



NAMHO AGM 2019

This year's Annual General Meeting and following Council Meeting, was held at the Peak District Lead Mining Museum, Matlock Bath on 30th March 2019. The following Officers were elected/re-elected:

Chair- *Peter Jackson*

Deputy Chair- *Roy Fellows*

Secretary- *Warren Allison*

Treasurer- *Steve Holding*

Editor- *Roy Meldrum*

Conservation Officer- *Peter Cloughton*

BCA Conservation & Access Committee

Representatives- *John Hine*

BCA Training & Equipment Committee Representative-
Vacant

Webmaster- *Nigel Dibben*

Contact details for all Officers are available [here](#)

The Committee would like to express their appreciation to Nigel Dibben for his commitment as NAMHO Chairman over the past years.

NAMHO Newsletter Distribution

At present, representatives of organisations are sent a link to the latest newsletter by the NAMHO Secretary. This will continue but it is now possible for any individual in a member organisation to subscribe to receive their own copy directly. The link to subscribe is on the newsletter page of the NAMHO website: www.namho.org/newsletters. In 2019, we will ask representatives to say if they want their name adding to the list of subscribers.

Nigel Dibben, NAMHO Webmaster

Acknowledgements

I would like to convey my appreciation to all those that have contributed towards this edition of the NAMHO Newsletter. Items are credited to the contributor, unless written/supplied by myself as Editor.

Roy Meldrum, NAMHO Editor

NAMHO Conferences

The 2019 NAMHO Conference is being held in Mid-Wales, 4th-8th July 2019 and is being hosted by the Cambrian Mines Trust. Full information is available [here](#), with booking [here](#)

Plans are now underway for the conferences for the next two years. **NAMHO 2020** will be in Cornwall and is aimed at an international audience, as was INTER-NAMHO 2000. Planned dates are 3rd-6th April 2020 with Kevin Baker as coordinator and the organisation will involve a working group drawn from a number of member organisations. **NAMHO 2021** is planned for Shropshire to coincide with the 60th anniversary of SCMC and planned dates are 1st-5th July 2021.



Chatterley Whitfield Hesketh headgear

British Caving Association and NAMHO

NAMHO is a 'Constituent Body' of the British Caving Association (BCA) but many persons involved with NAMHO have little understanding of this relationship and of the interactions between the two organisations. This article is aimed at trying to explain the relationship in a bit more detail.

First of all, not all will be fully familiar with NAMHO itself and it is worth re-stating how NAMHO views itself and how it operates. NAMHO identifies itself as the 'national body for mining history in UK and Ireland in order to promote education and research in Mining History'. NAMHO is run by a 'Council' that normally meets twice a year – there is an annual conference and some individually organised seminars. There is little (if anything) formally about mine exploration within the NAMHO constitution, however, many member organisations do get involved very actively with underground exploration and at the annual conference it is not unusual to have more delegates going underground than attending lectures – also NAMHO has produced "Guidelines for the Leisure Use of Mines" (currently being re-written).

BCA identifies itself as 'a national federation comprising: individuals; caving, mining and other related Clubs, Regional Caving Councils and National Bodies with specialist interests, all of whom have autonomy in their own field:'. BCA is run by a 'National Council' that typically meets four times a year and consists of representatives of the Regional Caving Councils, Constituent Bodies, individual members and member clubs. BCA also has a number of Standing Committees covering activities such as training, equipment, conservation and access – all Regional Caving Councils and Constituent Bodies have an automatic right to send representatives to these standing committees.

BCA Insurance

Many individuals involved with NAMHO and many of the NAMHO member organisations are also members of BCA in their own right – many will do this simply to access the insurance that comes through BCA membership but there is also access to other BCA services.

It is important to appreciate that BCA insurance is a benefit of membership and is not something that can be separately purchased. Mine explorers can access

this insurance by being 'Direct Individual Members (DIM's)' of BCA or by being 'Club Individual Members (CIM's)' via membership of a club that is also a member of BCA.

Clubs that are members of BCA also have corporate insurance cover, providing that all of their members are also members of BCA. Through this route, clubs can also have some elements of insurance for club huts and to act as 'access bodies' (controlling the access to mines or caves).

More information on the BCA insurance is available in the 'Frequently Asked Questions (FQA)' which has been recently updated and can be viewed in the Membership pages on the www.british-caving.org.uk website.

Note that NAMHO is specifically identified within the BCA insurance documents as a body covered by the insurance – my understanding is that this will cover the activities/decisions of NAMHO Officers and NAMHO Council but will not cover the activities of those NAMHO organisations that are not also members of BCA. BCA does provide some temporary insurance cover for non-BCA members attending the annual conference but the detail of this should be agreed between the conference organisers and the BCA Insurance Manager.

Other BCA Services

Through membership of BCA, individuals can access information and grants related to the activities of the standing committees – in particular grants are available for training and help with conservation and access (e.g. gating).

There is a regular BCA Newsletter that will be sent to anybody providing their email address. This can include important information and advice about equipment and access underground.

Countryside Right of Way (CRoW)

Many will be aware that BCA generally believes that the CRoW act is mis-interpreted by some national organisations (e.g. DEFRA and Natural England) who do not recognise right of access underground on open access land. For the mine history and mine exploration communities there have been concerns that any change in interpretation of the law might give misunderstanding about rights of access to mines. The distinction has been recognised by BCA and it is

appreciated that different laws will cover access to mines.

As matters stand, it probably needs intervention by politicians to get any change in interpretation of the CRoW act, but politicians generally have other priorities at the moment. Should there be changes in the interpretation of the CRoW Act, NAMHO will probably need to re-emphasise the differences in law regarding mine access.

NAMHO Representation at BCA

I have represented NAMHO at the National Council meeting for many years – while I am happy to continue with this, I feel that it is fundamentally bad for an organisation to be represented by a single individual for a long period of time. If anybody else is prepared to represent NAMHO, then I would be happy to attend as an observer for some meetings to help introduce them.

There has been little*, or no, representation of NAMHO at the various standing committees and working parties of BCA and NAMHO generally misses out from not being involved. NAMHO is automatically entitled to send a representative to standing committees and I will offer what help I can.

*John Hine has represented NAMHO at meetings of the BCA Conservation & Access Committee and he also attends National Council meetings but for this he is separately elected as a representative of clubs (four individuals can attend the National Council as representatives of the member clubs plus there are four representatives of individual members).

Note that (as for NAMHO) travel expenses are usually available for formal representatives.

There is something of a movement to have BCA meetings wholly, or partly, on-line. This has been particularly the case with some working parties and standing committees but also for the National Council meetings, there has sometimes been video input from members overseas or in a different part of the country.

Steve Holding

NAMHO Representative to BCA National Council

News from around the NAMHO Groups and Museum Members

Friends of St. Aidans BE 1150 Walking Dragline

The Friends of St Aidans care for 'Oddball', a Bucyrus Erie BE 1150 Walking Dragline Excavator, which was used in opencast/surface coal mining. This giant machine is preserved on the site where it last worked at Swillington, Leeds. Public Open Days are held throughout the year, with this year's remaining Open Days being Saturday, 15th June, and Saturday & Sunday, 14th & 15th September.

Further information can be found here or contact us via: contactus@walkingdragline.org

Mary McNulty, Secretary,

Friends of St. Aidans BE1150 Walking Dragline



'Oddball', photograph courtesy of Mary McNulty

Ivor Brown Memorial Day

The Club in association with the Friends of The Ironbridge Gorge Museums held a successful day of talks and films in memory of Dr Ivor Brown on Saturday 27th October 2018 in the Glass Classroom at the Museum of Iron, Coalbrookdale.

In addition to the huge contribution he made to the Club, Ivor was a leading light in many local history organisations and was well known for his talks and the visits that he organised to many fascinating locations. As a way of commemorating his life speakers from several organisations that he was involved with were

invited to contribute to a day of talks on the varied subjects that he was interested in.

As Ivor was always keen on underground rescues, the auction of two mining plates, one featuring the NCB Barnsley Area pits (donated by Iris Brown) and the other a Granville Colliery plate - the last deep mine in Shropshire (from the estate of the late Jack Smart) during the Ivor Brown Day raised £60 for the Midlands Cave Rescue Organisation.

Below, Quarterly Journal of the Shropshire Caving & Mining Club, Spring Issue No: 2019.1

Chatterley Whitfield Friends is now a Registered Charity.

Way back in the autumn of 2017 a few members suggested that Chatterley Whitfield Friends look into to becoming a Registered Charity. There were a few members who thought it could not be done, but through research carried out by Michael Ansell, one of our members he found that since 2013 the rules for registering had changed. It looked as if organisations could apply, so with the initial help from Brittain Adams another member the path towards Charitable status was commenced.

This is where I got involved as Secretary as the application form was very comprehensive and asked questions about Chatterley Whitfield. The information on the application reflected what the 'Friends' were already doing within the community and we just needed to show what we were about. So the web site was updated and a new constitution was drafted and in March 2018 it was presented to members at an Extra Ordinary Meeting and trustees appointed.

The application to become a Charitable Incorporated Organisation (C.I.O.) was submitted, but what should have been a relatively quick process was delayed as the work load at the Charity Commission was high.

In March we received an encouraging email, suggestion we amended our objectives and slimmed them down into one. With the consent of all the members this was done and on 24th April 2019 we received another email soon after and news that we were registered with the Charities Commission as a C.I.O. Registered Number 1183093

So by becoming a C.I.O. we have shown we are established for charitable purpose only for the public benefit. It gives us a legal entity and gives us a legal

structure independent of its individual members, making it easier for the **organisation** to enter into contracts.

So what happens next, well get on the internet and see what doors now open for you as a Charity.....

Well they have already opened we found a company offering twelve month free internet hosting for web sites.... so our site has gone over and we have saved some money.

It is exciting times for Chatterley Whitfield Friends - Registered Charity. (05/05/2019)

*Nigel Bowers,
Secretary Chatterley Whitfield Friends*

Peak District Mining Museum and Temple Mine

Congratulations are in order for the staff at the Peak District Mining Museum and Temple Mine as they have been awarded the 2019 Certificate of Excellence by TripAdvisor. Details of the museum and opening times available [here](#)

The Engine House Network- 'A New Purpose for Old Engine Houses'

At the NAMHO Autumn meeting last year, Steve Grudgings gave a presentation on a new proposal, The Engine House Network (TEHN). The objective of TEHN is to secure a number of 'at risk' architecturally and historically significant English mining engine houses, ensuring that they are conserved and have an economically viable future. The buildings could be 'at risk' from structural degradation, demolition for development or because of maintenance and other running costs cannot be supported by the current owners. Past solutions may not be viable in the future and therefore a different approach is required, with commercial viability/sustainability paramount.

The proposal is to develop the concept of TEHN, secure active stakeholder support, identify and secure funding, and confirm the organisation's structure and modus operandi. A buildings trust would be established as a not-for-profit company limited by guarantee, with Directors drawn from key stakeholder groups. Staffing would be volunteer based, ideally involving secondment from stakeholder organisations, with the possibility of a few paid staff in the longer

term. Site acquisition would be prioritised by agreed criteria (building significance, level of risk, cost/benefit of repurposing). Building owners would need to be engaged well in advance so that long term plans can be developed. However, in some cases a short term 'rescue' may be needed.

In theory the operating model will be self-funding, but in practice some start-up funding (loan/mortgage) is likely to be required. The overriding requirement is that income from a site needs to exceed its running costs. The challenge will be to maximise commercial revenue with minimum outlay, whilst ensuring ongoing public access and minimising changes to the building. Due to the geographical spread of possible target sites, maintenance and site management resources should wherever possible be organised locally.

Prioritisation of 'at risk' engine houses by historical significance, physical and financial suitability of adaption to generate income, accessibility and support from the owners, local communities and groups. A Priority List of Sites has been identified, but will be amended as sites become 'at risk' or get demolished.

Three examples are:

Brislington, Bristol

- 1735 Newcomen Engine House –oldest intact in UK (and world)
- Not listed
- Urban setting and current occupancy suggests high acquisition cost, low conservation cost
- Target –rental or Air B&B
- Owners engaged and happy to offer "first refusal"



Roachburn, Carlisle

- One of only two intact Bull engine houses in England
- Listed
- Rural setting and current condition suggests low acquisition cost, and low conservation cost
- Target –Camping Barn or Air B&B
- Owner engaged and has been taken through T.E.H.N
- Building proposed for inclusion in "FellfootForward Sceme" (HLF funding application made)

Brittains Pit, Ripley

- Unique combined shaft and headgear
- Probable low acquisition cost/high conservation cost
- Target –Visitor rental or display use at Midland Railway Centre
- Owners in discussions



Further target sites include Ledston Luck Colliery, Yorkshire (two Art Deco winding engine houses), Doddington Copper Mine Engine House, Somerset (complete Cornish engine house near the coast), Kinlet Colliery Engine House, Shropshire (complete brick winding engine house), Newbury Colliery Cornish Engine House, Somerset (large complete engine house used as a store by a concrete factory) and Cock Road Engine house, Bristol (complete 1820's beam winding engine hose).

The following stakeholder have been consulted to date:

- Architectural Heritage Fund
- Historic England
- Association for Industrial Archaeology

- Newcomen Society
- Avon Industrial Buildings Trust
- South Gloucestershire Mines Research Group
- National association of Mining History Organisations
- Landmark Trust
- Selected property owners

For TEHN to succeed its needs active support, funding and skills, feedback and active involvement. Can you or your group/organisation help in anyway? Do you have any suggestions or comments to make? Would you like to get involved? If so, please contact Steve Grudgings-steve.grudgings@btinternet.com

North Pennines Mines Research Group

I would like to facilitate the setting up of a new group which would cover the area of the North Pennines Orefield from Hexham to Stainmore.

My aim is that we should share information, advice and opinions about the North Pennines mining industries. I believe that this will facilitate the sharing of information within the community of historians, explorers, geologists and archaeologists, encourage research about the mining industries, and provide information to National and Local government authorities, land and property owners.

I consider that this is important because the Environment Agency (EA), Coal Authority (CA) and Rivers Trusts (RT) are developing and delivering pollution remedial works on mine sites. Other public bodies also have made and are likely to make decisions which impact on mine sites

Historians, explorers and archaeologists have information that is not visible or accessible to public bodies. The North Pennines AONB Oresome project showed a desire to continue with the work of that project and a group might help this work to continue.

There are various models of organisation that might be adopted. I have outlined some of those models at <http://northdalemine.uk/2019/04/23/north-pennines-mines-research-group/>

Establishing a new group would allow existing mining history organisations with interests in the North

Pennines to continue with their existing objectives. I have therefore called a meeting to discuss this proposal.

Date and time: Saturday 20th July 2019, 1100 until 1430 hrs.

Venue: Upper Weardale Town Hall, DL13 1QF, at St Johns Chapel.

Facilities: Accessible. Hot drinks will be available. Bring your own food.

Information: 01388 527532 or petesmine@gmail.com

Travel: A689 road passes the building. Car parking is available at the east end of the village, adjacent to the Anglican Church. Bus service 101 Weardale Motor Services from Bishop Auckland railway station.

The agenda for the meeting will be:

1. Discuss the proposal to establish a North Pennines Mines Group
2. Agree a format for establishing a group.

Peter Jackson

Mines and Miners during the First World War

On 18th November 2018, a NAMHO seminar was held at Carnforth Railway Heritage Centre. On the train to the seminar, I read Pete Joseph's article in British Mining 106 about the explosive bellite; so I wondered about the increased need for explosives during the First World War, but the seminar concentrated on coal, wolfram, iron and steel. Not only was there an increased need for fuel and minerals for the war; but there were problems because, before the war, the industries were heavily dependent on imported materials. Also, unlike during the Second World War, there was no concept of 'reserved occupations' and so many miners were persuaded to join the army.

During the First World War, the government produced "Special Reports on the Mineral Resources of Great Britain"; but most government strategy seems to have been re-acting to crises as they arose, rather than planning for extraction, processing, research and sufficient skilled labour in mining and in processing of metals. There certainly seems to have been little consideration of the values of self-sufficiency in raw materials and in processing; and many mines were closed very soon after fighting ceased. Perhaps it is difficult, from our perspective one hundred years later,

to understand how convinced people were that it was the war “to end all wars”.

Warren Allison gave a detailed paper about Carrock Wolfram Mine. The German influence on Cumbrian mining is well known, especially the sixteenth and seventeenth century work in the Keswick area. However, early in the twentieth century, Germans bought the ailing mines at Carrock. At that time tungsten was used only in light bulbs and the processing was done in Germany. The ore was worth £75 a ton. During the war, it was discovered that tungsten could be used to make the hardened steel needed for armaments and the price rose to £140 a ton.

In 1913, Carrock mine was owned by the Carrock Syndicate formed by British business men and steel manufacturers. They took the mine out of ‘care and maintenance’ and invested £3,000. The government invested £5,000. Pelton wheels were installed to generate electricity, but the water supply was insufficient and the mine ran at a loss during the war. In 1918, twenty-five people were employed; but in late 1919 the mine closed as the tungsten price dropped because of imports from China.

Peter Claughton spoke about “Maintaining Resources in the Face of Conflict” looking particularly at iron and steel. In 1914, the iron and steel industry was strong, but it was heavily reliant on imported ores. During the war, there was insufficient iron ore, particularly low phosphorus ores. The demand for “shell steel” outstripped production capacity and there were only six British firms capable of producing the steel required. As well as tungsten, steels could be hardened using manganese, chrome, nickel, molybdenum and vanadium; but all these metals were largely imported. The North Wales manganese mines, which had been abandoned, were re-opened and transport routes improved; but, these mines were abandoned after the war. The steel industry also needed fluxes and refractory materials

Another resource in short supply was labour. Miners were called up despite their expertise. For example, many of the Hodbarrow miners enlisted, but then they were recalled from the army in 1915. However, these men were still in ‘military service’ and so were not allowed to strike. This caused problems, and was one reason why the Ministry of Munitions took over control of mines. There was some increased mechanisation in mines; but Prisoners of War were

used in ironstone and limestone extraction: this may have been in contravention of the Hague Convention which stated that PoWs should have “no connection with the operation of war”. Raasay mine was an example of the use of PoWs, including as underground workers. Like many others, this mine was abandoned after war.

Many of the necessary developments were hindered by labour shortages. Although many explosives workers were women; before the war their use in metal mining and processing was minimal. However, by the end of the war 74 women worked in Cleveland mines, making up 4% of the surface workforce. At Wheal Mary, women re-worked dumps for tungsten ores. There is photographic evidence of other women mine workers.

Another requirement in short supply was power. Electric arc furnaces were used for special steel production (eg armoured steel) but this demand for electricity led to rationing. There was only one British tungsten processing plant (in Luton); but the works were idle for part of nearly every day because of lack of power.

Development of the metal mining industry was left largely to the economic market. The Ministry of Munitions took limited control of some sectors, but merely re-acted to crises as they arose. As with ore extraction, developments were hampered by labour shortages.

Dave Sables concentrated on the coal industry and set the First World War work in the context of the 1912 and 1926 miners’ strikes. For metal mines, seminar attendees seemed to agree that greater government foresight and intervention would have helped during the war: more strategic deployment of resources was needed, and a better overview of competing needs. However, in coal mining, government actions were unhelpful, perhaps because they were political rather than strategic. Mines were swapped from private ownership to nationalisation and back again. There were disputes and broken promises.

After the war, the return to the gold standard was disastrous, because it meant that exports were expensive and imports were cheap. As profits went down, so did miners’ wages. Also Germany was asked to pay some of its reparation in coal, and this also caused coal prices to fall. Then, in 1926, one million

miners were locked out of work. The coal mining industry was adversely affected for decades to come. *{Before attending this seminar I knew very little of the implications for the mining industries of the First World War and it ensuing politics. Not only were the talks and the following discussions fascinating – “How did we manage to win the war?” someone asked – but I have since re-read some of our library books, publications on Lake District Mining and on women working in mines, the Drapers’ “The Raasay Iron Mine” and R Page Arnot’s “The Miners: Years of Struggle”, with greater understanding.*

*Sallie Bassham,
NMRS Newsletter, February 2019*

Mining and Heritage News

England

Hard stuff

Tungsten is hard, dense and brittle with the highest melting point of any metal. This makes it very difficult to work. It was first isolated in the late 18th century but did not find widespread use for a hundred years.

Nowadays we find it in many applications that require hardness and resistance to high temperatures and, of course, as tungsten carbide. Believe it or not, one can now buy rings made of the stuff

Tungsten often occurs in nature in association with tin. The name comes from *tung sten* – heavy stone in Swedish but the chemical symbol, W, stands for wolfram, originally *wolf rahm* or wolf’s foam or spit – a name that goes all the way back to the 16th century and Georgius Agricola. Anecdotally, this refers to a frothy slag that devours tin – as a wolf devours a lamb - when smelting a tin ore that is contaminated with the tungsten mineral, wolframite.

The Hemerdon Ball tungsten deposit on the SW slopes of Dartmoor is the largest in the western hemisphere (300,000 tons estimated) but, long before tungsten had any value, the area was famous for producing tin and the similarity in the densities of cassiterite and wolframite meant that it was impossible to separate them prior to smelting. A recent article by Young and Taylor in *Historical Metallurgy* (vol 49 part 2) examined slag samples from a number of tin smelting sites in Devon and Cornwall. All the samples indicated a simple, single-stage smelting process and, as expected, those taken from near Hemerdon had the highest

tungsten content. More significantly, though, these high tungsten slags also contained the most tin, bearing out the old story that elevated levels of tungsten “rob” tin from the underlying melt. On the other hand, there was no evidence that the tungsten-rich slags had been foamy: on the contrary, they appeared to have been so viscous that they came away from the surface of the tin as platelets – more like ice than cream one might say. On that basis we might have to reserve our opinion on the “wolf’s foam” story. (11/05/2109)

Ian Crossland



Main open cast at Drakelands (formerly Hemerdon Ball) tin and tungsten mine which most recently operated 2014-18

Special coin to mark 150th anniversary of discovery of the world’s largest gold nugget

To mark the anniversary of the discovery of the world’s largest gold nugget in Australia, by two Cornishmen in 1869, the London Mint Office presented Cornwall with a special coin. Descendants of John Deason and Richard Oates were present at the event held at Cornwall Gold, near Redruth, where the coin struck by Perth Mint in Australia, was presented to the mayor of Redruth.

The two Cornishmen, recorded as workers in the Cornish tin mines in the 1851 census, emigrated to Australia to become prospectors. The pair discovered the 109.69kg alluvial gold nugget in Moliagul, Victoria, which had to be broken in to three pieces as no suitable scales were available. (17/05/2019)
<https://www.falmouthpacket.co.uk/news/17647352.john-deason-and-richard-oates-found-worlds-largest-gold-nugget/>

Public Fundraising Campaign launched for Kent Mining Heritage Foundation

A public appeal has been launched by the Kent Mining Heritage Foundation to help support the development of the Betteshanger Sustainable Parks Project at the former colliery site near Deal, Kent. As well as preserving the Kent's coal mining heritage whilst connecting the energy of the past with future 'green' energy. Donations can be personalised by purchasing a photo tile in the mosaic installation of the 'Waiting Miner' or with a Miners' Pit Check.

<https://support.betteshangerparks.co.uk/>

Scotland

The following mining news from Scotland was provided by Alastair Lings.

App available for Landscape Legacies of Coal

A smartphone app is now available allowing users to explore how coal shaped different communities in Scotland by following a series of heritage walks. The app, devised by Dr Catherine Mills of Stirling University, features 'Polmaise' and 'Devonside' site routes, with more in development and planned. Further information, including details of how to download the app and links to the Landscape Legacies of Coal website, Facebook page and Twitter, are available [here](#)

Canonbie Coalfield application

An application has been submitted for a new operating licence to work coal, details [here](#) (02/05/2019)

Restoration of East Ayrshire surface mine sites

Banks Mining have completed transforming two abandoned surface mine site, Ponesk and Spireslack, in East Ayrshire. Works included the excavation and reprofiling of over 6million tonnes of material to create areas that can be enjoyed by the local communities.

At Spireslack, a unique geological feature has been retained, with possible future development as a Geopark. (30/04/2019)

<https://www.agg-net.com/news/double-restoration-success-for-banks-mining>

Partnership to restore former mining sites

The new Scottish Government agency Forestry and Land Scotland (FLS), will be working in partnership with the Scottish Mines Restoration Trust (SMRT), Hargreaves, Hall Construction and local authorities as part of a long term project to transform former coal

mining sites in the central belt of Scotland. The project will also contribute towards the national climate change ambitions by creating new woodlands, creating greenspaces and improving biodiversity in area blighted by opencast mining. (20/04/2019)

<https://www.carlukegazette.co.uk/news/environment/the-greening-of-mainhill-quarry-ahead-1-4908902>

Wales

New plague marks forgotten pit disaster

A memorial plaque has been unveiled 175 years after 40 miners perished when the Eastern Cleddau River broke through in to the workings of Garden Pit, Landshipping Quay, and Pembrokeshire. Workings of the pit, which opened in 1788, ran out under the estuary and on the fateful day in 1844 the miners left the workings concerned about the increase in salt water seeping in. The miners were told to return to work by the manager, under instructions from the mine owner.

When the water inundated the mine four men and 14 boys were hoisted up the shaft, but the remaining 40 miners were drowned. The majority of those that perished were boys, the youngest being just four years old, and their names were never recorded as they were working in the mine illegally. (14/02/2019)

<https://www.bbc.co.uk/news/uk-wales-47213492>

Mining Institute clock chimes again

A clock which used to wake miners ahead of their shift at Hafod mine, near Wrexham, has been restored and is chiming again. The clock on the Stiwt, in Rhosllanerchrugog, stopped chiming in 2007. The institute, built for the miners in 1926, became a theatre with the closure of the mine in 1968, and due to successful fund raising the restoration encompassed the front of the building as well as the clock.

(10/05/2019)

<https://www.bbc.co.uk/news/uk-wales-48226496>

Ireland

The following mining news from Ireland was provided by Alastair Lings.

Ballynoe Mine, Silvermines, Co. Tipperary

During the autumn of 2018 the former barite open pit was used for testing ¡VAMOS!, an underwater mining system developed with €9.2 M of European Funding. The equipment includes a track-mounted mining vehicle with cutter head and ore-gathering, a barge with winch, a power and control umbilical, a floating

slurry hose, and a power and control centre. The remotely controlled vehicle was tested in depths to 57metres. On 24 October a demonstration day was held, which attracted 85 visitors.

The open pit is leased to Siga Hydro Ltd who plan to use it as the lower reservoir in a 360 megawatt pumped-storage hydropower scheme. Barite was first quarried here in 1956. Between 1963 and 1993 Magcobar (Ireland) Ltd produced 5.13 MT of barite (90%), mainly from the open pit, with underground mining from 1989. At its peak production in the early 1980s the mine was the biggest barite producer in Europe, providing 5% of the world's supply. (30/10/2018) <http://vamos-project.eu/news/>

Gorteen, Castlecomer, Co. Kilkenny (22/02/2019)

In mid-February a road at Gurteen in the Leinster Coalfield subsided and it was closed by Kilkenny County Council. Engineers Seamus Kavanagh and Phillippe Beubry visited the site and a geophysical survey was ordered. Cllr Maurice Shortall said "The geophysical survey covered an area some 150 metres on both sides which has alleviated the concern of nearby residents". The road has been repaired and should be back in use by early April. In the area there were old bell pits in the Three Foot Coal seam. (22/02/2019) <https://www.kilkennypeople.ie/news/castlecomer/371263/work-begins-to-fill-in-castlecomer-road-that-fellinto-a-mine.html>

Geotourism Grants

The Geological Survey of Ireland has awarded grants totalling €65 000 to 13 organisations to support the development and publication of educational and outreach materials that promote the geology of their areas.

The recipients include Arigna Mining Experience, Glengowla Mines and The Sliabh Aughty Furnace Festival. (07/02/2019) <https://www.gsi.ie/en-ie/events-and-news/news/Pages/Geotourism-grants-announced.aspx>

Further afield

The following news was supplied by Ian Crossland

Eliminating mercury from gold mining

Mercury is nasty stuff – the World Health Organization ranks it as one of the top ten chemical hazards in the environment. Even small amounts can cause serious

health problems but it's particularly dangerous for children in utero or early life. Mostly, it comes from burning coal and, increasingly in recent years, its use in artisanal and small-scale mining for gold which is estimated to generate 35-40% of all mercury reaching the environment.

For the miners, the main advantage of mercury treatment is that it's cheap and easy: the ore is crushed to powder and the heavy fraction is separated using a sluice. Mercury is then added to the slurry. Agitation and pressure (often applied by hand) brings it into physical contact with the gold so that it forms an amalgam which can then be separated and heated to evaporate the mercury. This releases mercury vapour into the air – an obvious hazard to the miners – but mercury is also released into watercourses and, downstream, bio-accumulates in fish with obvious consequences for those communities who rely on the now-polluted fishing grounds. It is estimated that 10-19 million people are affected worldwide.

On account of these environmental impacts, artisanal and small-scale gold mining receives a bad press in the developed world. And yet, it provides work and income for millions, contributes around 20% of global gold production and is one the few activities where small-scale producers can achieve a return that is not a small fraction of the world price.

A new project, GEF GOLD, aims to help artisanal and small scale gold miners to clean up their act by reducing and, if possible, eliminating the use of mercury. The Global Environment Facility (GEF) was established in the run-up to the 1982 Rio Conference. It is an international partnership of 183 countries, international institutions, civil society organizations and the private sector that addresses global environmental issues. It has pledged US \$ 180M to take the project to eight countries. Technically, the solution is to introduce conventional gravity methods: rocker boxes, shaking tables and the like. These are low cost and, if properly applied, are more efficient than mercury which extracts, at best, only 50% of the gold. This and a better price for the gold provide a financial incentive to the miners but the GEF acknowledges that the transformation will not be easy: a wide coalition of agencies will be needed to address the complete problem which encompasses governmental, legal and social issues like international trade, regulation, education, poverty, child labour and corruption. (12/05/2019)

Dig at Castel-Minier in the Pyrenees - Call for Volunteers

Castel-Minier, near Aulus-les-Bains in the French Pyrenees, was one of the largest mines of the French kingdom, providing a huge quantity of lead and silver in the 12th to 15th centuries AD. Over twenty years in the fourteenth century it is recorded as having produced more than 1.2 tons of silver per year. In later centuries, the mine switched to iron production. The site contains ore preparation areas and many mediaeval stone mills have been found. Excavations have been ongoing since 2006. More recently, a 14th century pit shaft – last used in the nineteenth century – has been re-opened, first with a mechanical digger and then with dynamite, shovels and picks (see photo). This year's campaign runs from 28th July to 24th August. Excavations include further work on the ancient pit shaft, a mine entrance and iron workshop (both 15th century). Volunteers are welcome. There is a €20 charge for insurance.

Contact florian.tereygeol@cea.fr for more information.



Pillar Talk

The Delhi Iron Pillar is one of the wonders of India: 23 feet high, weighing three tons and decorated with inscriptions, it stands in the World Heritage Site of Qutb Minar and is known to be at least 1600 years old. Two questions immediately come to mind: how could such an object have been made given the limited technology of the day? And, how come it hasn't long since rusted away to nothing? Professor R Balasubramanian of the Indian Institute of Technology has devoted much of his life to answering these questions.

As to manufacture, early iron smelting furnaces could produce no more than a few kilograms of iron as a spongy mass that had to be beaten into shape. Thus, the pillar was created by forge-welding (i.e.

hammering) many small pieces together while red-hot. As the Pillar grew larger it would have been heated over charcoal fires to allow additional material to be added. It's a staggering achievement that would have required a great deal of skill.

As to corrosion, that may be more a matter of luck. It seems that the iron of the Pillar has a high phosphorus content – something that it normally to be avoided because of its deleterious (not to say disastrous) effect on ductility. In this case mechanical properties are not so much of an issue and, instead, the phosphorus has a beneficial effect by forming a passive film of crystalline iron hydrogen phosphate hydrate. That, coupled with Delhi's dry climate, prevents rusting.

That was the story up till now, at least. Writing in *The Crucible* (Spring 2018), Paul Craddock of the British Museum noted that the Pillar's colour, grey when he last saw it 30 years ago, now "had a noticeable orange tinge, very suggestive of hematite or goethite formation – in common parlance, rust". The culprit is urban pollution, not least millions of cars that put levels of nitrogen and sulphur oxides way above official limits. Once rusting has started, it is very difficult to stop. Painting the Pillar would be unacceptable and, sadly, the only other effective remedy would be to bring it indoors. No doubt, a fibre glass replica could be put in its place but it's not quite the same is it?

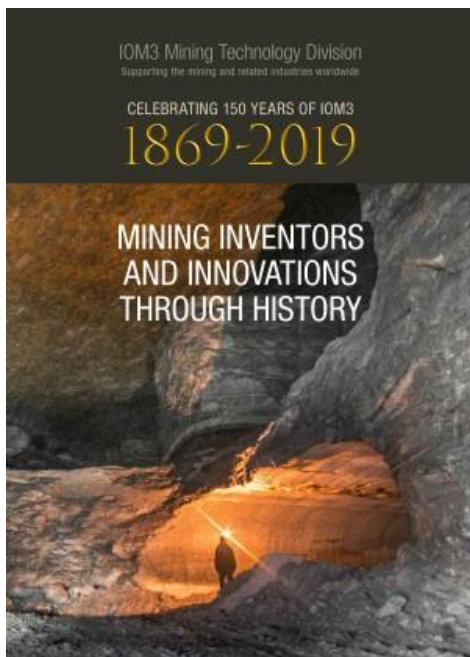


Publications

Mining Inventors and Innovations through history

Mining Technology Division of the Institute of Materials, Minerals and Mining, softcover, A4, 52 pages. Available for £5 including post & packing from Frances Perry: frances.perry@iom3.org

The booklet contains 22 short very readable and well-illustrated articles: Shearer loader, The powered roof support, Locked wire ropes, Cementation grouting process, The Aberfan disaster (spoil-heap hydrology and slope stability), How surface coal mining developed, The flame safety lamp, The light bulb, Shaft sinking, Detaching hooks, Mine ventilation and sub-surface environmental control, High-pressure steam engines, Electricity in mining, Rockbolt support in mine roadways, Mine water pumping, Health and Safety at Work etc. Act 1974, Modern deep shaft sinking machines, Underground occupational health in mines, Shaft linings and concrete transport underground, Explosion prevention, Metalliferous open pit mining, Communications in mining.

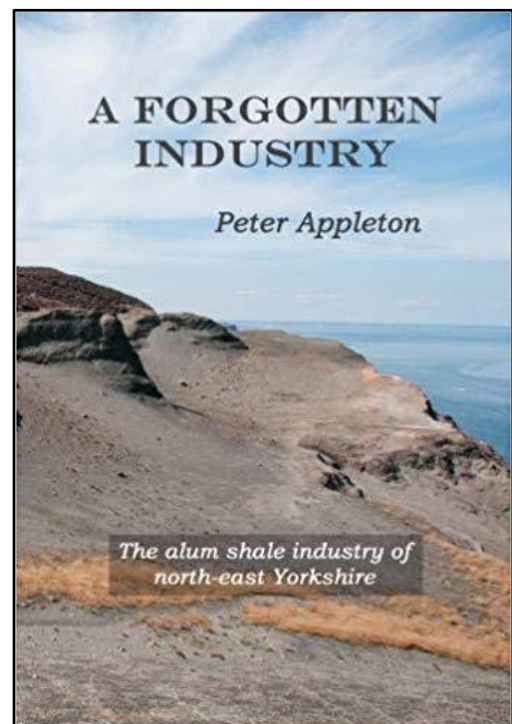


A Forgotten Industry: The alum shale industry of north-east Yorkshire

Peter Appleton, Boroughgate Books, paperback, 17x1.6x24.4cm, £15.00, ISBN: 978-0993367410

For some 270 years, the escarpments and coastal cliffs of north-east Yorkshire were home to England's first

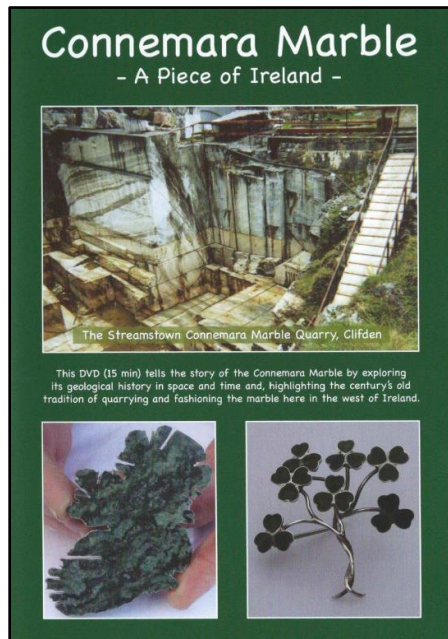
great chemical industry, the alum industry. Described by one writer as "a science-based industry, at a time when there was no science on which to base it", for the owners and proprietors of the works, it was an opportunity to try to create monopolies, form cartels, and make or lose fortunes. For the workers, especially those in the quarries, it was an opportunity, quite literally, to change the face of north-east Yorkshire. What was alum? A medical cure-all from Roman times to the late-medieval period. An essential substance for dyers and tanners. A fire-retardant. A water purifier. Some of its properties, known about since the Egyptian civilisation, are still relevant in today's world. Whilst concentrating on the operations in north-east Yorkshire from 1600 to 1870, the story of this industry is told from its origins in Egypt to the beginning of science-based industrial production. The people who made this industry; landowners, proprietors, works managers, and the full spectrum of the workforce, are all discussed. The activities of the alum sloops, sailing ships used to transport the raw materials and finished product, are explored in some detail; so are the supply and distribution networks. Alum production from shale was a process rooted in alchemy. Its demise was brought about by the industrial application of scientific chemistry.



Connemara Marble- a piece of Ireland (DVD)

This documentary by Alison Paylor for Connemara Marble Industries Ltd covers the geology of the marble at Streamstown Quarry; and its production, export and use. Duration 13 minutes. Copies are available free on request from Matthew Parkes.

<http://www.connemaramarble.ie/index.html>



Copy Date for the next Newsletter is **10th August** with publication due September 2019.

Contributions: Email the Newsletter Editor- editor@namho.org

Or by post-

NAMHO Editor, c/o Peak District Mining Museum,
The Pavilion, Matlock Bath, Derbyshire, DE4 3NR

FORTHCOMING EVENTS

1st- 30th June 2019: 'Dealing with the Past: Coal, Community & Change 1965-2015' National Coalmining Museum for England, Caphouse Colliery, Overton, West Yorkshire

**DEALING WITH THE PAST:
COAL, COMMUNITY AND CHANGE
(1965-2015)**



**NATIONAL
COAL MINING
MUSEUM**
Caphouse Colliery
New Road, Overton
West Yorkshire
WF4 4RH

FREE EVENT
1st JUNE 2019
to
30th JUNE 2019

For further details contact:
Natalie Braber (NTU)
Nataliebraber@ntu.ac.uk

Launch Event
3rd June 2019
11am – 1pm

**NOTTINGHAM
TRENT UNIVERSITY**

5th-9th June 2019: Mining History Association Annual Conference, Michigan, USA.

<https://www.mininghistoryassociation.org/>

19th-21st June 2019: The Archaeometallurgy in Europe 2019 conference Miskolc, Hungary.

<http://aie2019.argum.hu/index.php>

4th-8th July 2019: NAMHO Conference 2019- 'Mine exploration as a research tool - applications in mining history, geology and archaeology', Llanafan, Ceredigion.

7th-14th July 2019: Australasian Mining History Conference, Queensland, Australia.

<http://www.mininghistory.asn.au/next-conference/>

13th-28th July 2019: Lead, Leats, Mines & Mills, a fully illustrated display as part of Festival of Archaeology 2019, Council for British Archaeology, Long Ashes Leisure Centre, Threshfield, near Grassington, North Yorkshire. Details [here](#)

9th-14th August 2019: The Association for Industrial Archaeology Annual Conference, Bridgwater & Taunton College. Full details and bookings [here](#)

17th-25th August 2019: National Heritage Week, Ireland
<https://www.heritageweek.ie/>

14th-15th September 2019: European Heritage Open Days (Northern Ireland).
<https://discovernorthernireland.com/events/European-Heritage-Open-Days/>

19th-21st September 2019: European Labour History Network conference.
<https://socialhistoryportal.org/elhn/wg-mining>

21st-22nd September 2019: Vintage Excavator Trust Working (demonstration) Weekend, Threlkeld, Cumbria.
<https://www.threlkeldquarryandminingmuseum.co.uk/vintage-excavator-trust/>

15th October 2019: Archaeology of Underground Mines and Quarries, a talk by author John Barnatt at the Peak District Lead Mining Museum, Matlock Bath

19th October 2019: Symposium on Scottish Mining at Leadhills. The main topic is to be mining in Scotland, details to be confirmed

3rd-6th April 2020: NAMHO Conference 2020, Cornwall. Details to be confirmed.

18th-22nd June 2020: International Mining History Conference, Sudbury, Ontario, Canada.
<https://www.mininghistoryassociation.org/>

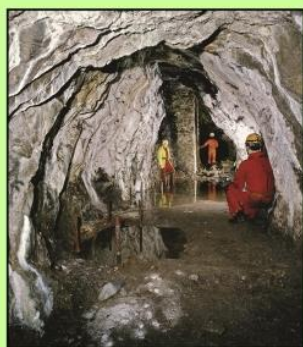
May 2020: The Second International Early Engines Conference, Black Country Living Museum, Dudley. Details to be confirmed.

1st-5th July 2021: NAMHO Conference 2021, Shropshire. Details to be confirmed.

Please check with organisers of meetings before making any travel bookings in case of change of dates or arrangements. NAMHO lists events in good faith but is not responsible for errors or changes made.

The Archaeology of Underground Mines and Quarries in England.

A talk by John Barnatt



Based around John Barnatt's book 'The Archaeology of Underground Mines and Quarries in England'.
Winner of the AIA Peter Neaverson Award for Outstanding Scholarship 2019.



Tuesday 15th October 7.30pm at
The Peak District Lead Mining Museum, Matlock Bath.

Tickets: £6 (£5 for PDMHS & AIA members)

Price includes tea and cake

We strongly advise buying tickets in advance!

Tickets can be bought in advance or on the day (if not sold out) from the museum or, for purchases of £6 and over card payment can be taken over the 'phone - 01629 583834 or 01629 583834 for any additional information. Wheelchair accessible.



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