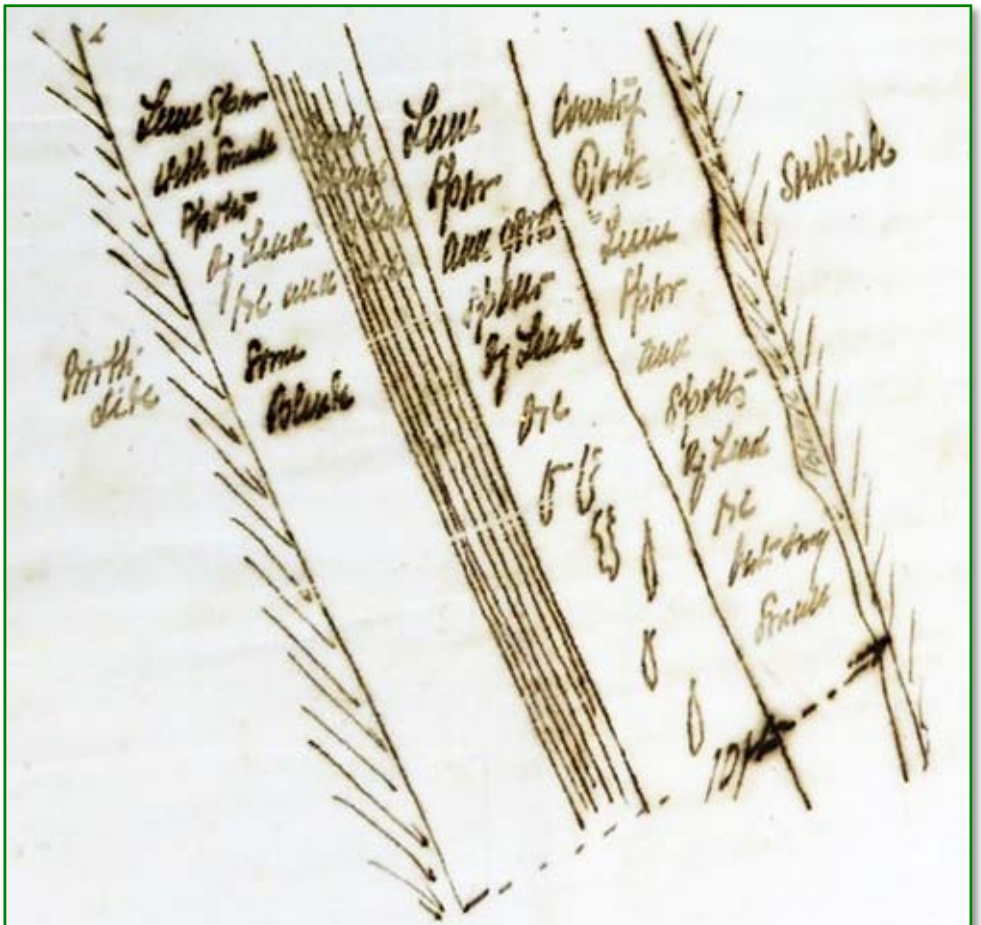
Figure 2: Longitudinal Section of Snailbeach Mine dated 1909? Surveyed by the manager Captain Oldfield. Traced by Percy Blight in 1921 for Shropshire Mines Ltd.

A letter from Captain Oldfield to Messrs Dennis dated December 1901[5] notes that all stopes have been stopped except 'Groves' on the 522 yd level which was producing 2 tons of lead per fathom.

The bargains record[2] for that period is incomplete but indicates a considerably reduced workforce compared to eighteen months earlier. Groves stope on the 522 yd level was still being worked in February 1903[6] and production had increased to 2¼ tons of lead per fathom and the vein up to 12ft. wide.

Figure 3 is a sketch by Oldfield which shows the distribution of minerals within the 10ft. wide vein in Groves stope on the 522 yd level in May 1903.

Below the figure is a transcription by Andy Cuckson.



North Side	Some spar with small spots of lead ore and some blende	Small strings of lead ore	Some spar and good spots of lead ore	Country rock, some spar and spots of lead ore	Blende	South side

Figure 3: Oldfield sketch of the vein in Groves Stope on the 522yd level, 1903.
Transcription by Andy Cuckson

Snailbeach Deep Mine Abandonment
Julian Bromhead, contunued ...

In 1906 (which is the last known bargains record) [2] 51 men were working deep underground extracting ore below the 402 yd level. Working was also continuing in Perkins level.

In May 1908 the main workings were on the 552 yd level although there was also some extraction on the 402 yd [8]. The vein on the 552yd was noted to be up to 12 feet wide comprising spar and quartz with strings of lead and black (zinc blende). Although wide, the vein was becoming increasingly unproductive.

A deed with the Marquis of Bath allowing the lower levels to be flooded is dated 6 September 1909 [9].

In October 1909 [10] Captain Oldfield carried out a detailed valuation of machinery, plant and materials at the mine, which would have informed the decision for SLMC to abandon the deep workings just over a year later. This valuation can be summarised as follows:

Location	£	s
552yd to 342 yd level	154	9
342yd to 112 yd level	272	1
112yd to surface	70	2
Surface	862	2
Total	1,358	14

This total is approximately £135,000 at 2023 prices.

Work was continuing in the deep mine in February 1910 when Matthew Harrison sustained a cut to the head from a falling stone on the 402 yd level.

An average 75 tons/month of lead ore was being sold by SLMC between January 1909 and December 2010 [11].

Abandonment 1910-1911

Pumping below the 432 yd level using a Cameron donkey pump ceased on 27 December 1910 and pumping from engine shaft in February 2011 [12]. The deep workings would have been abandoned after the pumping stopped. The same source also notes that it took about 2 ½ years for the water level to rebound up to the 112yd main drainage adit level following cessation of pumping. January 1911 was the date of the last royalty payment to Lord Tankerville[13].

The last SLMC lead ore sales[11] were 40 tons in February 1911 and 82 tons March 1911, which is likely to be the final processed ore from the deep mine and coincides with the last payroll record for dressing floor workers. March 1911 was also the last SLMC sale of blende.

From March to November 2011 plant, machinery, rails and scrap were sold off. The sale[11] included the following:

- 65 tons of iron rails
- 30 tons of cast iron pipes
- 191 tons of scrap metal
- 40 tons of rails, scrap and boiler plates
- Lancashire boiler
- Hauling engine
- Pumping/winding engine sold to E Jones & Co
- Compressor, sold to United Westminster, Wrexham
- Donkey pumps, sold to Cudworth & Johnston
- Stonebreaker, sold to HD Dennis

The total raised from the sale was in the order of £1,160 equivalent to approximately £120,000 at 2023 prices. From November 1911, Halvans Co Ltd were selling barytes and some lead ore reclaimed from the spoil heaps.

Acknowledgements

Many thanks to Andy Cuckson for his guidance and in reviewing a draft of this article.

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3. Cuckson, A; Personal comm
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5. Price doc 6, facsimile correspondence p48
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7. Price doc 6, facsimile correspondence p63
8. Price doc 6, facsimile correspondence p69-71
9. Cuckson, A; Personal comm
10. Price doc 6, facsimile correspondence p76-79
11. Price doc 13, facsimile of accounts 1909-1911
12. Price doc 52, letter from Cpt Oldfield for Halvans Co to unknown, July 1917
13. Price doc 3, record of royalty payments to Lord Tankerville

What the Papers Said - about Ritton Castle Mine, part 1

Submitted by Steve Dewhirst

Ritton Castle is one of the mines that tends get overlooked when talking about the mines around the Stiperstones. It may have been the site of an early drainage adit from the Bog Mine, but was certainly being worked from about 1820. In the 1850s a company known as the Ritton Castle Mining Company was formed working the West Stiperstones Sett. The mine was worked intermittently with various owners and names until the 1870s. A number of newspaper items concerning Ritton Castle from 1853 to 1874 have been found which might be of interest.

At Ritton Castle Mine meeting, on Thursday, the accounts showed a balance in favour of adventurers, 240*l*, 2s. 5d. A call of 2s. per share was made.

Royal Cornwall Gazette, 22nd July 1853

At Ritton Castle the men have finished fixing the air pipes from surface north of engine shaft to the fore breast on Potter's lode, and also in the winze under the adit level. More tribute ground will now be opened, and at the same time hasten a communication north and south of Potter's lode. The driving south to the Wheal pit lode will be completed shortly, there not being more than four or five yards to drive.

London Daily News, 19th August 1854

Liability of Shareholders. - Francis Morton and Co. v. George Cheston and George Rich, Shareholders in the Ritton Castle Mining Company. - The plaintiffs in this case are oil and tallow merchants, occupying the premises formerly belonging to the Coalbrookdale Co. The defendants are residents of London, but they have or had shares in a company which was formed for the working of a lead mine at Weston, Cherbury, near Salop. The amount claimed was the value of a cask of pale rape oil, £5 2s 9d, supplied to the agent of the company at the works. Defence was taken by Mr. Rich only, who appeared by Mr. Hughes. Mr. J.B. Balcombe was examined for the plaintiff. He stated he was secretary of the Ritton Castle Mining Co. ; he produced the books of the company, and in those books he found under date 9th December, 1854, an entry of £5 2s 9d for oil supplied to the mining agent. Has been secretary to the company since April 1833 ; the entry was in the handwriting of his predecessor, and his duty would be, when he received the cost sheet of the mining agent, to enter the several charges in that book. At that time both Cheston and Rich were partners in the company. **To Mr. Hughes:** There was no deed of settlement, and no registry of the company was found on the cost book principle, which was exempt from the operation of the act. He identified a letter as in the handwriting of Mr. Rich ; this letter was one relinquishing all interest in the company, and was dated December 8th 1854.- **His Honour:** Did he then cease to be a shareholder? :- **Witness:** No ; I see an entry in the book by which it appears a transfer of his shares was made on the 16th January, 1855. - **His Honour:** Well, Mr. Hughes? - Mr. Hughes called for the order given for the goods. - Plaintiff handed in a letter from the agent of the mines, conveying the order. The writing was identified. - The Secretary observed that this claim would not have been made against Mr. Rich had he not declined to pay the calls made on his shares. - **His Honour:** What of Mr. Cheston? - **Secretary:** He has paid up since the action was taken. - **His Honour:** Then you ought to pay his part. - Verdict for plaintiff.

Liverpool Daily Post, 22nd November, 1855

At the Ritton Castle Mining Company meeting, on Friday, resolutions were passed increasing the shares from 4000 to 5000 of 2*l*. each, upon which a call of 1s. 6d. per share was made, adopting the provisions of the Joint Stock Companies Act, 1856, with limited liability.

Royal Cornwall Gazette, 3rd October, 1856

From Ritton Castle Mine, Captain J.Griffiths writes (Oct. 7): - "On Monday we commenced clearing up the old wheel pit foundation for the masonry requisite to support the engine, and which we shall let down to No.2 shaft as quickly as possible. There is no alteration in the value of the stopes east and west. I consider them equal to the value fixed by D. Thomas. We are making good progress with the dressing floors. The end of 18 east of No.2 shaft is not driven on the course of the lode, but by its side. I purpose putting out a crosscut south at once to regain it, and I hope to do so in a few yards drivage."

London Daily News, 10th October 1856

A call of 2s. per share was made. At Ritton Castle Mine special general meeting the resolution passed at the special meeting, held on Sept. 26, were unanimously confirmed ; since which the company has been duly registered as the Ritton Castle Mining Company (limited) ; that all transfers of shares hereafter to be made must give the distinctive numbers of the shares, and be accompanied with the share certificates ; that the deed of conveyance must set forth the consideration, and bear the *ad valorem* stamp.

Morning Post, 13th October, 1856

The Ritton Castle Company have sold ten tons lead ore, delivered on the mine, at 13*l*. 1s. 6d., which, being free of charges, is equivalent to 14*l*. per ton ; purchased by the Stiperstones Company.

Morning Chronicle, 17th November, 1856

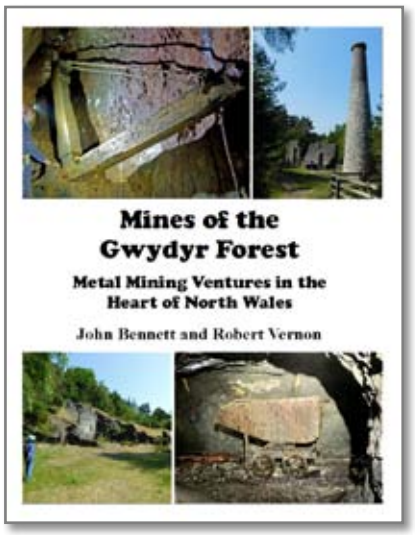
Books

Publications are available from Mike Moore at Club meetings, or online: **www.moorebooks.co.uk**

Mines of the Gwydyr Forest:

Metal Mining Ventures in the Heart of North Wales. (Revised 2nd Edition)

By John Bennett and Robert Vernon



Revised Second edition, published 4 December 2023.
Paperback: 562 pages. ISBN-13: 978-1838362129.
Price: £40 (Club members can get a discount from Moorebooks)

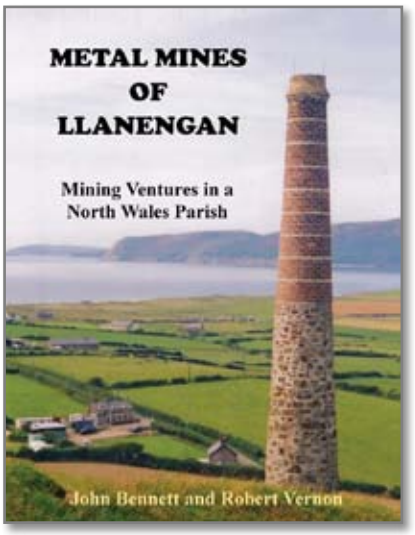
Mines of the Gwydyr Forest was originally published as a seven part series between 1989 and 1997. It was well received and was used by others to conduct their own mine explorations.

It was always intended 'one day' to publish the series as one complete volume. John sadly died in 2019, but most of his historical notes survived. Rob had fortunately kept all the illustrations, together with some of the mine plans and reports, and this has enabled 'Mines of the Gwydyr Forest' to finally be produced as one complete, revised and updated, volume.

The book starts with an Introduction followed by a section on the geology and mineralisation. This is followed with examples of early mining in Gwydyr. Much of the more detailed mining information comes from the latter-half of the 19th century, and the following sections follow a similar format to the original series. The central areas, south and north, deal with Llanrwst and Hafna mines, respectively, plus related mines; North-East Gwydyr is primarily Parc mine and the plateau area to the south; North-West Gwydyr includes Pandora and the Llyn Geirionydd area; South-West Gwydyr includes the Cyffty and Coed Mawr Pool area; Aberllyn and adjacent mines are discussed in the section on South-East Gwydyr. The penultimate chapter covers the mines on the northern edge of the Gwydyr Forest, Cae Coch and adjacent mines. The book concludes with an Epilogue.

Metal Mines of Llanengan: Mining Ventures in a North Wales Parish

By John Bennett and Robert Vernon



Second edition, published 5 December 2022.
Paperback: 172 pages. 18.9 x 1.19 x 24.61 cm. ISBN-13: 978-1838362119.
Price: £14 from Moorebooks. Other retailers are charging £18.00 to £25.00 - prices for second-hand copies of the First edition range from £15 to £45 !

The relatively unknown Llanengan metal mining field is found on the St. Tudwal's headland, on the tip of the Lleyn Peninsula, North Wales. Its isolated position meant that it never was given the same publicity as many of the major metal mining areas. Nevertheless it was a hive of activity in the latter half of the 19th century, and the mines were deepened with the aid of steam power pumping water out of the workings, and for winding. Everything, from mine engines to coal was brought into the area on ships.

The book details the history of mining in the area from the 17th century through to its eventual demise at the end of the 19th century. Initially mining was conducted by partnerships that were eventually superseded by London based companies that acquired capital to purchase the necessary machinery to deepen the mines. Now there is very little to show that this area was once a hive of industrial activity, although the final chapter does suggest a small heritage walk around the area.

For a number of years, John Bennett and Rob Vernon were involved with the historical study of Welsh metal mining. Their series of seven detailed books on the Gwydyr Forest mines was a substantial contribution to the recording of Welsh mining history. In addition, they were also involved with mine site conservation projects in the Gwydyr Forest and elsewhere in Wales. John sadly died in 2019, and Rob is now involved with other aspects of mining history.

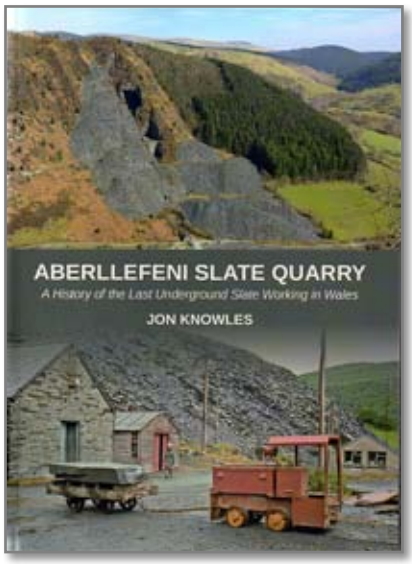
At the time of the publication of the first edition of Metal Mines of Llanengan in 2002, it did take their interests further and brought into the public domain a relatively unknown Welsh mining area. The publication of this second edition will hopefully make another generation of mining historians aware of this interesting mining field and is dedicated to John and his wife Elizabeth.

Books & Videos

Aberllefeni Slate Quarry

A history of the last underground slate working in Wales

By Jon Knowles



Hardback, 277 pages, colour plates throughout, A4. Price: £35.00

In Jon's own words "the book is a culmination of over 15 years exploration underground and archival research". It traces the history of Aberllefeni Slate Quarry from its inception to 2016. The quarry was one of the oldest, and certainly the last worked underground, in Wales.

Since 1985 Jon and a group of like minded colleagues have been systematically exploring the mines of the area in their spare time. After 30 years working in heavy engineering Jon relocated to Penrhyndeudraeth and is employed locally by J.W.Greaves and Sons Ltd of Blaenau, owners of the Llechwedd Mine (amongst others).

This book is a credit to Jon's expertise and determination, it is full of his own colour photographs, with black and white historical pictures. He has also provided a lot of detail of the industry itself, with the workshops and machinery supported diagrams and drawings, there are also plans of the mine. Plus a nice touch - an aerial photograph with a labelled photo on the opposite page so as not to detract from the original. I could easily go on raving about this volume but it is really an excellent piece of original work.

Mike Moore

Historic Mines of Spain Vol.4 Compilation No.57

Exploring more mines in Murcia and Andalucía

In April 2023 the Club re-visited south-east Spain to see more of the vast range of ancient and modern mines which survive so well in the country. Only highlights of the DVD are mentioned here - more details of the sites can be found in the series of reports that started in *Below! 2023.2*.


Underground in La Calera.

The isolated hill of Cabezo Gordo near San Javier is an important Neanderthal archaeological site and magnetite breccia has been mined there from several levels.

La Calera in the Barranco de la Mina valley was worked for iron and other minerals from 1884. A 2km long aerial ropeway was installed in 1915 and many trestles and some wire rope survive. Mining ended in 1962. Underground remains include masonry headframes and steel ore chutes.


Barranco del Chaperral winder.

After visiting the rebuilt mining museum in La Unión, the Maria Dolores and Calón mines of La Parajitos were explored both on the surface and underground.

A full day was spent in the Sierra Almagrera with Rob and Boo Vernon showing us Barranco Jarosa and the almost intact British stean winder high up at Barranco del Chaperral. They then took us to El Arteal where a large tunnel, miners' village and bath house remain to tell the story of intensive 20th century mining.


View along an Águilas rail tunnel.

Around Portmán we re-visited the wharf, the archaeological museum and the impressive Lavadero Roberto with its extensive railway infrastructure.

Corta Brunita's rusting ball mills were followed by many mines both small and large along the Rambla del Avenque, down to the tailings beach at El Gorguel. In the same day we saw the Peñarroya compressors and Túnel Lilliane at Mina Gloria; and re-visited La Parreta.

Águilas has impressive iron ore hoppers above railway tunnels and a long steel loading pier. That day was rounded off with Mina Amali and Lorca sulphur mines.

Price: **£ 14.40 (DVD)** Running Time: 1 hour 15 mins. ***Club discount available at meetings*** or visit: **iarecordings.org**

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Some Diary Dates 2024

Monthly Meetings - Normally held on the first Friday of the month at Allscott Social Club. **Please note:** The start time for Monthly Club meetings is 19:30 starting with a presentation or talk by a Club member (to be less than 60 minutes long), before the main meeting.

The secretary usually emails the meeting details a day or so beforehand. Please let him know if you don't receive them.

June 28th to 3rd July: National Association of Mining History Organisations (NAMHO) Conference. In Redruth, Cornwall. More details can be found on the **NAMHO website** and specifically the **NAMHO Conference Website**

Several Club members are already planning to make a week of it with trips after the conference.

July 27th: Festival of Archaeology, Ironbridge 10:00 to 17:00 to be held at the Coalbrookdale Museum of Iron - which will be free for all visitors during the festival. The Club is intending to have a display stand.

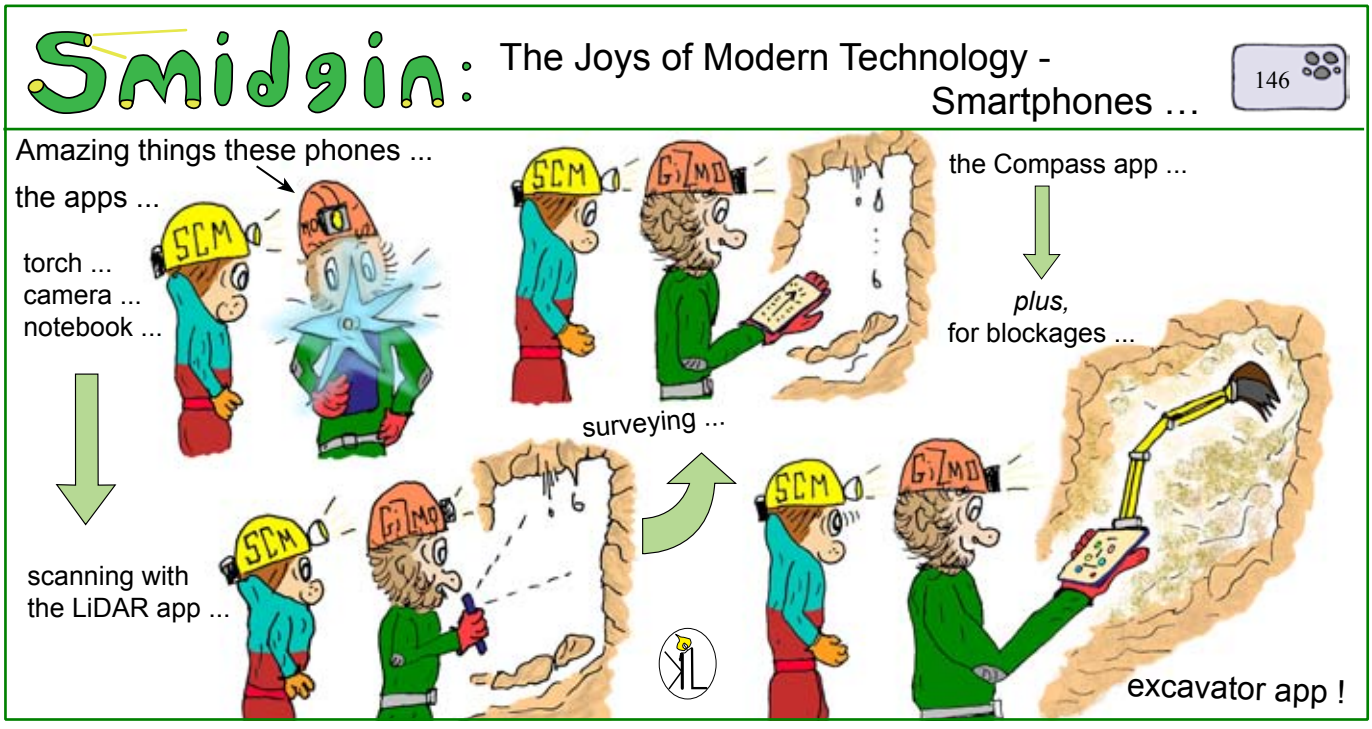
Sponsored by the Association for Industrial Archaeology (AIA) and The Council for British Archaeology Festival of Archaeology, there will also be other activities happening on the day – including a series of short talks, as well as local walks.

August 25th: OFD: Columns Open Day.

August: Gaping Gill winch meet, hosted by Craven Pothole Club. See **www.cravenpotholeclub.org** for dates etc.

September Date TBC: Hidden Earth, National caving conference.

Keep an eye on the **Hidden Earth website** for the location, date and booking details.



• Catch us on the World Wide Web. Club activities & the labyrinth: **www.shropshirecmc.org.uk**