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## President's Message

Since my last message, I have been able to attend two conferences – the NAMHO Conference in Cornwall and a meeting to celebrate the Legacy of Dr Arthur Raistrick.

Our Editor, Richard Smith, gave excellent presentations at both events and has prepared reports for this newsletter.

In addition to exhibiting the NMRS display panels, kindly updated by Barbara Sutcliffe, and selling some of our publications, I was able to speak to some of our members at these events and to help delegates with enquiries. I particularly enjoyed the NAMHO Conference and left not only better informed about the

history of mining in the region but also greatly enthused about the future of mining in Cornwall.

Up until a few years ago, the future of Cornish mining with the exception of the china clay industry looked bleak but the increasing price of tin and the prospect of a home-based lithium industry is igniting hope for a sustainable future. Indeed, an international mining conference held in Falmouth weeks before the NAMHO Conference attracted over 370 delegates with much talk of future expansion. This sense of optimism carried over to the NAMHO conference programme with links being made between the innovation and enterprise of previous generations and the drive to build secure sources of important metals such as lithium.

My informal conversations with NMRS members and delegates at the conferences suggest that while our society is maintaining its membership numbers, we should look at new ways of engaging our members as well as building on past and current achievements:

- As mentioned in previous articles, travelling is becoming more difficult and costly and numbers attending our two annual meetings are declining. There is growing enthusiasm amongst NAMHO member organisations for online lecture meetings that can be offered at more flexible times.
- Some members felt that a renewed programme of visits would attract younger members who are interested in exploring historic mining activity.
- Feedback on the quality of our British Mining (BM) series and our quarterly newsletter was universally positive. One member suggested that we should review our publications index and update where necessary.
- I was delighted to find that BMs are highly valued by mine exploration enthusiasts who use them as a resource for identifying old workings.

- While most people I spoke to were aware of the extensive resources available from our web site and Facebook page, we should give greater prominence to these in future publicity.

The NMRS Committee is always pleased to receive feedback and welcomes your comments by email or telephone.

As always, please consider whether you can help in some way, particularly by volunteering for the vacant roles of **Committee Secretary** and **Meets Secretary/Coordinator**.

Some progress has been made in arranging online lectures by Zoom and I have had one offer from the recipient of an NMRS grant. If you know of speakers who would be prepared to help us with an initial programme, please send me some details and I'll be pleased to contact them on behalf of NMRS. To set the ball rolling, I plan to give a presentation by Zoom at **7.30 pm on Thursday 5<sup>th</sup> September 2024** entitled "**Lessons from the Past – The Enduring Relevance of Mining History**". This presentation will explore the relevance of mining history to current issues such as small-scale mining, energy transitions, industrial innovation and community health and well-being. Please email me on [lmorris768@btinternet.com](mailto:lmorris768@btinternet.com) if you would like to receive joining information and a link.

#### **Autumn Meeting (Online)**

Our Autumn Meeting is scheduled for online presentation by Zoom at **2pm on Saturday 28<sup>th</sup> September 2024**. As discussed at the AGM, the business content will be kept to a minimum by placing Committee reports in the Members' area of the website. The major part of the 2-hour meeting will be taken up with short presentations by members. We would be very grateful for offers of presentations by members, please email me.

Members wishing to attend the online meeting will need to register by emailing me in order to receive a link and joining instructions. Many thanks in advance for your help with this. If the online format works well, we will explore the possibility of conducting hybrid meetings in 2025.

Len Morris, President

Email: [lmorris768@btinternet.com](mailto:lmorris768@btinternet.com) Tel: 07972 185644

## **NEW MEMBERS at 22<sup>nd</sup> July 2024**

Mr John Bramley	SHIPLEY
Mr Karl Brookes	STOKE-on-TRENT
Mr Peter Boyd	SANDY
Ms Shelan Holden	GALGATE
Prof William Kilgallon	BRACKNELL
Mr Johnathon Livitt	HAYLING ISLAND
Dr Keith Nicholls	MOLD
Mr Jake Plumb	NORTHWICH
Mr Michael Porter	WHITLEY BAY
Mr Colin Tate	BRADFORD
Mr Trevor Turnbull	ASHINGTON

A warm welcome to the new members who have joined in the last quarter. Please can I ask that when members change their address, both physical and where they have an email they let me know please so I can update the database. This is especially important as we often have a few postal mailings returned where people have changed their postal address and we had not been informed. Please let me know as your membership secretary. Best is email please at [membership@nmrs.org.uk](mailto:membership@nmrs.org.uk). I don't mind receiving details in the post either, so by all means write to me at 2, Meadow Bank Close, Cockermouth, CA13 9AA. Thank you.

Guy Hindley, Membership Secretary

### **John Lawson**

6<sup>th</sup> August 1942 – 27<sup>th</sup> March 2024

Stephen Moreton and John's son, Robert, reflect on John's life.

"John Lawson, of Castle Douglas, Dumfries & Galloway, was well known to northern mine explorers, and much respected for his encyclopaedic knowledge of mines and minerals, especially of the Nenthead mines which were a particular passion of his. Born in Hazel Grove, Stockport, his interest in minerals, or "rocks" to his relatives, began early. He spent hours as a boy collecting and labelling "rocks" gathered from near home, or on holidays to the Isle of Man, a hobby that would last a lifetime. Fortunately, his wife-to-be Joan Rixon shared his geological interest, so their unorthodox first date at the Alderley Edge mines in 1960 went well, and marriage followed in 1963.

But mineralogy was only part of a broader appreciation of science, and at school he showed an aptitude for chemistry, leading ultimately to a chemistry degree and a spell as an industrial chemist. After losing his job with Croda in 1971, Joan suggested he retrain as a teacher, which he did, and he secured a post teaching

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chemistry at Kirkcudbright Academy in 1973. So, by now with three kids, the family moved north and settled in Castle Douglas. Their fourth child arrived later that year.

They enjoyed their new home, and John acquired a reputation as an inspiring and well-regarded teacher in a career lasting over 30 years. Castle Douglas was also well-situated for rock-hounding and this, inevitably, led him to explore the mines of southern Scotland, and Northern England, along with his younger son Robert who by now had also contracted John's passion for "rocks". Together they founded "Moorland Minerals" in 1988, supplying mineral specimens, fossils and crystals sourced from around the world, or from their own expeditions. They became a regular sight at UK mineral shows, and also operated from a shop in Castle Douglas. In 1998-9, at great expense, he, Robert, and several others dug out the Hydraulic shaft of Greenlaws Mine, Weardale, and made it secure. Although flat workings rich in fluorite were accessed, they did not recoup the cost of reaching them, and the venture ended when the landowner died in 2003, and his successor ordered the team off.

But it wasn't just about minerals. Although these provided the main motivation, John found the history and heritage of the mining industry fascinating. He joined the Peak District Mines Historical Society and soon after the Northern Cavern and Mine Research Society (NCMRS) in 1964 which later became the NMRS. And he became actively involved in exploring and reopening long-lost sections of the Nenthead mines. He, Robert, and friends, cleared mine passages, explored down shafts, and up rises. Based on careful research and study of mine plans John deduced where to dig to access an area of workings where, he hoped, witherite might be found. This culminated in the spectacular discovery of the Scaleburn horse-whim in 1992, though not much witherite. The story is related in his article in "British Mining, No. 63", one of over a dozen articles on mining and/or mineralogical themes John wrote, or co-authored.

John remained active until well into his seventies, but his last years were marred by increasing frailty, health scares, and latterly, dementia, which was distressing and stressful for his family. He passed away peacefully at home, Joan by his side, but his contributions to mineralogy and mine exploration live on."

*Many thanks to Stephen Moreton and Robert Lawson*

## Colin Robinson

We noted the passing of Colin in our May Newsletter hoping to follow up with a more personal reflection on his life.

Barbara Sutcliffe and people she has spoken with remember Colin as being a very private person, but always more than happy to share his extensive knowledge about mining and minerals in the north Pennines. Apart from that no one seems to know much about his background.

Barbara recalls that "he came on the Rogerley meets with NMRS but spent his time collecting, not chatting like most of us! I met up with him at the 2023 North Pennine Mineral Expo where he gave us a box of books for resale but again there was not much conversation."

*Thank you Barbara. If any reader has any memories of Colin they would like to share, please let us know.*

## Publication News

Both Sallie (as Librarian) and myself would like to thank Steve Grudgings, David Hargreaves, Rob Needham and Dave Nicholls for their recent donations to the library and for resale. Rob Needham's was a particularly generous gift and some of his books are available in our new retail outlet. Thanks also go to Steve for collecting Rob's books and transporting them to Nelson.

One of our members is very pleased that at long last he has a full set of our publications. If there are any you are after please contact me so I can inform you when they become available.

Special offers for this month are as follows. All are post free to GB only and orders can be emailed to [mansemins@btopenworld.com](mailto:mansemins@btopenworld.com) or by phone at 01282 614615 (before 8.30pm please.):

**Bath Stone: a quarry history** by J.W. Perkins, A.T. Brooks & A.E. McR. Pearce, P/b 54pp 1990, £5

**Bullcroft Colliery Carcroft & Skellow: Early Development** by Dave Fordham, P/b 40pp 2009 1<sup>st</sup> Edition, £5

**Askern Main Colliery & Instoneville: Early Development** by Dave Fordham, P/b 40pp 2009 1<sup>st</sup> Edition, £5

**Glossary of Mining Terms** edited by W.G. Orchard, P/b 42pp 1991, £5

**Industrial Archaeology of the Swansea Region** by Stephen Hughes & Paul Reynolds, P/b 54pp 1989, £5

**Cleveland ironstone** by S. Keith Chapman, P/b 29pp 1<sup>st</sup> Edition 1973, £5

**Field Guide to Stiperstones Mines** edited by Adrian Pearce, P/b 60pp, Shropshire Mines Trust 2010, £5  
**Rookhope's Landscape Legacies** by Peter Bowes & Thomas Wall, P/b 32pp, North Pennines Heritage, £4  
**The Newcomen Engine in the West of England** by K.H. Rogers, H/b 64pp Moonraker Press 1<sup>st</sup> Edition 1976, £7

Barbara Sutcliffe

## Library News

Thank you to Paul Gidley for donating to the library a copy of Ray Devlin and Harry Fancy's book "The Most Dangerous Pit in the Kingdom". This book was published in 1997 to mark the fiftieth anniversary of the 15<sup>th</sup> August 1947 disaster at the William Pit on the Cumberland coast where 104 men lost their lives.

Given the reputation of William Pit, it is not an easy or cheerful read. However, there are details of the courage and bravery of many miners who risked their own lives to rescue colleagues after mine explosions. In addition to the adult miners who lost their lives, an appendix lists the names of twenty-six children who died. Another appendix is the Royal Commissioners' report of 1841.

There is an unattributed poem, 'William Pit': The Cost of Coal' which includes the lines:  
"Ask not what a miner's got, ask what he had to give.  
Descend in a cage to earn a wage, and so a life to live.  
No pounds and pence could recompense, kindred folk or kind.  
Damned blasted coal thou took they toll, the price for being mined.

Sallie Bassham

## Event Reports

### **NAMHO Conference 2024 - Cornwall**

29<sup>th</sup> – 30<sup>th</sup> June 2024 plus days either side for surface and underground visits

The 2024 NAMHO Conference was held at the Resilience Hub, Camborne with lectures on the 29<sup>th</sup> and 30<sup>th</sup> and June. Underground and surface visits took place between 28<sup>th</sup> June and 2<sup>nd</sup> July. NMRS had the only display stand which was ably manned by Len Morris. The membership brochures attracted some interest and several publications were sold. The conference was opened on the evening of Friday 28<sup>th</sup> June with a welcome by NAMHO President, Peter Jackson and was followed by a keynote lecture by Dr Keith Rust who described his work on a 3D model of the underground workings of the Cornish mining field.

The model was displayed as a video and was a most impressive achievement and is now almost complete. Afterwards the delegates were served Cornish pasties from a local bakery and enjoyed a social evening at the bar.

The lecture programme was opened by **Colonel Sir Edward Bolitho, CVO, OBE, CStJ, the current Lord Lieutenant of Cornwall, who gave an extremely interesting talk on his family's involvement in the mining and smelting business.** He told how they were originally tanners but under Thomas Bolitho (1765–1868) they became merchants supplying materials of all types to the fishing and metal mining industries. They went on to become one of the four main families engaged in tin smelting and owned the Chyandour Works at Penzance along with interests in several mines. As the smelters paid the miners only after the tin was sold and received immediate payment on their sales, they had a strong positive cash flow and expanded their activities into banking. Bolitho's Bank (later the Consolidated Bank of Cornwall) acted as financiers to the Cornish mining industry and were eventually acquired by Barclays in 1905.

**Steve Tarrant, the Manager of South Crofty Mine,** then brought us up to date with an account of the recent work being undertaken by Cornish Metals Ltd to dewater the mine to enable a thorough assessment of its potential to be made. Little exploration work had been done prior to closure in 1998 and a £40 million project is now underway to enable access to the mine, involving pumping 25,000 m<sup>3</sup>/day, construction of an effluent treatment plant and extensive refurbishment of New Cooks Kitchen Shaft; water will be discharged through the Dolcoath Deep Adit. The workings cover much of the old Central Mining District of Camborne and Redruth and it is hoped to produce 49,310 tonnes of tin metal in concentrate over a 14-year lifetime with a payback period of 3 years, creating 320 jobs at the mine as well as over 1,000 indirect jobs.

**Rick Stewart, 'Devon Great Consols - a story of this great Victorian copper mine'** From the 16<sup>th</sup> to early 19<sup>th</sup> centuries, the mine consisted of a series of shallow tin and copper workings, spread over an appreciable area. After the 6<sup>th</sup> Duke of Bedford dissipated the family fortunes, permission was given to develop the mine, starting on 12 August 1844 from an old tinner's shaft. They hit the back of a rich copper sulphide lode at 13 fathoms; this was 40 feet wide and 400 feet wide at the junction with a cross-lode. During

the 1850s it became the world's largest copper producer. The lease was extended for 21 years in the 1850s for a fee of £20,000 in addition to the usual royalties; a railway to Morwhellam Quay was built. Workings were down to 210 fms but copper prices became depressed during the late 1860s due to foreign competition and during the 1870s the mine became the world's largest arsenic producer. In 1876 they decided to sink Richard's Shaft to 300 fm, in an attempt to find tin below the copper but the project was unsuccessful. The mine was demolished for scrap in May 1905 and was briefly restarted in the 1920s.

**Alan Williams - 'Project Ancient Tin: Did British tin sources supply Bronze Age Europe and the Mediterranean?'** In ca 2200 BC, artefact analysis shows that Britain and Ireland were the first regions in Europe to switch from copper to bronze metal, typically with around 10% tin. This change then spread across the rest of Bronze Age Europe and the Mediterranean over the following centuries. 'Project Ancient Tin' is a Leverhulme-funded project by Durham and Liverpool Universities that over the last four years has sought to 'fingerprint' British and other European tin ores to artefacts in Europe and the Mediterranean using the latest chemical and isotopic analytical techniques. The project team involves archaeological, geological and mining specialists both locally and internationally and is part of a major re-evaluation of the European Bronze Age tin trade.

<https://projectancienttin.wordpress.com>

**Mark Hewson - 'China Clay Industry - Linking Cornwall and France and the new industry of British Lithium'** Mark is the CEO of Imerys UK Ltd. He described the current china clay industry around St Austell and the many uses of the product. Cornish china clay is a high-grade product and commands a premium over many larger suppliers. Imerys took over English China Clay Ltd about 25 years ago, converting it into a lower tonnage but higher complexity business; Littlejohns at St Austell is now the world's largest kaolin mine. Lithium can be extracted from the deposits and he described a project to extract 20,000 tonnes/yr from French and a similar quantity from Cornish sources.

**David Hardwick - 'JC Burrow Photographer - the pioneer of underground photography starting in the Camborne area from the 1890s'** Many will be familiar with Burrows' underground photographs of

Cornish miners and his book 'Mongst Mines and Miners' which can be found on the web. He was born in Truro in 1852 and lived in Camborne. His lesser-known works include underground photographs of South Staffordshire coal mines, North Wales slate quarries, the Bristol Coalfield and the Cornish china clay industry. Dave explained the problems of carrying heavy equipment into the mines, of smoke from explosions and magnesium flash powder interfering with repeat shots and the questionable wisdom of using open flash illumination in coal mines.

**Tom Greeves - 'Tinworking in the Landscape of Devon and Cornwall - Culture and Nature in Harmony?'** Serious archaeological and historical interest in tinworking in Devon and Cornwall did not develop until the 1970s. A tin mill of the 16<sup>th</sup> and 17<sup>th</sup> century was excavated at Colliford, Cornwall in 1978-1979 and provided the stimulus for landscape-scale exploration and survey of tinworking. Regrettably, society as a whole has not yet recognised this cultural content in the landscape and today nearly all discussion is about the so-called 'natural' environment. A feature that makes Cornwall and Devon unique within Britain, is that every river and stream flowing from the granite uplands contains tinworks, all potentially worked since prehistoric times. Several important structures and features relating to tinworking are still neglected within both counties and there is much scope for archaeological and historical exploration. Landscape designations urgently need reform. There is a need for a good culture/nature balance in woodland/pasture management, leaving extractive features still visible for access and investigation.

**Nigel MacDonald - 'Mineral Processing - Ores to Riches'** This was an authoritative description of the various types of crushing and ore dressing equipment used in the tin mining industry. Nigel described the process of liberating mineral grains from their ores and the compromises between eventual concentrate grades and the losses which have to be accepted to achieve them. He pointed out that most tin smelters require a grade of at least 55 %Sn and that smelting tariffs include penalty clauses for impurity elements.

**Rob Vernon - 'Dredging gold and tin placer in North-West Iberia – a futile exercise?'** Rob described the types of gold and tin dredges used. Most of the gold extraction was carried out by British companies in NW Spain and Portugal, who often

monitored the success of seasonal gold panners to determine areas for future exploitation. Most of the attempts failed because exploration had been unreliable and the dredging depths varied considerably - beyond the abilities of the dredgers to adapt. Also the dredgers were too light to cope with heavy boulders and the mineral processing techniques gave heavy gold losses. Tin dredging was carried out on the Mondego River by the Portuguese-American Tin Co. between 1912-1949 and from 1924-1933 at Belmonte by the Mondego Tin Dredging Co. Ltd, a company registered in Scotland. The former met with limited success as conditions were consistent and the project was well-planned.

### **Simon Timberlake - 'Bronze Age tin mining in Cornwall: the date of the antler pick from the Carnon Valley Streamworks, Devoran, near Truro'**

The 1997 radiocarbon dating of an antler mining pick discovered in 1790 by miners working the alluvial tin ground within the Carnon Valley, now in the collections of the Royal Cornwall Museum, provided the first clear evidence for Early Bronze Age tin mining, and its likely location, in South-West England. Study of this artefact has also revealed what is probably the earliest evidence for the marking of a 'tally' or count, perhaps a record kept by one of the prehistoric miners who used it. The context of this find and its significance as a possible model for the earliest alluvial extraction was discussed and links with contemporary gold recovery suggested. This evidence uncovered for early mining seems to be supported chronologically by the most recent findings of Project Tin.

### **Rob Vernon - 'The Great Egyptian Gold Rush'**

Egypt has mineral resources, particularly gold deposits that have been exploited intermittently since the time of the pharaohs. The gold funerary mask of Tutankhamun is a famous example from this period. Perhaps lesser known is the oldest mining map in the world, dating from 1150 BC and made of papyrus; it depicts quarries and gold deposits. In 1882, after a short period of military conflict, Egypt became a British Protectorate. with Lord Cromer as Britain's Chief Representative. He pursued a programme of modernising the country by investing in agriculture and industry. In 1899, Charles Alford and others formed the Victoria Investment Corporation Ltd, (VIC) to carry out mining exploration. In the winter of 1899-1900 the VIC financed an expedition to Egypt, led by Alford, with the object, 'to search for the ancient mines and to report generally on gold mining, past and prospective, in

Egypt.' The expedition discovered numerous areas where gold had been worked. A further company was formed, The Egyptian Mines Exploration Company Limited, to examine several prospects in greater detail: Um Rus and Fatira. Another concession was also explored, much further south in Sudan. By 1906, over 20 companies were formed in London to explore both Egyptian and Sudanese gold deposits, one example being the Nile Valley Company, formed in 1901. Fatira and Um Rus were floated as separate companies in 1903 and 1906, respectively. By 1913, over 60 companies had been formed in London to work gold and even gem deposits in Egypt and Sudan.

### **Colin Bristow - 'Tin & Copper Mining of the St Austell Bay Area'**

The two St Austell granites lie side by side in a central position in the Cornubian batholith and the western granite is well-known for containing high quality kaolin, or china clay deposits, which have been worked on a large scale since the early 19<sup>th</sup> century. However, there was an earlier phase of mining, going back to Bronze Age times for tin and copper. Bronze Age mining exploited the rich alluvial deposits in the river valleys and great depressions such as Goss Moor. There is even a suggestion that the Bronze Age miners constructed shafts to get to the 'tin ground'. Some of the workings in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries were worked well below sea level and the Happy Union working involved an elaborate wooden incline with skips to recover the rich basal tin ground. A major opencast working at Carclaze exploited a tin-bearing stockwork and was worked from earliest times. It involved a series of underground canals, constructed between 1740 and the end of the 18<sup>th</sup> century, to carry the ore away. It attracted great interest in European mining circles at the time and there are many contemporary descriptions by continental writers and illustrators; it was one of the earliest attractions for geotourists. Over £100 million worth of tin (at present tin prices) was recovered from this one working. Along the coast there were a series of copper mines which, at one stage early in the 19<sup>th</sup> century, rivalled the great copper mines of the Camborne-Redruth area. There are many stories of fortunes won and lost and great legal battles, which culminated in a celebrated action heard before the King's Bench in London in 1828. The wonderfully-preserved port of Charlestown was constructed around 1800 by Charles Rashleigh for the export of copper ore and china clay and is now part of the Cornish Mining World Heritage Site. There were also efforts to

evaluate the alluvial tin resources under the sea bed of St Austell Bay in the 1960s.

**Richard Smith - 'Smelting of low-grade tin concentrates'** Tin concentrates are generally classified as: High grade (55-78 %Sn), Medium grade (40 -55 %Sn) and Low grade (10-40 %Sn). Low grade concentrates tend to have high impurity levels and because of their greater gangue content give rise to higher tin losses in waste slags. Against this, it is sometimes more economical to produce a low-grade concentrate and to accept higher smelting charges in order to avoid excessive waste in milling. Low grade concentrates have traditionally been produced by Bolivia and Peru. During the 1970s and early 1980s Wheal Jane's tin output was almost entirely in the 30-35 %Sn range with some 10-12 %Sn. South Crofty and Geevor produced high or medium grades although both made a product of around 10 %Sn. The principal low-grade smelters from 1900 onwards were: Berzelius (Duisburg), Capper Pass (Bristol and Melton), Robinson & Bense (Tostedt, Hamburg), ENAF/Vinto (Oruro, Bolivia) and for a very short time Williams Harvey (Liverpool). Smelting technology differed considerably from that of conventional tin smelters, particularly in the use of fuming furnaces and electrorefineries. Some works had a capability to treat by-products from tin and other smelters and also recycled materials. Radioactivity has always been present in hard-rock concentrates but only became an issue for smelters in the 1980s when <sup>210</sup>Po was obtained by inadvertent concentration. In the last 8-10 years smelting technology for all grades has changed and furnaces invented in the 1970s are being introduced and investment is being stimulated by unprecedentedly high metal prices.

**Brigitte Cech - 'A Roman Gold Mine in Austria'** Interdisciplinary research was conducted from 2018 to 2022 in a recently discovered Roman goldmining area situated about 70 km to the south of Vienna in a landscape locally known as 'Karth'. This is the only Roman gold mine known in the Eastern Alps. Due to the fact that there was only forest after the Romans left the features are exceptionally well preserved. According to random finds the mines were operated in the 2<sup>nd</sup> and 3<sup>rd</sup> century AD. The mining area, including the catchment areas of the leats, covers an area of about 120 km<sup>2</sup> and consists of 12 individual mines. Water was brought to the mines by five leats with a total length of approximately 123 km. Archaeological excavations were carried out on two of the 15 large

tanks and on two of the leats to understand their construction. In addition to archaeological work, geological, geophysical and archaeobotanical studies were carried out as well as analysis of the gold contained in the sediment and hydraulic analysis of the water supply. Pliny the Elder's description of gold-washing on a bed of heather was reconstructed with great success as an archaeological experiment.

**Roy Morton - 'A photographic perspective - above and below ground of some interesting Cornish mines'** The author displayed a number of mining photographs accumulated over a long period of exploration together with an amusing series of anecdotes and personal recollections.

**John H. Morris - 'From Copper Tokens to Manure: efforts to develop a diversified mining conglomerate in Co. Wicklow, Ireland during the 18<sup>th</sup> and 19<sup>th</sup> Centuries'** A demand for low-value copper coinage to pay the wages of industrial workers was one of the less well-known consequences of the Industrial Revolution in the UK from ca 1760 onward. The Royal Mint was unwilling to satisfy that demand, as it considered it unfitting to issue such base metal coins bearing the regal profile on metals other than gold and silver. The resulting demand vacuum was exploited by a wide range of commercial enterprises in Britain and Ireland, including mining companies, during the latter part of the 18<sup>th</sup> century, through the creation and issue of low value, generally 1/4, 1/2, and 1 penny copper tokens. Two such Irish mining companies were founded on rival mining operations in Avoca, Co. Wicklow: the loyalist Associated Irish Mining Company (AIMC), on the east bank of the Avoca River and the nationalist Hibernian Mining Company (HMC) on the west bank. Both flooded Avoca and the wider region with their tokens. The HMC and its successors, the Wicklow Copper Mine Company (incorporated in 1827 and revised in 1865) and the Arklow Manure Company Ltd (incorporated in 1886), sought to diversify away from reliance solely on ore production and sales by developing a diversified range of potentially added-value products and services. Their ultimate effort, to produce and market artificial fertiliser, with which a particularly gruesome dimension has been discovered, is of especial interest.

**Gregor Borg - 'The Nebra Sky Disk and its link to Cornish gold'** Analyses show that the gold on the disk has a unique composition: it contains a very high proportion of silver, high levels of copper and tin, and

for artefact gold, anomalous concentrations of zinc, arsenic, tin, tungsten, lead, nickel, cobalt, platinum, and palladium. The particularly high silver and distinct tin content point to a tin-bearing region of origin where the gold was transported only briefly in the river, thereby being cleansed only minimally of its original companion metals from the primary veins by selective dissolution. However, there were no European analyses of natural gold available for comparison. Fortunately, there existed a gold database detailing the composition of Bronze Age artefacts from all over Europe. Based on these artefact analyses, various types of gold were distinguished, with one subgroup exhibiting a similar composition to the gold on the Nebra Sky Disk. The gold artefacts of this group were found in Germany and neighbouring countries together with a single object found in Cornwall. Finds in Germany initially suggested that the gold on the Nebra Sky Disk, might originate from gold-bearing streams and rivers in Thuringia, the Alps, or Bohemia. Funding from the German Research Foundation allowed for the sampling and analysis of natural gold occurrences across Europe as part of a multi-year research project (DFG-FOR 550). This provided a geochemical database for natural gold from approximately 100 sites for comparisons with artefact gold. The initial results were quite sobering, as none of the gold from Germany and the surrounding areas matched that of the Nebra Sky Disk. Promising gold regions, such as the gold of the River Schwarza in Thuringia, the River Rhine, or gold from Bohemia and Moravia, therefore, had to be excluded. Even gold from more distant regions, such as the Golden Triangle in Romania or the Tauern gold in the Austrian Alps did not match. The gold nuggets from Cornwall, especially those from the Carnon River, exhibited the greatest similarity to the gold of the disk and also to the initially overlooked gold cup from Rillaton Barrow relatively nearby. The Carnon River is historically known for its rich alluvial and primary cassiterite deposits, which were demonstrably mined in the Bronze Age. Almost as a by-product of tin extraction, large and small gold nuggets were repeatedly found, with their extraction also historically documented. Some particularly large and beautiful gold nuggets are exhibited in the Royal Cornwall Museum in Truro and in the private collection of the Williams family at Caerhays Castle. The Williams family operated tin (and gold) extraction from alluvial sediments of the Carnon River for more than 20 years at the beginning of the 19<sup>th</sup> century. Some of the impressive gold nuggets in the Williams' Mineral

Collection contain clearly visible inclusions of hard cassiterite, which were 'kneaded' into the softer gold during turbulent transport in the river. Geochemical conditions in the area created a very specific fingerprint of the Carnon gold, which, precisely matches that of the Nebra Sky Disk.

The conference was an extremely well-run event, organised by the NAMHO Committee with the help of local volunteers.



*Delegates visiting the King Edward Mine Museum*



*The Winding Engine – King Edward Mine Museum*

About 140 people attended and it is a sad reflection that no organisation has yet come forward with a venue for the 2025 conference.

Dr Richard Smith, NAMHO Representative

## **The Life and Work of Arthur Raistrick Conference – Grassington**

20<sup>th</sup> -21<sup>st</sup> July 2024

The conference celebrated the life and work of Dr Arthur Raistrick and coincided with the 70<sup>th</sup> Anniversary of the founding of the Yorkshire Dales

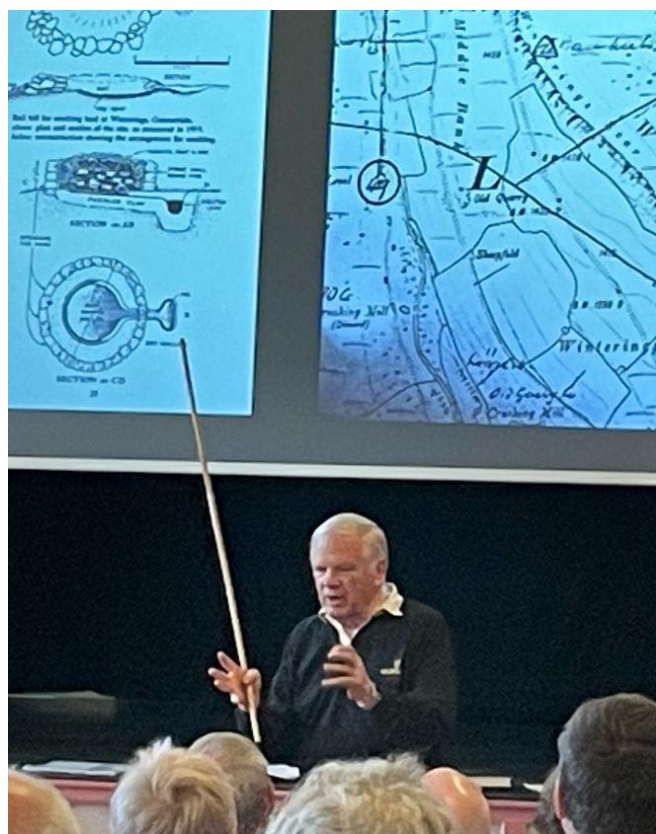
National Park. It was hosted by the Yorkshire Geological Society, supported by nine other societies, including NMRS and by the YDNP. Talks were held at the Devonshire Institute, Grassington; the event was very well attended and at a guess, there were over 80 attendees. the programme consisted of:

**‘Arthur Raistrick, scientist, polymath and lifelong rebel’ by Colin Speakman** (Friends of the Dales) and was a biographical introduction to the conference.

**‘Arthur Raistrick and the Pig Yard Club’ by Tom Lord** who described AR’s involvement in the Club and their pioneering exploration of the caves around Settle, such as Sewell’s, Victoria and Attermire Scar.

**‘Arthur Raistrick’s pioneering contribution to understanding deglaciation in the Yorkshire Dales’ by Trevor Faulkner** (YGS and University of Birmingham) describing the landscape left behind by the retreat of the glaciers 18,000 years ago and AR’s many papers on the subject, particularly in the earlier part of his career.

**‘Dr Arthur Raistrick’s contribution to mining history’ by Richard Smith** (NMRS) covering the 40-odd papers and 12 books written by AR on the Pennine lead mining industry and its associated communities.



*Our Editor Richard Smith - in full flow*

**‘Arthur Raistrick – Britain’s premier palynologist’ by Prof. John Marshall** (University of Southampton). AR laid the foundation of coal formation chronology by correlating pollen and spore inclusions with different seams and strata.

**‘Audiences with Arthur Raistrick’ by David Joy** (former books Editor of Dalesman Publishing Co.) – a humorous insight into his personal contact with AR and the production of many of AR’s books and booklets on the Yorkshire Dales, its villages, industries, people, origins and history.

**‘Arthur Raistrick and the end of the antiquarian tradition in the Yorkshire Dales’ by Roger Martlew** (Yorks. Arch. and Historical Society) described AR’s influence in changing the approach of Dales archaeologists from artefact finding and collection to the assembling of scientific information and finds examination with the aim of learning about ancient communities and cultures.

**‘Late prehistoric and medieval evidence in North Craven - a reassessment of Arthur Raistrick as an archaeologist’ by David Johnson** (Ingleborough Archeology Group) - discussed AR’s work on the archaeology of structures around Chapel Fell, Malham Tarn and Malham Cove, some of which has been revised as a result of later excavation.

**‘Physical, mental and spiritual refreshment - Arthur Raistrick, national parks and access to the countryside’ by Robert White** (formerly YDNP) described AR’s involvement in the formation of the national parks and in particularly the YDNP.

Activities on Sunday 21<sup>st</sup> July comprised walks and field excursions in the Grassington area including: Grassington Folk Museum, the landscape archaeology north of Grassington, the archaeology of Malham Moor, and underground and surface visit to Gillfield Mine, Greenhow, the deglacial features of Giggleswick Scar, a ramble around AR’s home environment of Linton, the landscape archaeology between Grassington and Conistone (Lea Green & Grass Wood), the mines of Grassington Moor and a historical tour of Grassington. It was a difficult choice to make and a pity that one could not attend all of these.

The trip to Gillfield Mine was well-led by Shirley Everett and Richard Clayton and explored the former Leeds University training mine and its workings in the Waterhole and Sun Veins.



*Delegates in the Sun Vein and an old tub*

Later the party visited the Cockhill Level briefly and ended with a tour of the remains of the Cockhill and Providence lead smelting mills.

The event was very well organised and NMRS was well-represented by the display stand, organised by Barbara Sutcliffe and manned by Len Morris.



*Len Morris welcoming Damian Rudge who recently received an NMRS grant for research on lead isotope provenancing of Roman lead pipes found in the North of England*

Dr Richard Smith



## **The North Pennines Mineral Expo – St. John’s Chapel**

26<sup>th</sup> - 27<sup>th</sup> July 2024

I would just like to thank Enrico Rinaldi for allowing us to display some of our publications at the Expo this July. Especially as he was doing such a sterling job of selling them on our behalf. Also, to Martyn King for taking them up there and returning them. I was able to visit thanks to a lift from a member in the very early days, Norman Lupton, and enjoyed meeting up with members. I had a long chat to Barry Metcalfe and his wife who I have spoken to on the phone but never met. It is lovely to hear how our newsletters are appreciated and read as soon as they arrive. Thank you to those of you who introduced yourselves to me for the first time. There are some photographs on our Facebook page. Word is definitely spreading about this event in such an important area in our mining history. It is thanks to Enrico who brings it all together.

Looking forward to the 2025 Expo to be held at the same venue, St. John’s Chapel Town Hall, on 19<sup>th</sup> - 20<sup>th</sup> July 2025

Barbara Sutcliffe

## **Request for information**

Dear Readers,

I was recently in discussion with an ex-fitter who worked at Bank Hall Colliery in Burnley and the subject of steam locomotives came up.

Our website contains photographs of one of the locomotives employed there in 1967, a saddle tanker called ‘Carbon’:

[https://bcthic.org/Archive/Industry/Coal\\_Mining?page=2](https://bcthic.org/Archive/Industry/Coal_Mining?page=2) (Six photos in the bottom two rows)

But my friend mentioned two previous saddle tank locomotives that were used at the colliery earlier. I think ‘Wasp’ was the name of one of them.

If anyone has any information of these earlier locomotives, please get in touch with me at [georgegrimshaw@btinternet.co](mailto:georgegrimshaw@btinternet.co)

Thank you, George Grimshaw, Burnley, July 2024



## Article: Hotwater Brake - Coalpit Heath, South Gloucestershire

by Steve Grudgings

*In our August Newsletter Steve gave us short accounts of five of his winter walks through landscapes shaped by historic mining activity. Here is a more in-depth account of one of those locations, Hotwater Brake.*

### Introduction



*Plate 1 – Looking south over the brook in Hotwater Brake in 2007*

Hotwater Brake is a wooded area lying to the south of the railway viaduct crossing Badminton Road and is one of the last unspoilt rural areas of Coalpit Heath. The term Brake is believed to denote a small section of woodland but the Hotwater suffix needs a longer explanation (see below). The Brake covers around 8 acres of mature ash and oak trees set in grassland, traversed by a small brook (Plate 1) which the track going through the area crosses by a low twin arched stone bridge (Plate 2).

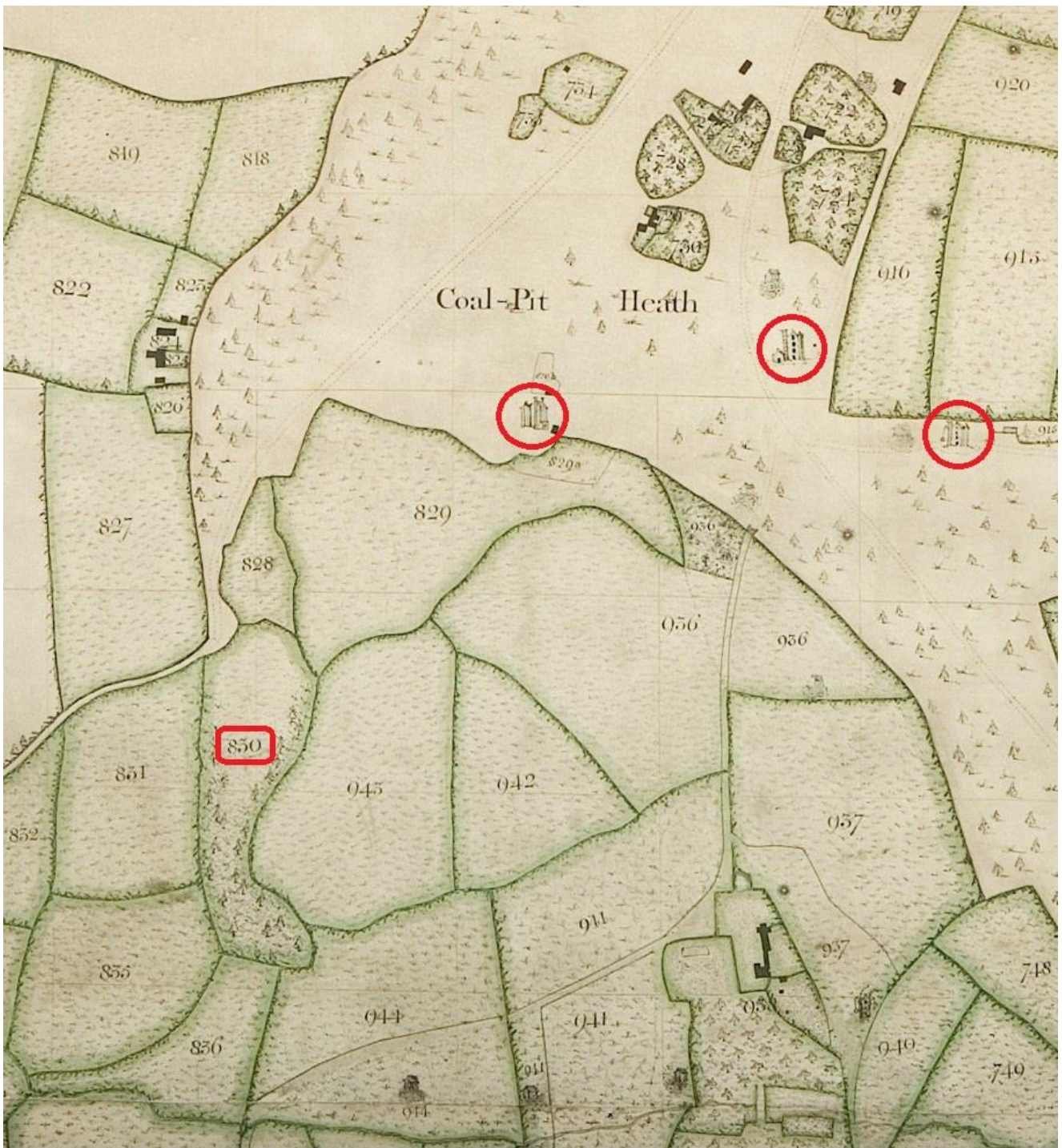
The topology of Hotwater Brake is unusual because of its intense undulations, understood to have their origins in medieval coal mining as one of the local coal seams comes to the surface to the east of the stream, and were thus easily accessed. In spring, the wood is a delight for nature lovers, deer make their home in the wood, the trees echo to birdsong and the ground is carpeted with celandines, bluebells and the full range of wild flowers.



*Plate 2 – The twin arches of the bridge appear to be built using the local pennant stone. The bridge may be of a considerable age (one arch shown in photo)*

### Early Coal Mining

Apart from its inherent beauty and tranquillity, I have been drawn to the wood as one of the last unspoilt local mining landscapes. Local anecdote suggests the three adjacent houses at the northern end had been built between the wars using profits from the coal sold by working a small mine in the woods, most probably removing pillars of coal left in the earlier workings. Apart from the undulations and a small length of narrow-gauge rail typical of such workings left beside the roadway leading into the wood, no tangible mining remains have been found yet. Local anecdote further suggests that post closure, the mine entrance was used to dispose of carcasses of pigs culled during an outbreak of Swine fever. In addition to the early and later coal workings the other important connection with coal mining is to be found in the name of the brake. Whilst we have no written evidence for this, we understand the “Hotwater” prefix came about because from around 1752 until about 1870 the water in the brook steamed in winter because of warm water passing down it. This water came from three atmospheric pumping engines draining the local mines that were sited alongside (and in one case underneath) the railway embankment to the north. When they were working, these engines generated large volumes of waste hot water which resulted in the steaming brook which we believe gave rise to the name Hotwater Brake. It is noteworthy that all maps show the shape and boundaries of the area as unchanged and that it has always been shown as wooded (Plate 3).

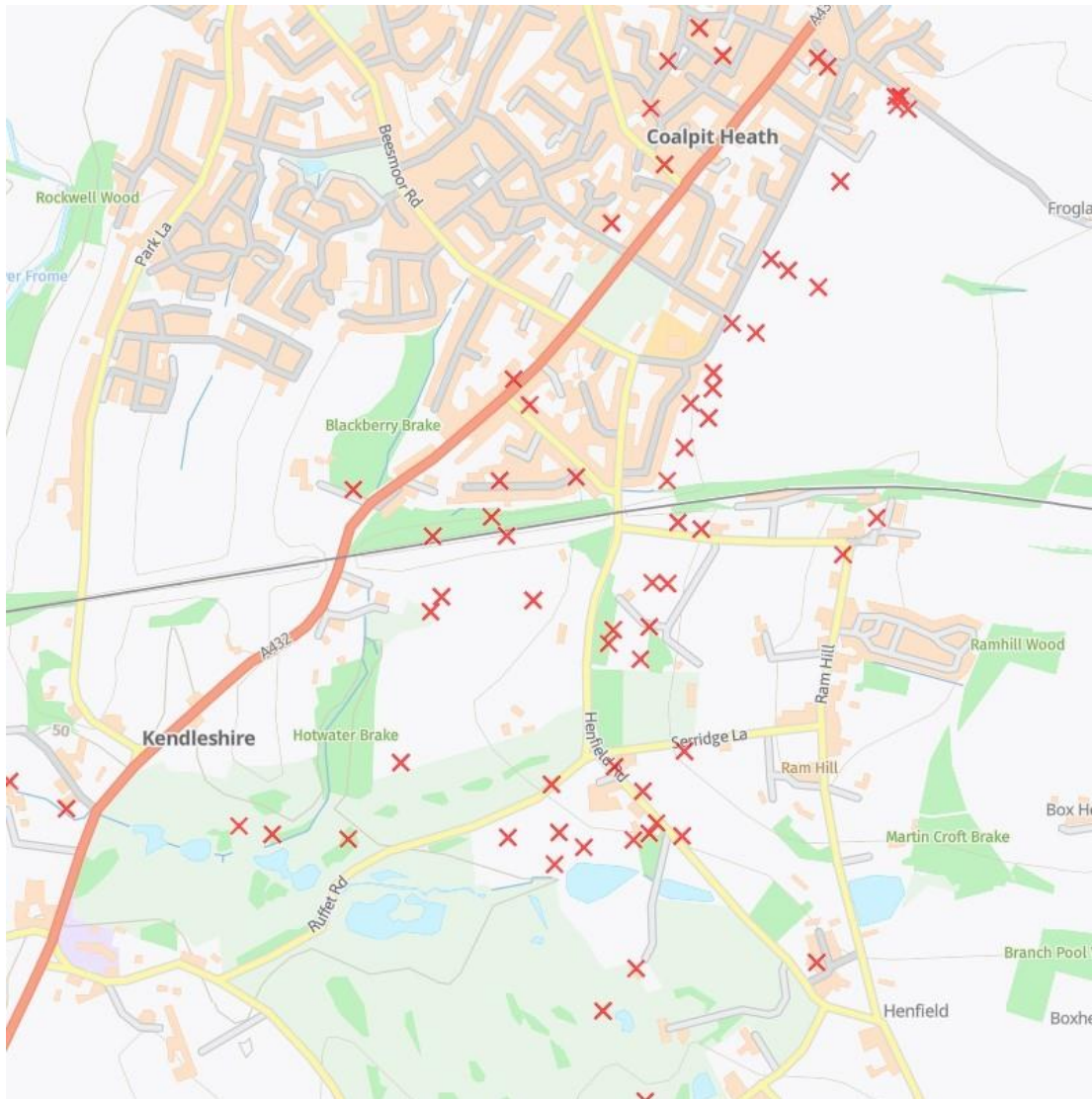


*Plate 3 - This extract from Halls 1774 map shows Hotwater Brake (numbered 830), the Badminton Road enters at mid left and the three Newcomen Engines generating the hot water are circled. Note the main line railway embankment built in the 1900s runs horizontally through the engine sites (see Plates 4 and 10 for route).*

*Image courtesy of Bristol Archives*

We have not been able to find any details of the coal workings, because of their proximity to the outcrop, the initial ones are likely to have been in medieval times and are understood to predate the perambulations of local coal mines produced in 1691 and 1696.

It is therefore likely that by 1700 the shallow coal had been removed locally (except for the pillars supporting the roof) and mining activity had migrated to the deeper seams to the north east.



*Plate 4 - An extract covering Hotwater Brake from the Coal Authorities Interactive Viewer. The red crosses are mine entries (the ones south and east of the brake are access shafts to the Serridge Adit, so not strictly mine entries)*

No shafts or adits feature on the Coal Authorities interactive viewer which supports this view (Plate 4). The geological map shows “old crop workings” across the area of the brake (Plate 6) – this needs taking with some circumspection as this term was widely used for ground disturbed by early mining use.

### **Coal Mining in the Twentieth Century**

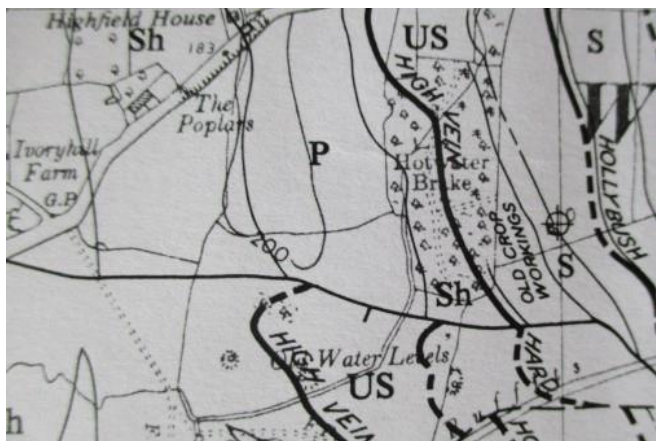
The information we have on the more recent mining activities of the previous century is second or third hand and gleaned from various local sources – this is what we understand - The wood was purchased along with the house fronting onto the Badminton Road by the late Harry Talbot and his wife in the mid-1970s. Harry passed away in 2019 and his wife in April 2023. A friend of the family recalls Harry telling him that Mr Rodman, a Welshman, mined a considerable amount of coal from the brake in the interwar period, assisted by Mr Salmon, a local man. Rodman’s profits paid for

the building of the three houses, his family living in No.108 (Plate 5) and Mr Salmon and his wife in the bungalow No.109. Harry purchased the house from Mr Rodman’s widow.



*Plate 5 – No.108 Badminton Road, built by Mr Rodman in the interwar period and now owned by the Talbot Family*

Harry recounted that because Mr Rodman liked a drink, Mr Salmon was often left working underground by himself and when the visiting mining inspector found this, he ordered the workings to be closed (it was a legal requirement that there was always more than one miner underground – for obvious reasons). Apparently, the mine entrance was at the bottom of the deepest remaining crater in the woods and presumably some form of rails and small wheeled tubs would have been used to transport the coal to the surface (Plate 7).



*Plate 6 - This extract from the local geological map shows the High Vein (paradoxically the lowest seam) outcrop running through the centre of the wood. This means the seams will dip to the east. There is an east-west fault directly below the brake which displaces the seam further east*



*Plate 7 - The largest hole in the brake via which Mr Rodman's coal workings were reportedly accessed*

Three other features are worth noting, on the slope on the western side of the stream a small (less than 12" square) stone lined passage emerges from the hillside, purpose unknown (Plate 8).

The second feature of note is the well beside the track in the garden of No.108 which, having been explored

by members of South Gloucestershire Mines Research Group, appears to be cut in rock in the lower part and the upper part "ginged" with a carefully built dry stone shaft supported by a framework of rails (Plate 9). This suggests it was dug to provide water when the house was built using material from the mine – the upper ginging being in place to retain loose ground. The remains of its windlass survive around the well head.

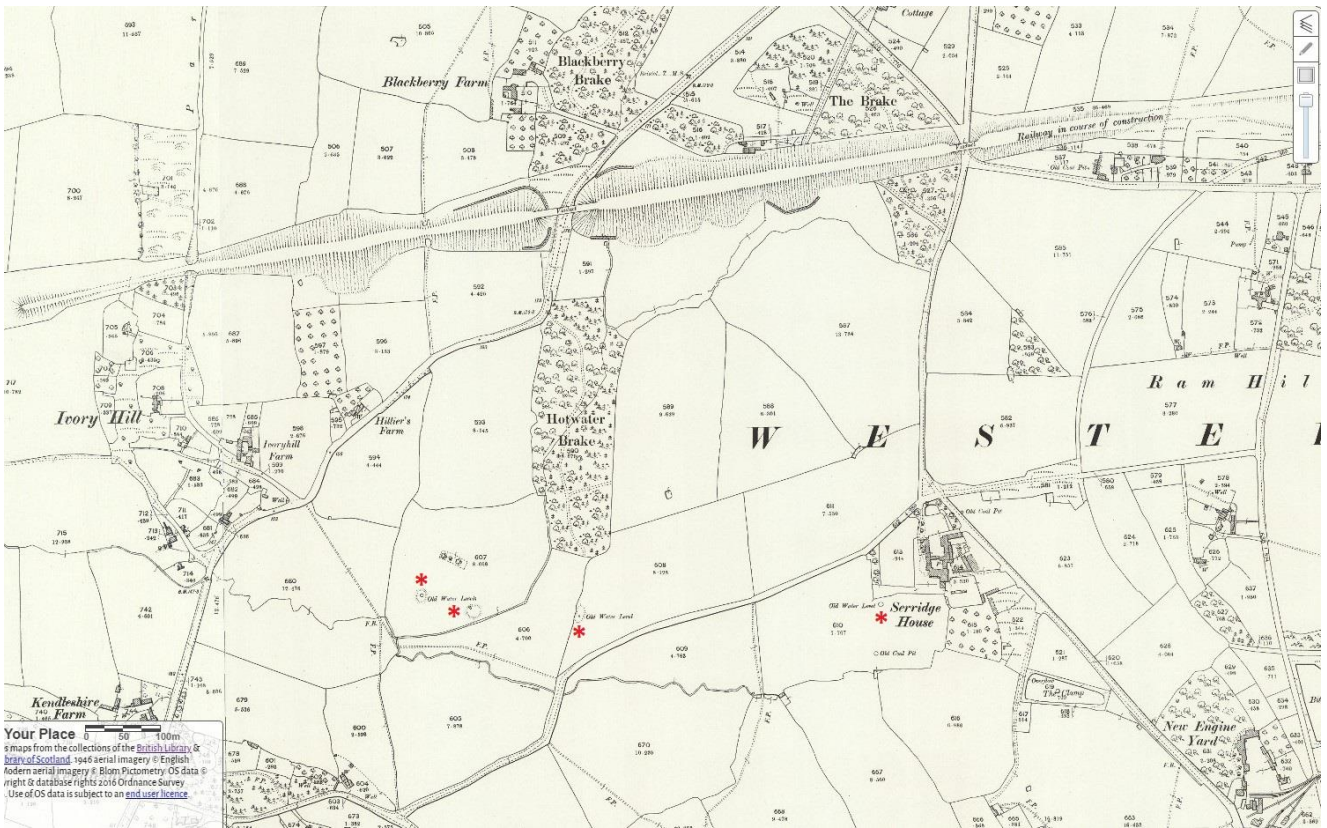


*Plate 8 - The small stone "drain" on the western side of the brook – purpose unknown*



*Plate 9 – Looking up the well from the bottom, the arrangement of the rails holding up the narrower round "ginging" are clear in this view*

The third is more of a characteristic than a feature and concerns the stream progressively drying up as it goes through the brake. This appears to be natural seepage into the underground voids and workings – it's also worth noting that the Serridge Drainage Adit passes only 250 yards south of the point where the brook dries up at a depth of around 30 feet and is an obvious conduit for water locally (Plate 10). In heavy rain, the brook water can be observed sinking into small hollows around it.



*Plate 10 - This extract from the third edition 25" OS map shows the railway embankment under construction and two streams running southwards from it merging to run through the brake. The line of the Serridge Adit into which much of the local water is likely to drain is denoted by the four tumps\* marked "Old Water Level"*

**The surrounding area**

The areas to the south now occupied by the Kendleshire Golf course and to the west which is primarily agricultural were both extensively mined from the C17 onwards as the number of mine entries shown on Plate 3 indicate. The area directly to the north is occupied by the railway viaduct and local anecdote (again) suggests the masonry of the viaduct pillars extend as far below ground as they do above due to the unstable ground caused by earlier mining. Apparently, the viaduct length was reduced and embankment substituted as a more cost-effective way of addressing this. Opposite the viaduct and the Badminton Road lies Blackberry Brake – of a similar size to its southern counterpart also containing much undulating land believed to have resulted from early mining. The 1691 perambulations report a coal openwork (like a quarry) just left of the track to Blackberry Farm (Plate 11).

A local resident recalls venturing into a hole in Blackberry Brake some 15 years ago “the depth of a long ladder” down which the stream running through the area disappeared into in wet weather and this prompted its filling (Plate 12). This hole and some of

the loose ground below the viaduct may be attributable to a shallow drainage level running along the parish boundary to the north, parts of which have been investigated by colleagues.



*Plate 11 – Understood to be the early “openwork” described in the 1691 perambulations to the south west of Blackberry Brake (taken in 2004)*

Finally, it would appear from the number of mature “twin” ash trees as well as the variety of mature Oak and Ash that the brake has been managed as a woodland resource for some time.



*Plate 12 – Blackberry Brake in flood in 2007 (with the hole described by Alan Payne to the right)*

We very much hope the area can retain its unspoilt nature and will endeavour to discover more of its history.

Note: Hotwater Brake is not accessible to the general public and approval for access from the owners should be sought.

Steve Grudgings, Chair, SGMRG, 20 April 2023

\* *For those, who like me, scratched their head. A Tump is a hill which is separated from adjacent hill tops by a height difference of at least 30 metres on all sides.*  
<https://www.hill-bagging.co.uk/Tumps.php>

## Conferences & Exhibitions

### The Association of Industrial Archaeology Conference 2024, Cardiff

One day Conference, Saturday 5<sup>th</sup> October  
 The Radisson Blu Hotel, Meridian Gate, Bute Terrace, Cardiff CF10 2FL

The AIA annual industrial archaeology conference takes place in Cardiff this year, and runs from Friday 4<sup>th</sup> to Sunday 6<sup>th</sup> October. It will take a slightly different form from previous years, with one day of conference business and two half days of visits.

On the Saturday there will be four presentations by nationally-recognised experts, two in the morning and two in the afternoon, with a short AGM at mid-day. The first three exploring elements of Welsh industrial heritage, and the fourth sharing results of a recent survey of 600 publicly-accessible industrial heritage sites:

- 'Our Welsh industrial museums', Steph Mastoris, former Head of Museums, National Museum Wales

- 'The Making of an Industrial Landscape: Blaenavon World Heritage Site', Dr Peter Wakelin, heritage consultant
- 'Welsh Slate World Heritage Site', Dr David Gwyn, Govannon Consultancy
- 'Results of the new Industrial Heritage Survey', Paul Belford & Zoe Arthurs, Heritage Innovation

The afternoon will end with presentations by this year's Award winners ahead of the Conference Dinner and prize-giving. The presentations and AGM can also be attended on line. The optional tours will take place on the Friday afternoon and Sunday morning.

Half-day visit options, Friday 4<sup>th</sup> October

- National Waterfront Museum, Swansea
- Industrial Tour of the Lower Swansea Valley

Half-day visit options, Sunday 6<sup>th</sup> October

- Big Pit, the National Coal Museum of Wales
- Blaenavon Ironworks



*Blaenavon Ironworks (photo © Ian West)*

Discounts on the conference fee are available for AIA members and members of Affiliated Societies. A bursary scheme will also provide some free places. Discounted accommodation is available at the Conference hotel. Full details and booking are available via the conference webpage:

<https://industrial-archaeology.org/conferences/service001/>

*Thanks to Barbara Sutcliffe*

## Back Issues of the Newsletter

A member has back issues 1986 – 1988, and partial set 1994 – 2009 and needs to clear some shelf space. Anybody interested in some or all please contact [philip.coates@tiscali.co.uk](mailto:philip.coates@tiscali.co.uk)

## Mining Today around the British Isles

### Publication of data from MEIGA grant scheme (includes mineral exploration around old mines)

See BGS Press article, 17<sup>th</sup> May 2024:

<https://www.bgs.ac.uk/news/over-600-mineral-exploration-project-reports-now-available-through-the-uk-critical-minerals-intelligence-centre/>

Please note that NOT all data has been published. A full list of projects is given in **BM No.107, UK Mineral Exploration During the Past 60 Years, by Tim Colman**, Appendix 2 (p.221-225) with regional maps in the main text.

The areas covered by the MEIGA reports can be found on the GeoIndex viewer:

<https://mapapps2.bgs.ac.uk/geoindex/home.html>

Add Data, +Mineral Exploration Investment Grants Act (Minerals). The areas can only be viewed at certain map scales, and they may be very small.

*Thanks to Alastair Lings*

### Aberdeen Minerals

Aberdeen Minerals (AM) are planning to carry out a programme of daytime, exploratory mineral drilling works at the Upper Arthrath and Nether Arthrath farm properties, near Ellon, AB41 8YP.

The drilling forms part of AM' ongoing work to research and assess the deposits of nickel, copper and cobalt minerals which were first discovered and drilled in the Arthrath area in the 1960s and '70s. The current phase of work follows up on from the completion of nine boreholes at the same site across two campaigns during 2023.

In this new programme, six boreholes will be drilled to collect more samples for laboratory testing to further investigate the properties of the mineralised rocks below the surface as part of our ongoing mineral appraisal. The objective of this programme is to test the quantity and quality of mineral enrichment below the levels that were already tested by historical drilling.

The drilling work will comprise two small drill rigs and supporting equipment which are being provided by Priority Drilling UK Limited.

AM' ongoing investigations are preliminary and exploratory in nature at this time, and the results will be used in combination with other survey information to advance the mineral appraisal at this location.

The drilling works are due to commence around 12<sup>th</sup> July and they are scheduled to continue until mid-September.

Aberdeen Minerals, 24<sup>th</sup> June 2024

*Thanks to Alastair Lings*

### Alba Mineral Resources plc

A flood of news releases recently from Alba about their 100% owned Clogau-St David's Gold Mine in North Wales. Key Points:

#### Waste Tip

All fines from Trenches 1 and 3 at historic Clogau Waste Tip have now been processed for their gold content. 16.4 grams produced from Trench 1 and 14.2 grams from Trench 3, equating to back-calculated head grade for the 20mm fines material of 3.83 g/t from Trench 1 and 2.68 g/t from Trench 3 (overall average 3.19 g/t).

#### Underground Operations

- Underground safety and access works have been completed, including installation of ladderways to provide access to No.5 Level
- Ongoing underground works have confirmed significant completed historic development between No. 4 and No.5 Levels, ~20m in length, providing further opportunity for sampling and access to payshoot
- No.5 Level dewatered and surveyed, with no further safety works identified, though substantial amounts of ore and tailings from previous mining will need to be removed (and assayed for gold content)
- Preparations ongoing for underground bulk sampling at primary Llechfraith Target, with final development plan now in place and roll-out of underground work plan in progress
- Appointment of highly experienced Mine & Operations Manager

RNS, 15<sup>th</sup> May - 15<sup>th</sup> July 2024

### Albion Stone plc

Albion Stone pioneered the shift from quarrying Portland Limestone to mining in Portland, Dorset with their first mine sunk in early 2000s at their Bowers Quarry site, with mining operations at their Jordan Quarry starting in 2008. They ceased quarrying activities in 2015 switching all production to the two mines. A third mine, the all new Stonehills mine became fully operation in 2022.

In April 2024 Albion installed a new stone brick line, marking a significant milestone for their operations. This cutting-edge line is now fully operational, breathing new life into what Albion fondly term as

'unloved stone'. While structurally sound, this stone often lacks the aesthetic consistency desired by architects. However, through the transformative process into bricks, its true character and diverse features are unveiled, revealing a natural masterpiece dating back 140 million years.

Currently, the brick line boasts an impressive production rate of 4,000-4,500 bricks per day.

Albion Stone, 17<sup>th</sup> April 2024

### **Anglesey Mining plc**

Anglesey Mining, 100% owner of the Parys Mountain Cu-Zn-Pb-Ag-Au VMS deposit on the Isle of Anglesey, North Wales, is pleased to announce the appointment of Robert Marsden to the Board as Chief CEO with effect from 1st May 2024. Rob is a Mining Engineer with 29 years of international experience. Upon graduation from the Camborne School of Mines in 1995 he joined Rio Tinto plc and over the next 18 years held several technical, operational and management roles and latterly was employed in the Business Evaluation Department at Rio Tinto's head office in London. In 2013 Rob founded his own consultancy, MarsdenGray, based in the UK, to draw together his unique blend of technical, financial and practical experience, providing clients with clear robust insights into the planning, operation and evaluation of mining projects. 18<sup>th</sup> April 2024

Anglesey Mining announced the assay results for the recently completed drill hole NCZ003. Drill hole NCZ003 was the third and final hole to be completed from the infill drilling program of the Northern Copper Zone (NCZ) and Garth Daniel Zone (GDZ) at their Parys Mountain VMS project.

Consistent both with historical drilling and the recently completed NCZ001 and NCZ002 holes, the assays confirm NCZ003 intersected a significant zone of mineralisation across the NCZ with 90m @ 0.57% CuEq (including internal dilution). Drill hole NCZ003 was terminated prematurely at a depth of 535m due to a large, potentially fault-related void. The last 6 metres of core prior to the 4m void assayed 1.16% CuEq and coincides with previous high-grade assays from historic drilling.

Anglesey Mining, 13<sup>th</sup> May 2024

### **Anglo American Crop Nutrients Ltd**

The future of the Woodsmith Polyhalite Mine could be in jeopardy as owner Anglo American has admitted

that its success could depend on 'strengthening' its balance sheet and finding new investors.

The news comes after the Woodsmith site in the North York Moors National Park, near Whitby, revealed plans to slash its investment in the Woodsmith fertiliser mine next year from £1bn annually to £200m before seeking strategic investors to restart its polyhalite project from 2026.

It is hoped that the £6bn flagship project could still begin producing polyhalite by the end of the decade - initially expected to begin production in 2027.

The loss on the Woodsmith project has led the company to a £544m loss for 1H 2024. This is the latest financial blow after surviving a £38.6bn takeover bid by its larger rival BHP.

For now, the company is focusing on an 18-month restructuring, planned to complete by the end of next year. As part of the restructuring Anglo will sell its entire coal business, sell its diamond company DeBeers and demerge its platinum business, Amplats.

Yorkshire Live, 26<sup>th</sup> July 2024

### **Boliden - Tara Mines**

The long-awaited return to work at Tara Mines, Navan Co Meath, ROI will begin on 28th June. All workers returning should be back by late September/October.

The mine shut last July with 650 workers temporarily laid off after what the Boliden said were "significant and unsustainable financial losses" amid soaring energy prices and falling zinc prices globally.

There will be no short time working and it is expected there will be very little, if any, redeployment needed, but this is subject to the Voluntary Severance Scheme.

The decision to return to production at Tara Mines was finalised when staff accepted a deal thrashed out at the WRC in April, which included a voluntary redundancy scheme which saw headcount reduce by 170 workers.

The company expects the mine to be in full production by the start of 2025.

Meath Chronicle, 18<sup>th</sup> June 2024

*Thanks to Alastair Lings*

### **Conroy Gold & Natural Resources plc**

CGNR announced encouraging results from two scout drilling holes on its Mountain Lodge base metal target in Northern Ireland, in the northern section of the

extensive (20km<sup>2</sup>) zinc zone which the Company has discovered in the Longford – Down Massif in Ireland. The Mountain Lodge and adjacent Wolf Island base metal targets are located to the south east of the precious metals target area at Clay Lake where the Company has made significant gold discoveries:

- Zinc and lead mineralisation intersected in two scout drill holes
- 30.0 metres intersection at 0.42% Zn + Pb from 9.0 metres
- 1.0 metre intersection at 1.05% Zn + Pb from 20.0 metres
- Drilling results confirm mineralisation in an extensive zinc zone

CGNR, 8<sup>th</sup> May 2024

## Cornish Lithium plc

Update on activities since the start of year to May.

### Geothermal

Cross Lanes Farm (formerly the site of the Company's Twelveheads Project) selected as suitable site for a lithium in geothermal waters Demonstration Plant

- Planning process underway including engagement with the local community
- RSE Shears appointed to undertake project FEED (Front End Engineering Design) study
- Lithium concentrations and chemistry at Blackwater found to be consistent with previous samples of Cornish geothermal waters
- Planning permission obtained for next lithium in geothermal waters exploration site at Tolgus following community engagement
  - Groundworks to commence shortly with drilling expected to start in May
- Drilled and tested a borehole at the Trelavour Hard Rock Project with valuable geological data obtained to refine the subsurface model
- Encouraging results obtained from testing utilising Evove's selective membrane technology for lithium processing
- Completed on-site testing with Koch Technology Solutions to further refine their Direct Lithium Extraction (DLE) technology for use on Cornish geothermal waters

### Hard Rock

- All elements of the hydrometallurgical section of the Demonstration Plant now on site and being assembled into final configuration. Concentrator section being constructed ready for commissioning

- Hydrometallurgical section partially funded via a grant from the UK Government's Automotive Transformation Fund Scale up Readiness Validation programme

- Feasibility study being managed by Ausenco and on track. Publication expected in early 2025
- Continued programme of local community engagement with Community Liaison Group established.

Cornish Lithium, 1<sup>st</sup> May 2024

## Cornish Metals Inc

Shaft refurbishment work and dewatering continues at Cornish Metals' South Crofty Tin Mine, Pool, Cornwall. The Phase 2 shaft work platform was delivered on 4<sup>th</sup> July and was installed and commissioned in just 4 days. This will speed up the replacement of the old shaft timbers in New Cooks Kitchen shaft with new steel guides. For the 8 weeks prior to the arrival of the work platform crews had been working from the recently installed main cage to remove old timbers, scale, mesh and re-bolt the top section of the shaft. The new platform will stay in the shaft and provide a safe, stable work platform, working its way down from the collar to the very bottom, 770 metres below. The platform is accessed and serviced by the existing main cage, which is used to transport personnel and equipment down to the platform and bring the old timbers out. IME Consultants (IMEC) designed and fabricated the platform and Siemag Tecberg UK Ltd. designed and commissioned the communication systems and main cage modifications.

Since commissioning the South Crofty Mine Water Treatment Plant last October, Cornish Metals have pumped and treated approximately 2.5 million cubic metres of mine water – this is the equivalent of 1,000 Olympic-sized swimming pools, or for those that live locally, it is comparable to treating half the volume of Stithians Reservoir! Over the last 10 months the following quantities of metal have been intercepted and removed from solution, ensuring they do not enter the Red River:

- 100 tonnes of iron
- 12 tonnes of manganese
- 4 tonnes of arsenic

The mine dewatering programme and associated treatment process is just one component of our wider commitment to minimising the impact of South Crofty on the environment and our community.

Cornish Metals, 8<sup>th</sup> - 25<sup>th</sup> July 2024

**Cornwall Resources Ltd** (Subsidiary of Strategic Minerals plc)

### **Redmoor Tungsten / Tin Project**

CRL has taken a second look at 3,786 meters of historical core from six boreholes, which constitutes approximately 27% of its existing drill core from its Redmoor Project at Kelly Bray. This has shown the potential for resource expansion through previously unsampled mineralisation. To further assess this opportunity, 129 diamond drill core samples, totalling 177.45 meters, have been selected and dispatched for geochemical analysis, with results anticipated in the next two months. Meanwhile, re-logging and sampling efforts are ongoing, with additional samples being prepared for shipment.

### **Tamar Valley Licence Area**

CRL have initiated initial reconnaissance mapping and desk studies of its new Tamar Valley Licence Area. These efforts have already identified previously unrecognised mineralised zones at the surface, which have been sampled. The desk studies are focused on the Plantation Vein, a historic Tin-Tungsten (Sn-W) target that was extensively drilled between 1967 and 1970, with some minor underground explorations conducted in the early 1970s. Plans for stream sediment and soil sampling are underway as well as work on the highly prospective Plantation Vein. CRL have also successfully commenced initial engagement with the Duchy of Cornwall's tenants and local parish councils.

CRL, 8<sup>th</sup> May 2024

### **Cornish Tin Ltd**

CTL provided an update on the results of its successful Phase 2 exploration drilling program from February to April 2024, at its Great Wheal Vor Project in Cornwall, UK. A total of 2,810 metres of diamond drilling has been completed in Phase 2, with 1,506 metres of tin focused drillholes, and 1,304 metres allocated to the new lithium field intercepted in Phase 1. A combined total of 9,290 metres has now been drilled by the Company. Total funds raised from January 2022 to date (placing and retail) comprise just under £4.9 million.

Cornish Tin's Phase 1 discoveries included:

- a new high-grade tin lode "Hichens Lode"
- multiple new tin lodes with grades of up to 6.28% Sn
- significant intercepts returned from numerous mineralised structures open in multiple directions

- a new lithium field in the rare G5 granite in the Company's exploration area, also associated with high tin values

<https://www.cornishtin.uk/news/cornish-tin-news-update-25-june-2024> Cornish Tin, 25<sup>th</sup> June 2024

### **Fluorsid British Fluorspar Ltd**

Green Land PD Ltd, formerly Fluorsid British Fluorspar Ltd, based in Hope Valley, Derbyshire faces closure. The Gazette published that on 14 May 2024, Gloucester-based creditor Marble Power Ltd, presented a petition at the High Court of Justice to wind up the company. Issued in June, the petition will be heard on 22 July in the matter of the Insolvency Act 1986 at the Birmingham District Registry, Birmingham Civil Justice Centre.

Extractive Industries, 18<sup>th</sup> July 2024

### **Galantas Gold Corporation**

GGC announce the successful completion of its trial stoping program at the Cavanacaw Gold Mine at the Omagh Project in County Tyrone, Northern Ireland.

Six stopes were successfully mined and backfilled using a narrow vein, modified Avoca longhole open stoping method, in two separate blocks. Following the success of the trial, the Company plans to increase the distance between levels to 12 metres. Relatively low-grade areas of the mine were selected for the trial to assess the suitability of the mining method and also to serve as a training project for the locally trained mining operators.

Trials have led to an optimized cycle of two days from the initial stope blast to completion of backfill, thus reducing the potential for dilution and also streamlining the process. This mining method can now be applied to more than 240 stopes which are already planned for the Kearney and Joshua zones, with grades in the range of 2.0 grams per tonne (g/t) gold to 17 g/t.

GGC received approval from the Local Council Planning Committee on May 22, 2024, for a three-hole drilling programme of approximately 1,000 metres.

GGC plans to drill the Kearney North target at the Omagh Project to test for a northern extension of the main Kearney Vein at depths over 200 metres, and to explore for further dilation zones. They are aiming to uncover the potential to extend the resource northwards and build on the existing high-grade gold resources.

At the Cavanacaw deposit area where sulphide rich, gold-bearing veins are well developed, geological modelling suggests that a concealed ore shoot may lie to the north of the site at greater depth. The target area, approximately 180 metres north of the current extent of the main Kearney Vein, coincides with a historical Pionjar (base of till) anomaly of 31.5 grams per tonne gold.

The Kearney Vein system has a strike length of approximately 850 metres, proved by drilling. It remains open at depth down plunge. The vein is well developed in the 'Cavanacaw Member', a competent host lithology. This host unit dips to the north and is expected to lie beneath a pelitic horizon in the current target area.

GGC, 28<sup>th</sup> May – 18<sup>th</sup> June 2024

### **Lochaline Quartz Sand Ltd**

LQS's three apprentices had the opportunity to attend the 17th Safety Seminar of the Midland Institute of Mining Engineers, held in Sheffield during April. The seminar was also attended by their Mine Manager, Dario Coragliotto, who was already in Sheffield for the MAUK - The Mining Association of the UK meeting the day before.

Wanting the three to make the most of the long journey south, visits were arranged to Crompton Controls and Garrard & Jones Engineering Ltd, to give them a sense of the broader industry. All three enjoyed the varying experiences during their stay – Kirsty thought the seminar was useful to understand more about the different mining operations across the UK, Ewan felt it was good to gain insight into how the custom panels that LQS uses are made at Crompton Controls, and Billy thought it was great to hear the story of Garrard Jones\* and also to see the variety of industries it serves. We are confident that the safety seminar, focusing on the Challenge of Change, will have given them valuable insight into the industry that they can take forward in their own careers.

LQS are currently looking for an experienced Underground Boomer Drill Operator.

LQS on LinkedIn, May 2024

\* **Garrard Jones Engineering Ltd** (GJE) was founded in October 1996, initially set up to repair and overhaul Electrical Mining Equipment.

Over the years, the company grew within the mining arena and specialized in Electrical, Mechanical,

Hydraulic and fabrication mining work. In 2011, GJE became a product support centre for UK Coal, the largest Deep Coal Mining company within the UK. In addition to this, relationships within India, Australia, Saudi Arabia, Turkey, Morocco, Russia, America and Iran saw the company become a key exporter of mining equipment.

However, 2013 saw the closure of Daw Mill and Maltby collieries in quick succession. This had a knock-on effect which also saw the closures of Thoresby, Kellingley, and Hatfield collieries all in 2015, marking the end of an era.

Over the last 6 years, the company has diversified into Tunnelling, Solar and Wind powered energy, crane repairs and other industrial maintenance and repairs.

In terms of mining they are one of a few mining repair centres remaining in the UK, a key supplier to the remaining deep mines in the UK and are also a continued export supplier to the aforementioned mining countries.

GJE website

### **Northern Lithium**

Northern Lithium has placed an order for Evove Ltd. to install and trial an in-field Direct Lithium Extraction (DLE) demonstration plant in the UK during the autumn of 2024.

The commercial agreement follows Evove's extensive DLE processing at industrial-scale of saline brines extracted from Northern Lithium's Northern Pennine Orefield in August 2023 and the announcement of a tripartite partnership between Evove, Northern Lithium and engineering firm RSE in December 2023. (See NMRS February Newsletter)

Lithium is a critical raw material in the manufacture of rechargeable batteries. It is forecast that the UK will need up to 80,000 tonnes of Lithium Carbonate Equivalent (LCE) per year by 2030 and as much as 135,000 tonnes per year by 2040.

The initial module of a DLE demonstration plant is due to be commissioned at Northern Lithium's first production site in County Durham during the autumn of 2024, with successive modular expansion of the plant thereafter to reach first full-scale commercial production of battery grade lithium from 2027, and scale up from there to 10,000+ tonnes of battery-grade lithium delivered per year from several production

areas across the Northern Pennine Orefield within the next decade.”

Northern Lithium, 26 June 2024

## **Nuclear Waste Services**

The Asbestos Innovation Partnership (AIP) will work with the NDA, NWS and the supply chain, to test and develop new solutions to treat asbestos waste, helping to deliver efficiencies and enable more effective waste management. The NDA group is tasked with decommissioning the UK’s oldest nuclear sites safely, securely, and cost-effectively. Given the age of these facilities, large quantities of radiologically-contaminated asbestos waste must be managed.

Currently, non-nuclear contaminated asbestos waste goes to hazardous landfill, some contaminated asbestos is allowed in very small quantities in the Low Level Waste Repository, and the bulk is designated for disposal in a future Geological Disposal Facility (GDF).

Nuclear Waste Services will now oversee the AIP to look at how legacy and future waste is managed in the most sustainable and efficient way, utilising innovation and technology development. It is projected that by utilising new techniques and reducing use of landfill, the partnership could help realise multimillion-pound cost savings. Contracts have been awarded to two consortia which now make up the AIP:

- AminTech (Veolia Nuclear Solutions (UK) Ltd, Cyclife UK and Waste2Glass)

- REACT-2 (Galson Sciences and Thermachange)

Establishing the AIP demonstrates the NDA delivering on commitments in its strategy in relation to Integrated Waste Management. Namely to drive technology development to deliver a range of suitable treatment routes that enable the effective and optimal management of the variety of wastes in the NDA’s inventory. It also marks the delivery of one of the key NWS strategy milestones to ensure that the right waste form, in the right package, is managed or disposed of at the right facility.

NWS, 22<sup>nd</sup> July 2024

*Asbestos and radioactive waste, scary or what?*

## **Tungsten West plc**

The Environment Agency (EA) has granted the Tungsten West (TW) a permit to operate its Mineral Processing Facility, within the limits previously agreed between TW and the EA. This is the last of the key permits required to further progress the Project.

TW continues to make substantial progress on its updated Feasibility Study (FS) which is expected to be completed in H2 2024. The main focus of the FS, which builds upon work undertaken in the two previous studies carried out, is on optimising the capital expenditure required to restart operations and the resultant operating costs. Mining Plus UK Ltd has been appointed to complete the updated FS.

The Company intends to concentrate its efforts on maximising tungsten and tin recovery through the Mineral Processing Facility with the intention of targeting 3.5 million tonnes per annum throughput, following a ramp-up period. Mining operations will be fully-outsourced to Hargreaves (UK) Services under the terms of the existing Mining Services Contract.

The Company is targeting recommencing mining and processing operations in 2026.

Tungsten West, 12<sup>th</sup> June 2024

## **West Cumbria Mining**

West Cumbria Mining (WCM) said that it robustly defended the legal challenges against its planned Woodhouse Mine heard in the High Court in London on 16<sup>th</sup> - 18<sup>th</sup> July 2024.

Ahead of the General Election, lawyers for the Government (on behalf of the Secretary of State, Michael Gove) submitted a strong defence against all of the grounds of claim on 1st July 2024. On 10th July, less than a week before the hearing was due to commence, the new Secretary of State, Angela Rayner, radically changed position and conceded the claim.

WCM did not agree with this extraordinary U-turn, and as a result continued to defend the case on its own.

The decision of the High Court is expected to be issued within the next few months.

WCM, 22<sup>nd</sup> July 2024

## **Western Gold Exploration Ltd**

WGE announces the completion of its 2023-2024 drilling within the Lorne Porphyry District, Argyll, Scotland. Drilling focussed on their two main prospects, Lagalochan and Ardloch, situated 8km apart along the same geologically prospective corridor, termed the Lorne Fault Zone. A total of 11 shallow holes were drilled, eight of which were targeting porphyry stockwork extensions and skarn mineralisation at the western margins of Lagalochan for a total length of 1,207m. In addition, three initial

holes focused on the newly identified outcropping porphyry mineralisation at Ardlochan, identified during recent sampling (see NMRS February Newsletter) for a total length of c. 221m.

Highlights:

- High-Grade Epithermal Style Gold Veining [Hole WGLD001, Lagalochan] 1.3m @ 20.8 g/t Au, from 109m and 1.0m @ 8.49 g/t Au, from 52m. Veins remain open along strike.
- Porphyry and skarn mineralisation extended > 800m westwards at Lagalochan
- New Porphyry system identified 8km west of Lagalochan at Ardlochan

As a next step WGE is actively evaluating the application of various geophysical surveys:

1) a deeply penetrative magnetotelluric (MT) geophysical survey across a c. 100km<sup>2</sup> area will allow to both better refine and link existing targets and identify new targets near-surface and at depth, particularly buried

2) an induced polarisation (IP) and ground magnetic survey focussing on Ardlochan will better target the mineralisation intercepted in drilling and outlined by previous surficial exploration. For the first time magnetite mineralisation has been noted as being directly associated with copper-gold mineralisation and may be related to the core parts of the potassic alteration system. A detailed ground magnetic survey could help define the extents to the observed mineralisation and help vector towards the core of the system.

WGE, 1<sup>st</sup> May 2024

## Heritage News

### Mining and Mineral Museum in St Just

As reported in the May Newsletter Dominique Hudson and his daughter Maria have a semi-permanent spot in the local Free Church Hall, Bosorne Terrace, TR19 7LY, every Thursday, Friday and Saturday 10am-5pm. Entrance is £3 for adults and £2 each for children.

They will be closing for their 2024/25 winter break at the end of September. Dom and Maria thank those who have already visited and look forward to seeing more visitors before the end of September.

St Just is a world heritage site for mining history and many local families go right back to the mining heydays. This heritage needs to be encouraged and the museum is a means of celebrating it and passing on information to visitors and locals alike. Geevor Tin Mine have been very helpful lending them some

models and bal maiden items/tools as have many local families.

Please support them as their museum is completely self-funded.

*Thanks to Barbara Sutcliffe*

### Wessex Archaeology's research available for free via new digital Online Library

"The Wessex Archaeology Online Library, brings together over 45 years of archaeological research comprising 75 books, including many out-of-print titles, as well as 155 reports ... and counting.

We've created this new digital platform to share our rich archaeological knowledge and data with as many people as possible, removing barriers including subscriptions and fees.

See [wessexarchaeologylibrary.org](http://wessexarchaeologylibrary.org)

A diverse range of topics and archaeological disciplines feature in the library, conducted by 100s of specialists in archaeological fieldwork, marine archaeology, geophysics, geoarchaeology, built heritage and many finds and period specialisms.

Please do dip in and discover the resources for yourself and please do share this information with your network so they too can make use of it."

Dr. Bob Clarke MCIfA, Deputy Director of Research,  
Wessex Archaeology  
*Thanks to Tim Cook*

### The Brinsley Colliery Headstocks to be replaced with a new wooden replica

*In the May Newsletter we reported that the Brinsley Colliery's Headstocks had been cut to pieces in January.*

Good news - on 16<sup>th</sup> July the Broxtowe Council met to decide whether to build an oak-frame replacement, a steel-frame replacement that would require less maintenance, or create an interactive art piece using original materials from the headstocks.

They voted unanimously for the oak-frame replacement option which would "preserve the original aesthetic of the structure". It is estimated it will cost of up to £220,000 to build and £6,000 per year to maintain.

Ken Hamilton, the chair of the Friends of Brinsley Headstocks group, which campaigned for its resurrection, said: "This is what we've been pushing

for. It's very good for Brinsley because it's a landmark there. We wanted it to be the same specification as what was already there. We said, if it's going to be done, it's got to be done in wood, as it was. Everyone is so relieved, we got what we wanted."

The Guardian 17<sup>th</sup> July 2024  
*Thanks to Roger Bade*

Coal extraction at Brinsley Colliery (named as "Bod Tod"), began in 1842 through a single shaft, and continued for 30 years until 1872 when a second, deeper shaft, was sunk serviced by the tandem headstocks. (The headstocks were bought second hand from the Willey Lane Colliery, near Underwood where they were first installed sometime around 1838.)

The colliery was then worked from 1872 until 1934, and was then used for access to Moorgreen and Pye Hill pits until 1970, when the surface buildings were demolished.

The headstocks were taken to a mining museum, but returned to Brinsley in 1991, where they were re-erected.

Source: The Friends of Brinsley Headstocks  
<http://brinsleyheadstocks.org/index.html>

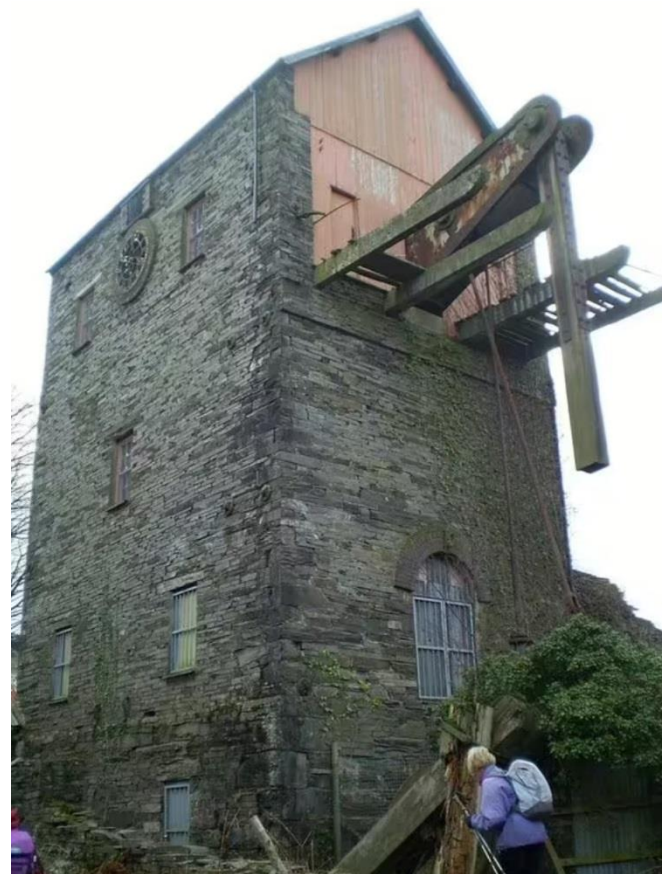
### **Welsh Village Abandoned as Quarry Expanded Reclaimed by Nature**

The forgotten village of Talysarn, Gwynedd, was once a bustling community but had to be relocated - and now it's almost completely submerged in greenery.

In the Nantlle Valley, the very depth at which the slate was buried informed the innovative quarrying techniques that were developed there. Excavating these underground seams necessitated the creation of immense pits.

The valley was home to a multitude of small quarries; however, amalgamations and takeovers saw the emergence of larger, more centralized enterprises like the Dorothea Quarry. Opened in 1820, Dorothea remained operational until 1970. The site evolved from a series of smaller working quarries which over time were deepened and merged into the large flooded pits that we see today. By the 1840s, Dorothea was producing about 5,000 tonnes per year. However, by the 1870s, production had soared to more than 17,000 tonnes. However, Dorothea was grappling with serious flooding issues.

In 1884, several men tragically drowned when the pit was engulfed. In an attempt to alleviate the flooding problems, the Afon Llyfni, which flowed through the valley, was realigned and deepened in 1895 to flow south of the slate workings.



*The Cornish Beam Engine installed 1904 (Mattcymru2 CC BY-SA 4.0)*



*Two Lancashire boilers have deteriorated and the boiler house roof is very largely gone (Chris Allen / CC BY-SA 4.0)*

This helped to some extent but as the workings deepened, the constant need to pump out water became a significant drain on the quarry's profits. A

decision was made in 1904 to install a Cornish beam engine on site to replace the waterwheels.

As the quarries of the Nantlle Valley expanded, it led to the removal of the old Talysarn village. The village was moved westward, where it now accommodates nearly 2,000 residents - yet some original structures persisted amid the quarries, with their ruins visible even now. The main road was shifted in 1927 to the valley's south, though traces of the old route remain.

Wales Online, 9<sup>th</sup> July 2024

<https://www.walesonline.co.uk/whats-on/travel/forgotten-village-full-overgrown-ruins-29503747>

*Thanks to Barbara Sutcliffe*

### **Grassington Moor Heritage Trail**

A walking trail through this awe-inspiring lead mining landscape has been renewed. Thirty years ago, 18 beautifully illustrated interpretations boards were erected on the moor. They began at Yarnbury and ended at the smelt mill chimney, on the Out Moor. The replacement boards were part funded by the Common Cause project and the Yorkshire Dales Millennium Trust. The features along the route include early shafts, water collection and ore-dressing areas, the smelt mill, pits for large waterwheels (for pumping and winding from distant shafts) and the chimney from the Cupola smelt mill.

Yorkshire Post, 14<sup>th</sup> June 2024 (MG)

***British Mining No. 46, The Grassington Mines, by Mike Gill, gives a more detailed history of the mines.***

### **Cutting Pollution from old metal mines**

Nearly 125 miles of rivers in Teesdale and Swaledale are polluted by metals from long-abandoned metal mines. So, a project to cut heavy metal pollution is being led by the Yorkshire Dales Rivers Trust and funded by the National Lottery Heritage Fund. Two hectares of vegetation plots, are expected to restrict the heavy metals currently being washed from old lead mines on Egglehope and Marl Becks, which both drain into the river Tees.

The idea is that encouraging rare calaminarian grassland habitats to grow will cut the amount of rainwater finding its way through the mine spoil. This will reduce erosion and the amount of heavy metals washed into the becks.

Yorkshire Post, 28<sup>th</sup> May 2024 (MG)

### **Elsecar Heritage Centre's Newcomen Engine**

Elsecar New Colliery was sunk in 1794, with a beam-pumping engine being added the following year. Although the colliery closed in 1923, the engine has survived on its original site. This makes it a World record of the Yorkshire belief that "it'll come in useful, sometime".

In 2014 the engine's owners, Barnsley Museums, restored it to working order. They now offer fascinating tours of the site. These cost £6 per person, last about an hour and give an in-depth insight into its history working. All the money raised goes to support the work of Barnsley Museums.

To book, call 01226 740203 or email:

[elsecarheritagecentre@barnsley.gov.uk](mailto:elsecarheritagecentre@barnsley.gov.uk)

Yorkshire Post, 21<sup>st</sup> May 2024 (MG)

### **New Appointment at Coal Mining Museum**

Dr John Tanner has been appointed Head of Master Plan and Capital Projects at the National Coal Mining Museum for England as it seeks to develop the site using innovative ways to present the stories of coal mining and its legacy. Tanner, who has a record of delivering major projects and award-winning museum developments, has family links with the coal industry for 140 years until the 1980s.

Yorkshire Post Magazine, 18<sup>th</sup> May 2024

*Thanks to Mike Gill (MG) for these four Yorkshire Post articles*

### **Royal Cornwall Museum's Mineral Gallery reopens after £476,000 revamp**

The BBC report that as part of the six-month revamp the Mineral Gallery has new exhibits, a high-tech video display and a new lighting system. There are 12,000 mineral samples in the collection, which bosses say give a unique insight into Cornish mining history, while staff at the museum in Truro said they were "delighted" with the new display.

The chair of the Royal Institution of Cornwall, the charitable body behind the museum, said it was crucial that they made the collection more accessible to all people. "If you're a geologist you love them because they're minerals, and actually they're very beautiful, so you can enjoy them for their beauty," she said. "But there's something in what we're trying to do with the interpretation, and that's to connect up the dots to how they're relevant now, whether it's in your mobile phone or your car battery, there's such connectivity."

The transformation lead for the project said they wanted to "make the museum more inclusive and open to a wider range of people". The museum's artistic director, said: "It was looking a bit tired, a bit dusty, a little bit old fashioned but the collection in there is so exciting, it just needed bringing to life."

BBC News, 12<sup>th</sup> July 2024

<https://www.bbc.co.uk/news/articles/cy79p1nd3ylo>

*Thanks to Barbara Sutcliffe*

*From tired and a bit old fashioned to trendy, inclusive and alive! What do the public think about that? The BBC do not tell us.*

*However, if their Facebook comments are anything to go by, some collectors of British minerals are not impressed at all, commenting that "there are so few specimens displayed, the lighting is not good, no catalogue numbers or chemical compositions shown ..."*

## **RCM Reveals First Bronze Age Mining Tools Found in Europe**

In advance of the reopening of its Mineral Gallery the Royal Cornwall Museum has revealed discoveries in its collection, evidencing Bronze Age mining in Cornwall. Recent carbon dating research on an oak shovel along with evidence from examination of an antler pick has signified that the two items within the museum's archive are the first Bronze Age tin mining tools to be found in Europe, providing insight into the mining techniques and daily life of our ancestors.

Presented at the recent **NAMHO Conference 2024**, the newly published research into the pick and shovel supports the growing evidence of Bronze Age tin workings in Cornwall dating back over 3,600 years.

Both the antler pick and wooden shovel were found in the Carnon Valley, mid-Cornwall, when alluvial tin streamworks were being reworked in the nineteenth century, with radiocarbon dating indicating they are from the British Bronze Age (2,400-800 BC).

Led by Dr Alan Williams from the Department of Archaeology at Durham University, Royal Cornwall Museum's oak wooden shovel has most recently been radiocarbon dated at around 3,200 years old by the Project Ancient Tin team. The shovel is formed from one piece of wood, unlike Medieval wooden shovels that are in two pieces.

The antler pick (48cm long) is around 3,600 years old, or Early Bronze Age, and is the first evidence for the

extraction of tin and/or alluvial gold in the British Isles. Examination of the antler pick reveals tally marks carved into the side, which could signify the recording of work by prehistoric miners, with the research and dating for this piece conducted by Dr Simon Timberlake, Early Mines Research Group.

Now with designated dates, these two items within Royal Cornwall Museum's collection are of historical significance, representing the first Bronze Age tin mining tools discovered in Europe and showing evidence of Bronze Age tin workings in Cornwall.

Small amounts of gold also found in the Carnon Valley have been linked by chemical fingerprint to the gold in the famous Nebra Sky Disc, an artefact thought to be the world's oldest map of the stars. Found in Germany, and considered one of the most important archaeological finds of the 20th century, the inclusion of Cornish gold and tin in this disc along with other finds suggests Cornish prehistoric mining and trading practices may have pioneered the European Bronze Age.

"Cornwall and mining are already intertwined, but this important discovery demonstrates just how long mining has been taking place in Cornwall, and how well developed some of the tools of the trade were, even at that time," Bryony Robins, artistic director for Royal Cornwall Museum said in a media statement.

Mining.Com, 14<sup>th</sup> June 2024 (AL)

## **Trout living in rivers polluted by metal from old mines across the British Isles are genetically "isolated" from other trout.**

Researchers from the universities of Exeter and Cardiff analysed brown trout at 71 sites across the British Isles (NE and SW England, west Wales and SE Ireland), where many rivers contain metal washed out from disused mines.

Common metal pollutants in former mining areas include lead and copper, and many fish and other species in these rivers have already been wiped out.

While trout in metal-polluted rivers appear healthy, they are genetically distinct – and a lack of diversity in these populations makes them vulnerable to future threats.

The researchers found that metal-tolerant trout populations split from the wider species during periods of peak mining activity.

“We found massively reduced genetic diversity in some of these trout populations inhabiting metal-impacted waters,” said Prof. Jamie Stevens, from the University of Exeter.

If fish without this metal tolerance swim into these polluted rivers, they must either leave or die from that exposure. As the metal-tolerant fish are no longer able to breed with the general population they become genetically isolated.

While the fish may be healthy where they are, the genetic diversity that allowed them to adapt to this rapid change in their environment is now lacking, thus leaving them more vulnerable to future changes.

The emergence of these genetically isolated metal-resistant trout, was seen in populations inhabiting metal-polluted rivers in Cornwall, Wales and NE England.

Alex Morrison, University of Exeter, 31<sup>st</sup> May 2024  
<https://news.exeter.ac.uk/faculty-of-health-and-life-sciences/trout-in-mine-polluted-rivers-are-genetically-isolated/> (AL)

### **Lochaline Sand Mine Heritage Trail**

A new mine heritage trail in Lochaline, on the Morvern peninsular, will be opened by current and former miners and their families on June 14. Lochaline Silica Sand Mine is the only underground sand mine in Europe and is used to make windows and glass bottles.

The trail celebrates more than 80 years of mining in the village and serves as a reminder of Lochaline’s contribution to World War II. The mine opened in 1940 after Britain lost access to continental supplies of silica sand, which was used to make periscopes, binoculars and gunsights.

The first team of men to work in the mine came from the slate quarries in Ballachulish. Among them were Donald Noel Paton, the first manager, and Jimmy McGregor, the processing plant foreman. Both their daughters will be at the opening of the trail, which has been organised by Morvern Heritage Society and funded by contributions from the mine’s current owners, Lochaline Quartz Sand.

Diana Noel Paton was born in the village became involved in fundraising for the project as she felt it was important for tourists to learn about Lochaline’s past. She added: “There are so many people passing through the village who see all the old mine workings but don’t know the important part the village and the mine

played in the war. “We now have a walking trail that connects the past to the present, linking up with other local walking routes around the village.”

The trail begins at the original mine entrance and follows the route the sand took along a single gauge railway to the old West Pier, where it was loaded onto ferries for transportation. The trail then loops back through the village finishing at the site of the original dormitories and canteen, which is now The Whitehouse Restaurant.

Press and Journal, 1<sup>st</sup> June 2024 (AL)

### **Poor Cow, Lucky Cow!**

A cow has been rescued by firefighters from a mineshaft in Cornwall.

Crews from St. Dennis used specialist line rescue equipment to help retrieve the animal, which had fallen about 20m (65ft) down the shaft near Indian Queens, St. Enoder, Cornwall on Thursday afternoon. (local media say a mine shaft at Castle an Dinas, St Column Major)

The service said a "safe working area" was created before two firefighters were lowered into the shaft one at a time to sedate the cow and secure it with animal retrieval gear.

Cornwall Fire and Rescue Service said the cow was lifted up to ground level and was then "left in the care of the farmer and vet on scene".

BBC News, 28<sup>th</sup> June 2024 (AL)

### **£8.5 million funding confirmed to redevelop this Whitespots Country Park**

Whitespots Country Park is located between Bangor and Newtownards, Co Down, NI.

The site has a distinctive mining history and First World War heritage. Extensive working of lead ore took place here during the 19th century, and up until 1910. The lead mines were responsible for 40% of the lead ore produced in Ireland in the 19th century. A total of 13 mines produced more than 13.9 thousand tonnes of lead. Designated an Area of Special Scientific Interest (ASSI), reminders of this industrial history can still be seen today.

Clandeboy Estate was used as a training camp during the First World War. The nearby Somme Museum examines Ireland’s role in the First World War from the

special perspective of the cross-community involvement in the three local volunteer divisions.

Ards & North Down DC, 10<sup>th</sup> July 2024 (AL)

### **Valentia Slate secures World Heritage Stone status**

Valentia Slate has become the second Irish stone to be awarded the status of "International Union of Geological Sciences Heritage Stone". Valentia Slate is a natural stone which has been used since at least 1816.

Its new status is awarded only to stones that have a long history of significant use and which are still available for conservation purposes. It joins Connemara Marble as only two Irish stones currently with this designation.

Valentia Slate is extracted underground on Valentia Island, Co Kerry, ROI in the same facility that was opened by Peter Fitzgerald, the Knight of Kerry, in 1816.

It has been used in many landmark buildings internationally, including the floors and roofs of the House of Commons in London.

Professor Patrick Wyse Jackson, one of the co-applicants for the global designation, noted that Valentia Slate is a unique stone type that only occurs in Co Kerry.

He said its characteristics allowed it to be split into roofing slates but also large slabs and it was utilised for a wide variety of domestic and commercial applications.

"Amongst the more unusual uses were for headstones, garden benches, billiard tables, water tanks, and walling for bonded warehouses," he added.

RTÉ, 22<sup>nd</sup> April 2024 (AL)

### **Rehabilitation of Historic Mines in the ROI**

The ROI government undertakes to address essential health and safety works to make safe hazards arising from adits, shafts, and unstable spoil heaps, and provision of fencing and signage for historic mine sites in Ireland. There are 27 historic mines sites in Ireland, of which the highest risk sites are Silvermines and Avoca.

Among the minerals produced around Avoca, Co. Wicklow in the last two centuries, copper has been primarily mined along with silver and to a lesser extent gold.

The Silvermines area of north Co. Tipperary has been mined intermittently for over one thousand years for a range of commodities. Lead, zinc, copper, silver, barite and sulphur were exploited from a number of different sites.

Two reports (2024) by CDM Smith Ireland Ltd for Department of the Environment, Climate and Communications:

- Initial Baseline Audit of Significant Geoheritage Features at the Former Mining Area of Avoca,
- Initial Baseline Audit of Significant Geoheritage Features at the Former Mining Area of Silvermines.

<https://www.gov.ie/en/publication/2aebd-historic-mines-rehabilitation/>

DECC, 23<sup>rd</sup> April 2024 (AL)

*Thanks to Alastair Lings (AL) for the 7 articles above*

### **Lost self-portrait by coal miner artist Norman Cornish discovered behind bar scene**

The self-portrait of the coal miner artist Norman Cornish—depicting a grimy young man with tousled hair—has been rediscovered on the reverse of one of his crowded pub scenes.

The undated but early self-portrait was discovered on the back of the later Bar Scene, on loan from the Durham County Council collection to an exhibition opening this week at the Bowes Museum, County Durham. It was discovered during conservation work at the museum, and will be shown for the first time in the exhibition.

Cornish, born in 1919 in County Durham, was described as “the last of the pitman painters” when he died in 2014, although by then he had long since become sufficiently famous and prosperous to leave the mines, work full time as an artist, and be awarded an MBE.

For photos of the paintings see

<https://www.theartnewspaper.com/2024/07/18/lost-self-portrait-by-uk-painter-norman-cornish-discovered-behind-bar-scene>

The Art Newspaper, 18<sup>th</sup> July 2024

*Thanks to Barbara Sutcliffe*

## Article: Colliery Engine Houses in North-west Derbyshire

By David Kitching

*At our AGM in April David gave an interesting talk about legacy colliery engine houses in NW Derbyshire and NE Cheshire. This article looks at two in NW Derbyshire.*

The collieries of North-west Derbyshire and North-east Cheshire were relatively small compared with those in the more productive coalfields and most had closed by end of the 19<sup>th</sup> century, although a few lingered to the mid-1930s with the last survivor closing in the early 1980s. The early closures and often rural settings resulted in some of the engine houses surviving long after, sometimes as housing. This is a short look at a number of these interesting buildings and the engines that were contained therein where known.

### Dolly Pit, Bugsworth, High Peak, Derbyshire

This interesting survival is the engine house of the Dolly (or Barn Pit) high up above Buxworth in Derbyshire. (Note: The village of Bugsworth was renamed Buxworth in 1930)



*The building housed a rotative beam engine used for winding coal from the shaft, which was located between the camera and the building (Photo 1975)*

The pit was operated by Messrs Stott and Hall according to the mine plans, and this presumably

meant Levi and Elijah Hall who operated other mines at Ollersett and Gowhole.



*View of engine house from the other side (Photo 1975)*

The colliery worked the Yard Seam and coal was sent down a tramway from here to feed the limekilns at Bugsworth Basin on the Peak Forest Canal. The shaft was 103 yards deep (94m) to the Yard Seam. Another small mine Old Dolly Pit was situated by Clough Head Farm. This had been worked from some time prior to 1800 and in 1799 the Clough Head Tramway was constructed to carry coal down to the kilns, a branch to Dolly Pit was added about 1850.

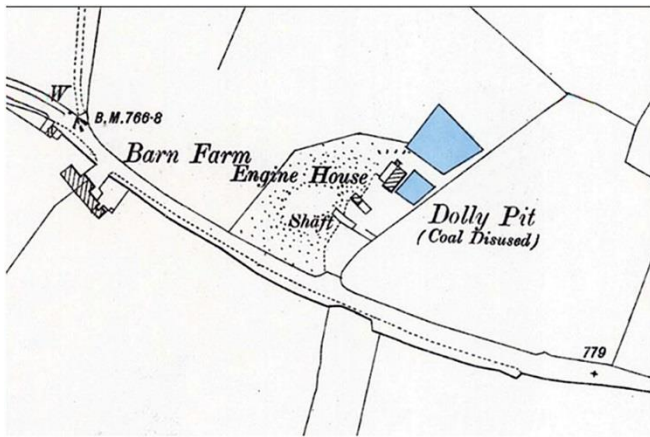
### Bugsworth - Closing of Dolly Pit

North Derbyshire & North Cheshire Advertiser, 1<sup>st</sup> December 1882

*Owing to the expiration of the lease, the above pit has ceased working. In consequence, the persons employed on the pit bank, the engineers and banksmen, and a few of the carters and others, agreed to have a farewell gathering, and on Wednesday they improvised a dinner in a very plain way, and which was served in the pit cabin. A conversation followed respecting bygone days and many changes which they had seen. The closing of the pit is rather unfortunate for the people of Bugsworth, as they have been supplied by coal pits for many generations.*

The colliery was reopened in 1889 by local farmer and landowner John Drinkwater who accessed the working via an adit off Dolly Lane (Dolly Lane Tunnel) and in 1896 employed 23 men underground and 5 men on the surface. Drinkwater died in 1898 and his executors ran the colliery until May 1899 when it was abandoned. It does not appear that the Dolly Pit shaft was used for winding coal in this period of working.

The engine house stood in a derelict condition until 1975/76 when work commenced to convert it into the house that stands today.



*Location Map*



*The house as it stands today. The boiler once stood at the left side of the main building with a chimney behind*



*View of the house today from the other side*

### **Bank End Engine House, Newtown, High Peak, Derbyshire**

Another of the vertical winders found in the area, the Bank End engine house was unknown until this photo turned up. It was taken by a New Mills photographer and after a fair bit of research and looking on the ground the location was identified adjacent to the Peak Forest Canal.



*Bank End Engine House*



*Bank End Shaft Site Beside the Canal*

Now all that is left is just a few stones under the grass. It does not appear on any OS map, neither does the wharf appear on the canal distance tables of 1888. The location is about 1.5 miles NW of the Dolly Pit Engine House.

David Kitching, April 2024

**\*\*\*NMRS Needs You! Vacancies for\*\*\*  
**Committee Secretary**  
**Meets Secretary/Coordinator****

## Let's Continue the Discussion ...

### Copper Slag Blocks

In Steve Grudgings' article on Historic Mining Landscapes (May 2024), he mentions (page 10) copper slag blocks, and that he is not aware of their use anywhere other than Bristol. I can add to his knowledge. I have seen them at Redbrook in the Forest of Dean, and much closer to my home in Staffordshire, there are a considerable number at the small town of Cheadle. These ones originate, I believe, from the smelting works at Whiston, about five miles north-east of Cheadle, where copper ore from Ecton was smelted. Finally, there are some to be seen in Whiston itself, including a house built from the blocks.

Tim Jeffcoat, Uttoxeter, June 2024

### Recent Books

#### The Irish Miners: Stories about their trials, tribulations and triumphs

by Eamon McCarthy

Probably worldwide coverage, but with mention of Ireland - 'He and partner Pat Hughes returned to Ireland in the late 1950s,' Eamon explains. 'With Mike's new Priority Drilling, they explored old copper workings in Allihies and Bunmahon in Waterford, proving there was little of economic value left. But they found new lead and zinc deposits in Tynagh in Galway and near Navan that were developed into successful new mines and created the modern Irish metal industry.'

<https://www.amazon.co.uk/Irish-Miners-Stories-tribulations-triumphs-ebook/dp/B0D64ZDK9G/>

*Thanks to Alastair Lings*

#### A New Venture for the Northern Mine Research Society

We now have our own retail outlet for pre-loved books including our BMs, OS maps, books on archaeology, geology, mining in GB and abroad, caving, underground disasters, 1st world war tunnelling, mineral identification etc. There are also some journals including PDMHS, Descent, Russell Society, Trevithick Society.

Stand 905, KarLen Antiques and Collectibles, Unit 5, Kings Mill, Queen Street, Harle Syke, Burnley, BB10 2HX

Open 7 days a week Monday - Saturday 10am- 4pm, Sunday 11am-4pm.

Why not combine with a visit to Queen St Mill across the road. Check their website for opening times first. Kings Mill has been repurposed for modern day life with individual secure units and also includes an auction centre, a child's play area, a dance centre, a gym centre, a caravan repair unit, KKS - an arcade, pool tables, licensed bar and giant TV screens with more to follow. There is a free car park with an overspill one next door.



*NMRS Bookcase, Stand 905, KarLen Antiques and Collectibles*

We hope our outlet will help to bring to a wider audience our interests and aims with some flyers on display. Also, it should bring in some extra money which is transferred directly into the NMRS publications account, making both mine and Tim's life easier. As the unit is not far from home it is easy to visit to top up our shelves. The unit originally opened in May and is now full.

*Many thanks to Barbara Sutcliffe for coming up with this idea, organizing and maintaining it.*

**Don't forget to checkout our NMRS Facebook Page. The page is curated by Barbara Sutcliffe and updated daily**

[https://www.facebook.com/NMRSEnquiries/?locale=en\\_GB](https://www.facebook.com/NMRSEnquiries/?locale=en_GB)

### **From the Newsletter Editor**

If anyone emails me, I will reply. However, since starting as the Newsletter Editor I have only recently started checking my Spam folder.

Finding two emails in it is what has prompted this mea culpa.

Gmail says they were put in the Spam folder because "you receive many emails about the NMRS." Well, they are spot on there as I only use it for NMRS!

Forget AI, more like AS.

As emails in the Spam folder are automatically deleted after one month, I may have missed some emails. If anyone has sent me an email and not received a reply, please resend.

**Please note that the deadline for inclusion in the November Newsletter is the 30<sup>th</sup> October 2024**

Submissions that will interest members of the NMRS are welcome. They may be forwarded to me by email, or by post (Document or USB Flash Drive) to:

### **Newsletter Editor**

Paul Gidley

1 The Crescent,

Princes Risborough, HP27 0HT

Email: Editor.NMRS@gmail.com

Photographs, plans and drawings must be reproducible in monochrome. Colour photos will appear as such in the electronic version. \*\*If you want anything returning please ask\*



*End of an era - Port Talbot Steel Works Blast Furnaces No.5 gone (right), No.4 going end of September (left)*

*Photo Credit: Viktor Mácha, Beauty of Steel Project*



Let's be careful out there

### **The Legal Stuff**

"The Law of England, nothing to do with me"

#### **Disclaimer**

The views expressed in this newsletter are those of its correspondents and are not necessarily agreed with or shared by the Northern Mine Research Society, its Officers or the Newsletter Editor. The accuracy of statements made in articles submitted for publication will not normally be checked for validity by the Newsletter Editor. The responsibility for the contents of articles submitted by individual members, or groups, remains with the authors and cannot be accepted by the Society, its Officers, or the Newsletter Editor.

#### **Data Protection Act**

Members are reminded that the NMRS maintains a list of their names and addresses solely for the purpose of printing labels for membership cards and posting newsletters and publications. Such details are deleted from the database for any member who leaves the society, either after the committee has been notified, or after it has been determined that an overdue subscription has not been paid for several months.

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