Northern Mine Research Society

Newsletter

Society established 1960

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Please note that the deadline for inclusion in the Febuary 2019 Newsletter is the 26th January 2019.

Society News

The **Autumn meeting** will have taken place by the time you read this and reports will be going on the website for those unable to attend. Needless to say we all enjoyed the event and we must thank Sallie for arranging another splendid buffet. We had **interesting presentations** from Steven Daniels on Revisiting Colliery closures c. 1986-7; Matthew Hatton on the Tin Coast, Richard Smith on Taconite Mining in Minnesota, Graham Topping on the Chinese Cement industry, David Kitching on the Water wheel at Middlecale Colliery and Mike Gill on Who lived in mining landscapes? The latter gave us food for thought. The topic of insurance for underground trips was mentioned which is now a MUST for anyone going on our underground meets. The newsletter was also mentioned by a member who wished to change the way he receives it. It was pointed out anyone can change from paper to online or vice-versa but must inform the Membership secretary in plenty of time before a mailing.

Enclosed with this newsletter is the **membership renewal form for 2019.** We are very pleased that once again we have felt it unnecessary to increase fees. Our membership secretary, Gary, is very appreciative when forms are attended to promptly as it saves him so much time. Thank you to all who gift aid their membership but please remember to inform us if your circumstances change and we are no longer able to claim it. We continue to produce four Newsletters a year and two publications. BM 106 Memoirs should be with this mailing and BM 105 The Lead Mines of Strontian should be available before the end of 2018 but if not will be delivered early 2019 as part of your 2018 membership. May I also remind you our **privacy policy** document is on our website.

It is time to consider **Committee nominations.** If you are interested in any of the positions all you need to do is to contact the Secretary in writing **at least twenty eight days before the 2019 AGM** with signatures of a proposer and seconder and the position you are interested in. Obviously your signature will be required. **The secretary`s address is, NMRS Hon. Secretary, 91 Ightenhill Park, Burnley, Lancs, BB12 0LL**

The present officers are listed below – they have all indicated they are prepared to stand in 2019

President (presently acting)	Barbara Sutcliffe
Vice President	Malcolm Street
Junior Vice-President	Len Morris
Membership Secretary	Gary Topping
Secretary	Vacant from 2019 AGM
Treasurer	Tim Cook
Publications Editor	Richard Smith
Publications Officer	Barbara Sutcliffe
Recorder	Mike Gill
Librarian	Sallie Bassham
Newsletter Editor	Graham Topping
Meets leader	Mick Cooke
N.A.M.H.O Representative	Sallie Bassham
Website Administrator	Malcolm Street
Committee Member	James Cleland

The vacancy of Secretary reminds me of the following snippet from our September 1989 Newsletter. "*By this time next year NMRS could be just a fond memory. John Mc. retires as Hon Sec at the AGM and so far we haven`t exactly been trampled underfoot in the rush by budding administrators. Truth be known, no interest whatsoever has been shown by volunteers to take on the post*" Here we are almost 30 years later after several secretaries and again needing one.

There must be one of our members willing to take on this role. Just contact myself or Mick for details of what is involved nowadays which is not arduous.

May I also remind our members we do award **grants** and there is a section on our website with full details.

On behalf of our Society I would like to welcome the following **new members**

Alex Dudiak	Stockton-on-Tees
Callum Ewan	Sandbach
Terry Nutkins	Kyle, Highland
Craig Spencer	Redcar

It is with regret that we have to announce the **death** of a former member, Peter Hay. He died in his sleep after a short illness on 7th June 2018. His daughter, Dr Fionnuala Rose informed us that he had been active to the end and had been taken ill after returning home from a visit to north Wales visiting mines and mineral collecting. Apparently he enjoyed reading our newsletters and the family found a "well thumbed" stack of them. He had derived a great deal of interest and enjoyment from being one of our members. Condolences were sent to his family.

We also learnt of the **death** of a former member from the White Rose Caving Club, Graham Whitehead. His widow, Anne, had found one of our early publications which she sent onto me and is now in our stock of out of print publications. Please let me know if you have any gaps in your collections you need to fill.

A **donation** was sent to our Society in August from Dr J. Hargreaves who started life as a 15year old miner at Huncoat Pit, Accrington in 1956 and progressed via Wigan Tech. to travel the world before becoming a mining stockbroker in London. It is always interesting to hear about others.

We wish our member **Richard Bell** a speedy recovery after his very recent accident while on a geological trip with friends. At the moment of writing he is recovering in hospital. Many of our members will remember him from the Leyburn event we attend.

The British Goldpanning Association are holding their Championships the 25th-26th May 2019 at Wanlockhead. They have said NMRS members are welcome to join and don`t have to be a members of BGA to take part.

Finally on behalf of all our committee I would like to wish you all **Seasons Greetings for Christmas and the New Year** and thank you all for your support in 2018. Thanks should also be given to all on our Committee who work extremely hard on your behalf.

Barbara Sutcliffe (Acting President)

LIBRARY NEWS

Thank you to Richard Smith for donating "Honister Slate Mine" by Alastair Cameron and Liz Withey, to Steve Grudgings for the 2017 "The International Journal for the History of Engineering & Technology Volume 87 (2), to the Great Orme Exploration Society for the latest copy of their Journal and to Mike Gill for Rob Vernon's article "Parys Mountain Copper Mine: past, present and future, Malcolm Southwood & Richard Bevins' paper "Parys Mountain: the type locality for anglesite", this year's PDMHS Newsletters, issues 23, 24 & 30 of "The Mole" and the Great Orme Exploration Society Journals for 2012, 2013 and 2015.

Sallie Bassham. {Honorary Librarian}

George Redmonds. Historian

Dr George Redmonds, the author of British Mining No.101 – The Vocabulary of Coal Mining in Yorkshire, 1250-1850, died at the age of 82 on August 10th after a short illness. Born in Bradford, he graduated from Birmingham University, before teaching modern languages in London, Kenya, West Germany, and Huddersfield. For his research into surnames of the West Riding, he was awarded a PhD by Leicester University in 1970, and this work was published as the first volume of the English Surname series in 1973.

He became a freelance historian in 1974, and lived on his earnings from publishing local history books. Specialising in the origins of surnames and place names, he became internationally recognised for his work. His Dictionary of Yorkshire Surnames, published in 2015, is an invaluable resource for historians of that county. It has thousands of entries, giving the names, linguistic meanings, geographic origins and distribution. A further work, Yorkshire Historic Dictionary, prepared in collaboration with the Borthwick Institute for Archives, will be available soon.

Mike Gill.

Clearwell Caves could collapse

INCREASED heavy traffic to a Forest poultry farm is threatening to collapse the historic Clearwell Caves, says the mine owner Jonathan Wright.

Mr Wright says the owners of Clearwell Farm have greatly increased the numbers of 44 ton lorries traversing a cattle grid directly above a vast underground cavern. They have now applied for retrospective planning permission for additional buildings on the site.

Mr Wright has written to Forest of Dean District Council planners saying a support pillar in the cavern is already showing signs of cracking and is in danger of collapse with possible fatalities. He said: "It is totally outrageous that they should do this work and then apply for retrospective planning permission. "There is material evidence that the current use of the driveway is inappropriate. "I have previously drawn the awareness of the council to the very large caverns lying beneath the access road to the farm with the largest cavern directly beneath the cattle grid access to the farm.

"This cavern is supported by a pillar that now shows signs of stress through faulting and with continued use at its current increased level is likely to cause irreversible damage to the cavern making it liable to collapse. "The cavern is large enough to easily swallow several 44 ton lorries and their drivers. "The proposed industrial scale development is inappropriate for the Clearwell area and the fact the applicants seem totally unconcerned by the fragile cavern being driven over by thousands of 44 ton lorries is alarming. "This should be evidence enough for the council to refuse this application on is own. "The application threatens access to the mines, which would affect the viability of this part of the commercial activities operated by Clearwell Mine Management Ltd." Mr Wright said the heavy traffic visiting the farm would damage other tourism based businesses in the area.

The council planning development recommended approval for the application, provided the weight of HGVs visiting the site is restricted to 36 tonnes. Applicant Mr Stephen Hay, of Lower Cleeve Farm, Ross-on-Wye, was asked about the application but he declined to comment.

The Forester News.

UK's largest gold nugget found by man who lay in Scottish river for hours

The largest gold nugget found in British waters for 500 years has been discovered by a man lying face down in a river in Scotland.

The man, who wishes to remain anonymous, came across the 85.7g (2.75 Troy ounces) lump with a method called snipping, in which the prospector uses a snorkel to lie face down in the water and search the riverbed. Named the Douglas Nugget, it is expected to be worth at least £50,000.

The discovery was made two years ago but its precise location remains a secret to avoid Scotland's biggest gold rush in years. Upon finding the nugget the man - in his 40's - ran from the water clutching his gold shouting "bingo".

Gold expert, Leon Kirk. Examines the record breaking Gold nugget found in a Scottish river.

Finally breaking his silence, he said: "I was following a crack in the bedrock and found around 2g in fine gold. "This then led to a pocket, where I uncovered the nugget. I called over my friend to have a look and we both assumed it to be around 5-7g in weight. "It wasn't until I removed it that we realised just how big it was." He added: "I took off my glove and picked it up, jumped out of the water and screamed, 'Bingo!' to my friend. "We were both stunned and couldn't believe it. I've never seen anything like it in my lifetime." The man, who has been looking for gold as a hobby for 20 years, is unsure what to do with his find and is currently keeping it in a safety deposit box - but there is a danger the Crown Estate could claim the proceeds if it is sold.

Under law, gold and silver are classed as Mines Royal, meaning that in most cases they belong to the Crown. Permission from The Crown Estate is required to take away any gold that is found, regardless of the method used to find it. It is not clear whether permission has been granted.

Leon Kirk, from Gold Panning Supplies UK, and friend of the successful prospector, said that while they were concerned that giving away the location of the river could cause a huge gold rush, his friend was also keen to keep his find a secret to allow him to fully search the river. "It's a bit of a secret society, gold panning, when you find a good river," he said. "I know this guy has spent the last two years looking through the rest of the river where he found this huge nugget. "He's found lots of other pieces of gold since so that's probably why he's kept it quiet - you wouldn't want to give something like that away. "I think we're both of the view as well that telling people where it was could ruin the river - but I don't even know where he found it."

Although he does not know exactly where the gold was found, Mr Kirk recommended that people scour Wanlockhead in Dumfries, Galloway where gold nuggets have been discovered before. In 2015 a £10,000 nugget, which weighed approximately 18 grams, was found near Wanlockhead. Mr Kirk added: "This is a very exciting and unprecedented find. But the nugget's rarity means it is very hard to put a price on it. "I would say it is worth at least £50,000 but, as it's rarer than an Aston Martin or a Faberge egg, a billionaire could easily come along and pay a lot more for it. "Historically, it is off the Richter scale." The Douglas Nugget is believed to share a similar diameter to that of a 1.6 ins golf ball.

Dr Neil Clark, author of Scottish Gold: Fruit Of The Nation, believes the shape of the Douglas Nugget could mean there is more gold just waiting to be found close to the mystery location. He said: "The size of the nugget suggests that it probably did not travel far." But added: "The fact that we have waited over 500 years for this nugget suggests it may be difficult to find another comparable one in the near future."

The Telegraph.

Wolf Minerals miners' jobs at risk as it stops trading

Wolf Minerals employed 200 staff at Hemerdon and hoped to produce about 3,000 tonnes of tungsten and tin per year

Australian firm Wolf Minerals (UK) has gone into voluntary administration after talks with international backers seeking further finance failed. Lorry drivers have been reported to have been sent home from Drakelands mine at Hemerdon, near Plymouth, in Devon, which reopened in 2015. However, industry analysts said the mine was expected to re-open "after renegotiations with creditors".

Wolf, which had spent £130m in start-up expenses alone, had hoped to produce about 3,000 tonnes of tungsten and tin a year after reopening the mine. It was working to exploit what was said to be the world's fourth-largest deposit of tungsten.

The company released a statement on Tuesday saying that, if longstanding talks on refinancing did not reach a positive conclusion within two days, it would run out of short-term working capital.

BBC South West Business Correspondent Neil Gallacher said the statement had shown "either sheer brinkmanship, or it's a sign that Wolf fears its international backers may really be about to decide against a further refinancing". He said: "The puzzle is that, after such a long and bumpy ride, this would be a curious time for the backers to run out of patience. "Recent signals from the mine have suggested tungsten output is improving after early teething problems; and the metal's value globally has risen strongly in the last couple of years.

BBC News. Oct 2018. {Edited}

Coate Moor Mine PLUS a FREE Bonus Visit

Warren Moor Mine Chimney.

Grinkle Mine Sirocco Fan.

Grinkle Mine Excavation 2018.

September 22nd 2018 visit to Coate Moor Mine in Killdale, North York Moors, by invitation of the Cleveland Mining Heritage Society.

After a welcome and introduction from the CMHS secretary Simon Chapman the CMHS members set to work clearing out a mine drain and repairing a fence around a ventilation shaft, while NMRS were shown around much of the 4.25 km. of board and pillar workings in the Main, Pecten and Two Foot Ironstone Seams. We returned to surface after around two hours for lunch.

After lunch we took a walk around the heavily game-keepered private woodland to see the surface remains including ventilation shafts. We then moved on to Warren Moor Mine to see the remains of, two shafts, boiler chimney and engine beds but we couldn't get very close because Land of Iron project contractors had fenced off the whole mine site whilst work is being carried out to consolidate the chimney, and remains for the future and allow visitors safer access to the site. We then crossed the valley to New Row, which was the last place to visit in the hope of being able to see the remains of Lonsdale Mine but due to access problems and woodland in the way we could not even get a glimpse.

For more information see, CLEVELAND IRONSTONE. A Memorial to John Owen. I believe that this is available from North York Moors National Park information centres.

One of the members had travelled up from Cambridge so in order to get more value for his miles travelled, the leader offered a second day of entertainment. Three members met up on Sunday morning for a trip around the Grinkle Mine Sites. Starting at the coast at Port Mulgrave to view the few remains of the ruined harbour which was built for the export of Grinkle ironstone. A tunnel portal still exists in the cliffs that once carried the rail track onto a gantry over storage bunkers on the harbour, wagons then unloaded into the bunkers from which the ships were loaded via ore- chutes, for transport to Jarrow on the river Tyne.

The next stop was the inland end of Dalehouse Tunnel where permission was granted for us to enter the caravan site to see the bricked up tunnel portal. We then followed the line of the 3 ft gauge railway track and roads up the valley towards the Grinkle mine site, on the way, entering the Rigg Lane tunnel for a quick look. Further up the valley we saw the downstream end of the culvert that carries the beck's waters under Grinkle mine site.

When the shafts at Boulby Potash Mine were sunk (started in 1969) the waste rock was dumped onto the old Grinkle Mine site burying most of the remains, the area of the old boiler plant and haulage engine house were saved and a few years ago CMHS were granted permission to uncover and investigate the site. At the moment engine and haulage gear beds, the site of the four Lancashire boilers, flue, chimney base and gated drift entrance are to be seen as are the two upstream openings to the culvert. A climb through woodland and over a rail crossing took us to the top of a sloping field, where at the bottom is the Grinkle Sirocco fan house which still contains the remains of the fan and the walled up ventilation shaft which was a good finale to the day. It was a good and full weekend for all concerned.

Colin Keighley

Coal Mining in the UK: Where Mines are still being operated and planned

Coal mining in the UK is due to end by 2025 but more than a dozen open-cast mines are still in operation - with several more planned. Dorothy Musariri looks at where they are based, what they bring to the economy and why they're still in operation.

For decades, coal mining in the UK was the backbone of the economy and stimulated regions including the North of England, Midlands, Wales and Scotland by employing hundreds of thousands of people. The closure of collieries from the 1970s onwards meant the industry collapsed, with figures by Statista showing the number of people employed in mining fell from one million in 1920 to 2,000 in 2015. Britain's last deep coal mine closed in December 2015 and the industry's future looks all but over as the government ramps up plans for all coal-fired power stations to close by 2025. But amid the dying gasps of the industry are a series of attempts to open new surface mines, which would add to more than a dozen still in operation.

Coal Mining in the UK.

A community in County Durham was braced for a new mine that began operating this week, despite vocal opposition. Open-cast mines use a slightly different process to underground mining, which was more commonplace in the 20th century. Surface mining doesn't require the employees to work and live on mining camps for a long time, which is what's expected when working underground. It also involves taking minerals from the surface of the ground rather than the passages dug under it, making it a less hazardous working environment to. Despite the transition towards renewable energy, coal remains a useful natural resource that is utilised in manufacturing, domestic heat generation, food and beverage production, chemicals production and electricity generation.

According to the Department for Business, Energy and Industrial Strategy, 14.5 million tonnes of coal was needed to satisfy demand in electricity generation last year. Here's a list of some of the open-cast mines that are active in the UK and the companies that operate them – plus those that are seeking permission to open new sites.

Coal mining in the UK: Locations of existing open-cast mine sites:

Glynneath, South Wales
Selar is one of Celtic Energy's coal sites situated in the small town of Glynneath in South Wales. It has excavated approximately 3.5 million tonnes of anthracite coal, with reserves of more than one million tonnes still to be mined. The 330-hectare site, of which 180 hectares is at the core of operations, employs 100 people, including 70 directly and 30 sub-contractors.

Tairgwaith, South Wales
East Pit is one of the three sites owned by Celtic Energy. It has been in operation since 2005 and covers an area of about 400 hectares, but only 80 hectares is used for coal mining. The site's coal extraction rate is in the order of 5,000 to 7,000 tonnes per week. Once the coal has been extracted it is transferred by road and rail to the Celtic Energy's own processing and distribution centre at Onllwyn.

Coelbren, South Wales
Nant Helen is one of Celtic Energy's largest operational sites and has about three million tonnes of coal reserves. It was first granted permission in 1998 and by 2016, supported just over 100 employees. However, the company announced in August 2016 it was downgrading operations from April 2017 for two years.

Seaton Burn, Tyne and Wear
Using around 85 loaded lorries per day, the Brenkley Lane surface mine lies just north of Newcastle. Banks Group started extracting coal from the site in 2010 and covers 244 hectares of land. It has extracted 3.4 million tonnes of coal and employs more than 50 people. The site is programmed for a 2021 completion. Banks is currently in the process of deploying drone technology to help its surface mines in the region run more securely and efficiently. Using specialist software, the drone can turn the information it collects into detailed visualisations of the site. This can be used to notify the way in which tasks are deliberated and approved.

Cramlington, Northumberland
The Shotton surface mine has provided more than just fuel but has led to the creation of a huge public art installation. Banks Group built Northumberlandia as part of the restoration of land adjacent to the mine, with landowner the Blagdon Estate donating an extra piece of

land for the spectacle. The artwork is also known as "The Lady of the North", standing at 112 ft high at her tallest point, while she is 1,300ft long. She is made up of 1.5 million tonnes of rock, soil, stone and clay – material that was taken from the mine. Princess Anne opened the site, which sits in the 19-hectare Northumberlandia Landform Park, in September 2012 and it attracts about 100,000 visitors per year. Banks has extracted coal from the Shotton mine since 2008. It employs about 120 people, with up to 190 coal wagon movements on site each day, and claims to boost the economy through supplier spend and staff wages by about £15m every year. Although originally due to end in 2016, its website says it is due to end coal production on site this year, with restoration completed next year.

The Northumberlandia Public Art Instalation. Shotton.

Consett, County Durham
Another site belonging to Banks Group is the Bradley mine, near Consett. It is based on a 71.3 hectares site and employs 30 people, with a maximum of 32 loaded lorries per working day. Work is expected to end in 2021.

West Lothian, Scotland
The Rusha coal mine owned by Banks Group began extracting coal from the site in 2012. It extracts about 1.5 million tonnes per annum of coal over its 154 hectares. The site has 150 employees and traffic movements of up to 63 coal wagons a day.

Ayrshire, Scotland
Kier Minerals owns and operates the Greenburn surface coal mine complex. It's situated in Ayrshire with an average annual rainfall of 1400 mm and five distinct working areas over 9.2 sq km. The mine, which opened in 2004, produces 750,000 tonnes of coal and 68,000 tonnes of fireclay per year. During its lifetime, it will usually provide up to 12 million tonnes of coal to the UK electricity market. Kier is also involved in local community groups and has contributed 0.5% of revenue to local community projects. It employs more than 200 people, with 89% said to be living within a 15-mile radius of the mine, and has gone more than three years without a reported accident, according to Kier's website.

Merthyr Tydfil , South Wales
Merthyr Tydfil mine is owned by Merthyr (South Wales) Ltd, a subsidiary of family business Gwent Investments. It has been responsible for operating the South Wales site since 2007. Merthyr works closely with its main customer Tata Steel on its two sites Ffos-y-fran and Nant Llesg. It also supplies coal to the cement industry and various heritage railways around Wales and the UK .It invests £12.9m annually, made up of £12.9m in goods and services. Another £4m in wages is pumped into the local economy through spending on goods, services and wages within 10 miles of its Ffos-y-fran site.

Other sites
There are four other coal mining companies registered with the Coal Authority, including OCCW (House of Water), Ayle Colliery Company, Packaged Water, Three D's Mining, H M Project Developments. Compelo could find no public details about their mining operations.

Coal mining in the UK: Potential new locations for sites

Highthorn, Northumberland
Banks Group submitted plans for a mine in Highthorn, near Druridge Bay Country Park on the Northumberland coast, in October 2015. It said the proposed 400-hectare site would bring "substantial investment" to the area by extracting up to three million tonnes of coal and creating at least 50 jobs. Northumberland County Council initially approved the application in 2016 but the authority was later overruled by former Local Government Secretary Sajid Javid, who rejected it. Banks has since announced it intends to challenge the decision at the High Court over Mr Javid's use of the National Planning Policy Framework.

Pont Valley, County Durham
Banks Group has had more luck in its plans for another North East coal mine. Operations were due to begin at the Bradley open-cast mine in Pont Valley this week despite community opposition. It expects to extract 500,000 tonnes of coal and has promised 30 new jobs, alongside a £50,000 community fund.

Whitehaven, West Cumbria
West Cumbria Mining is hoping to open a mine in Whiteheaven – but, unlike others on this list, it would not be a surface mine. It wants to use the £165m Woodhouse Colliery site to extract one billion tonnes of coking coal from under the Irish Sea. About 500 jobs would

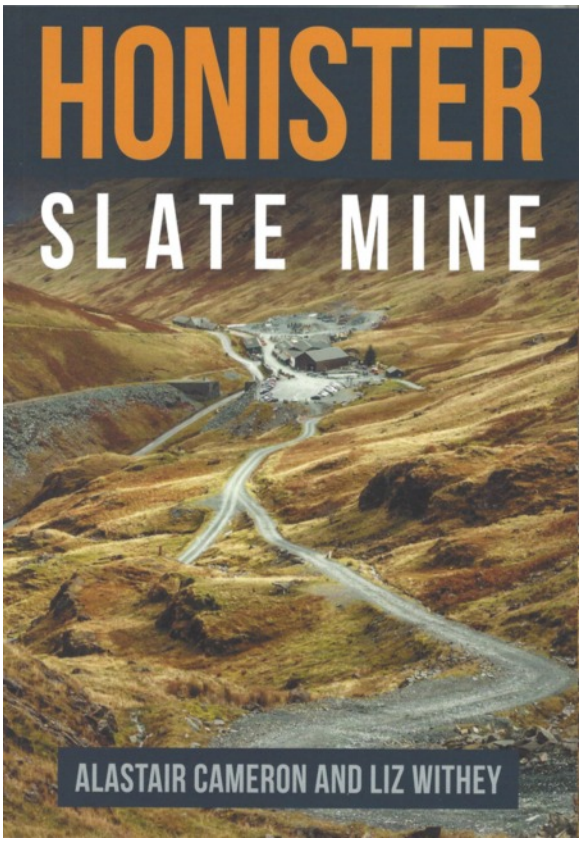
be created and it would bring in £200m of investment into the area. The company has been backed by International Trade Secretary Dr Liam Fox and Northern Powerhouse minister Jake Berry, but it is not expected to go before a planning committee until later this summer.

Coal mining in the UK: View from industry and environmentalists

Environmentalists have long called on the UK government to show its commitment to ending coal mining in the UK by putting a stop to the opening of new open-cast coal mines. Campaign groups such as Friends of the Earth, RSPW, WWF and others have also urged the government to block all developments of new projects. In February 2018, Anne Harris, of the Coal Action Network said: "The 2015 Paris Agreement and the sharp decline in coal use this year indicate there is no long-term future for coal. "If it fails to intervene in these projects, the government will allow local people's health and ecology to be needlessly and permanently damaged, and risk its reputation as an international leader in 'powering past coal'." But industry argues that coal demand remains high and domestically-produced supplies are needed as a result.

Banks Group, which operates many of the country's open-cast mines, says that without producing its own coal, the UK would have to import more from countries such as Russia, the USA, Colombia and Australia – which produces more CO 2 via its transportation than coal produced in the UK. Community relations manager Jeannie Kielty, who is heavily involved in community work across Durham, Cumbria and Northumberland says she believes the industry has a place in Britain's energy market. Speaking during the ongoing row over the proposed Highthorn site in Northumberland in 2016, she said: "There is a market there for the coal in the medium term. "We believe it makes much more sense to mine the coal and provide the investment and jobs in Northumberland and the North East than to send that money abroad."

Compelo. **July 2018.**



Book Review – 'Honister Slate Mine' by Alastair Cameron and Liz Withey

This 96 pp. paperback is well-illustrated with 100 rare and unpublished images, mostly in full colour. It offers a fascinating insight into this iconic landmark of the Lake District.

The exact date when mining began at the site is unknown but it was undoubtedly in operation shortly after the Norman Conquest. By the Victorian period, large-scale underground mining was well developed. Many miles of rail track were laid to transport the slate from the mine to the processing sheds at the head of Honister Pass.

The mine closed in the 1980s but was re-opened by Mark Weir, the son of a local hill farmer, in 1995. The extraordinary story of Weir's development of the mine is given in full together with some unique photographs of this phase of the mine's history.

The book is a unique record of this well-known feature of the Lake District and is particularly valuable for the high quality of the photographs and the detailed history of the mine from the early Victorian era to the present. The authors are to be congratulated on producing this well-produced and researched contribution to Lake District history.

Cameron A. and Withey L., 'Honister Slate Mine', Amberley Publishing, Stroud, August 2018, 96pp. ISBN 978-1-4456-7199-4. Paperback, £14.99.

Richard Smith.

Mining 101 free course

The University of Exeter Penryn Campus will be hosting a free "Mining 101" course designed to introduce you to the mining life cycle and gain a broad understanding of the mining industry. The course will be delivered by a team of academics from Camborne School of Mines who are now based at the Penryn Campus.

The exciting new course will be delivered over a period of twelve weeks using online lectures, PowerPoint presentations, documents and reference material in pdf format, mp3 podcasts, videos, e-tivities, discussion boards; and through face to face teaching, and includes three half day campus based study sessions. This will be an excellent tool for those interested in going into the expanding mining field or simply learning more about the industry which shaped Cornwall's landscape. Given the current developments in the resumption of Cornish mining it would be a brilliant opportunity to understand the industry. The course will start on July 16th and continue until the 5th of October.

Read more and book your place at **http://www.exeter.ac.uk/cornwall/events/returntolearning/mining101/#fyilQebhCZaj8T0M.99**

Sirius Minerals Woodsmith Mine

The Company has gone to great lengths to ensure that the Project is sensitive to the local landscape: mineshaft head frames will be sunk below ground to reduce their visual impact; surface buildings will be kept to a minimum; and the entire site will be landscaped and screened by existing woodland to blend in with the surrounding area. We also abide by strict environmental limits which govern our activity during the construction phase.

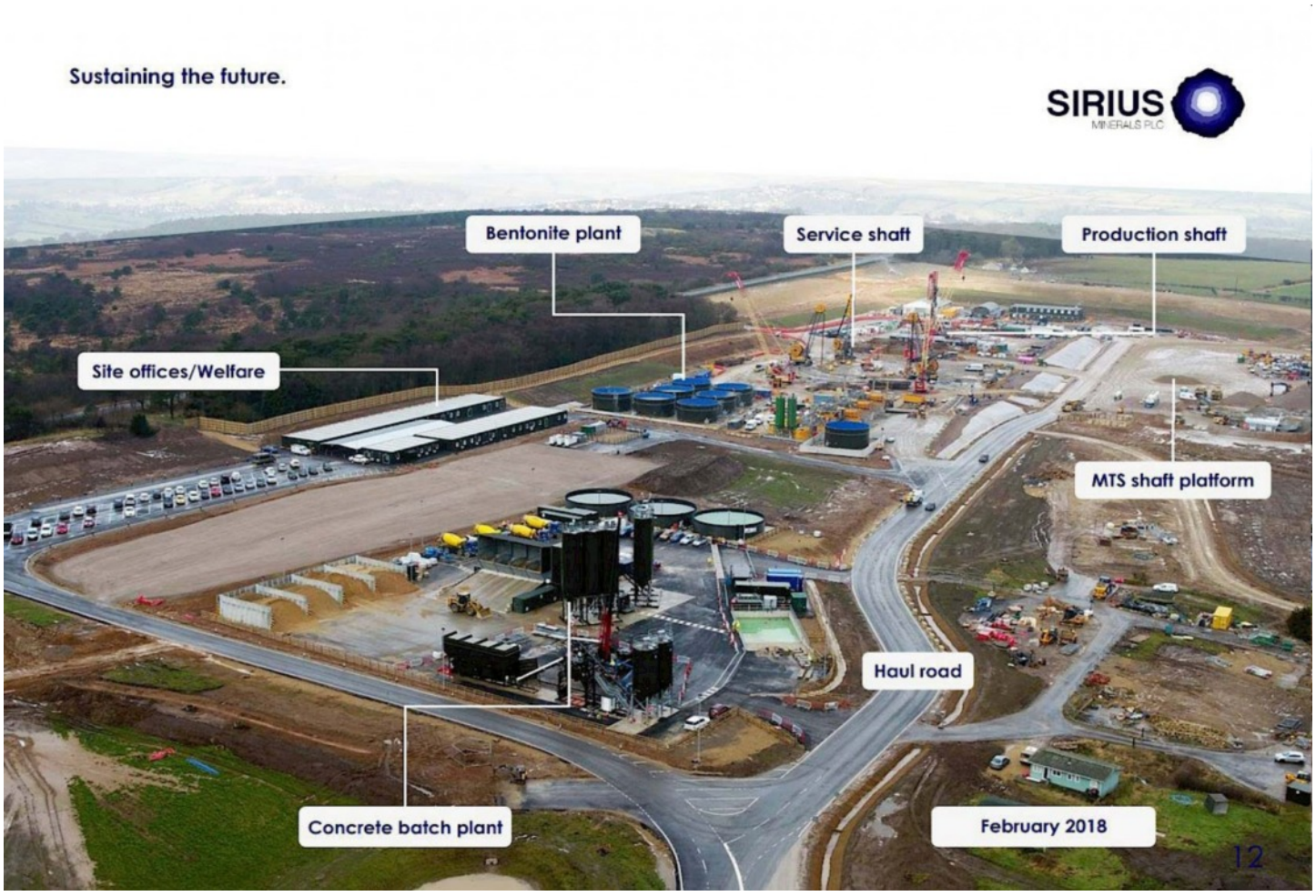
CONSTRUCTION

The tunnel will be constructed using three tunnel boring machines (TBMs) which will be deployed from Wilton, the mine site and Lockwood Beck. Two TBMs will meet around the midway point between Lockwood Beck and Woodsmith Mine.

The two TBMs starting at the mine site and Lockwood Beck will require shafts to be constructed after which the TBM components will be lowered and assembled before commencement of tunnelling. The TBM at Wilton will be assembled in a shallow portal on the MHF site.

The vertical alignment of the tunnel will be located within the low permeability Redcar Mudstone strata. Geotechnical conditions along the route have been assessed from a combination of existing geological knowledge, surface mapping, existing geophysical surveys and 12 boreholes along the length of the route. The selected route avoids shallow aquifers and any abandoned iron stone mines in the Esk Valley and Guisborough areas.

The tunnel lining design is based on technical interpretation of the various Geotechnical investigations.



MINE DEVELOPMENT

The mine site development comprises long-life infrastructure, which secures the Project's long-term, high-volume and low-cost production capability. Two deep shafts, the production shaft and service shaft, will access the Polyhalite shelf seam.

PRODUCTION SHAFT

The shaft will reach a depth of 1,594m and fitted initially with a Blair multi-rope (BMR) winder with two 39-tonne capacity skips with rope guides and be capable of hoisting 6.7 Mtpa. To increase production capacity, a second winder and two additional skips will be installed once production ramps up to 6.7 Mtpa, giving a total hoisting capacity of 13.4 Mtpa. The shaft will have skip loading facilities

at the 1,520m level and skip unloading facilities at the 360m level, where Polyhalite will be transferred to the mineral transport system's tunnel conveyor.

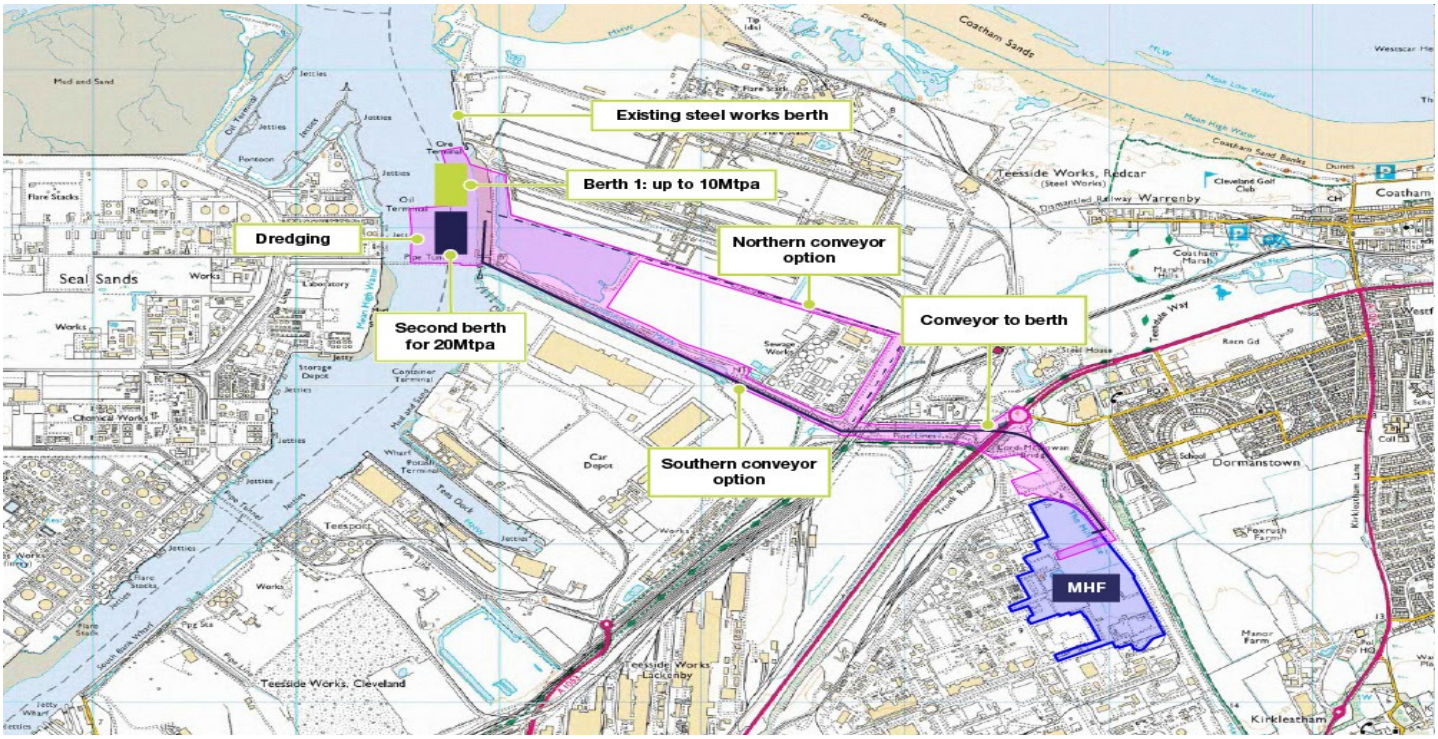
SERVICE SHAFT

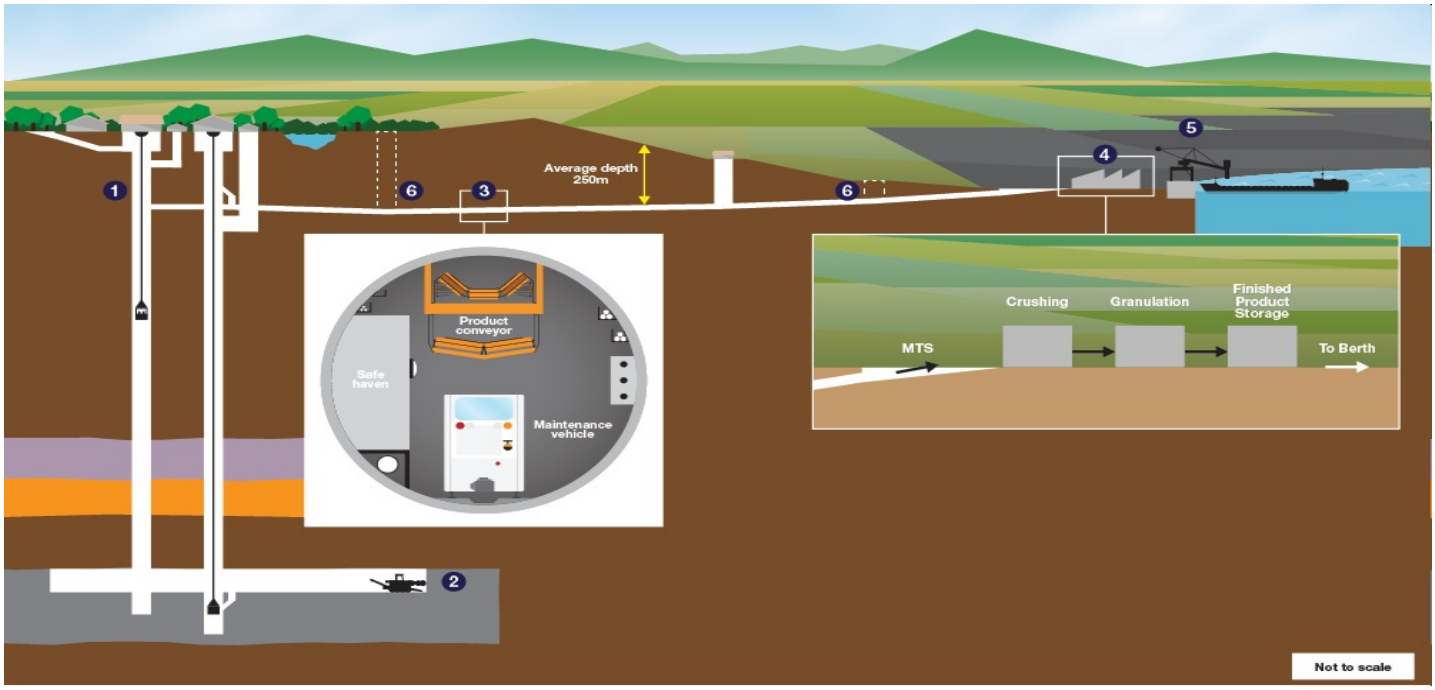
This will also be fully lined and have a 6.75m internal diameter, reaching a slightly shallower depth in comparison to the production shaft of 1,565m. It will be fitted with a 20 tonne cage for transporting equipment and personnel to and from the mine level (depth of 1,520m) and the MTS level (depth of 360m). An alternative personnel conveyance suitable for 16 persons will also be fitted.

MTS SHAFT

In addition to the two deep shafts, a third shaft for a tunnel boring machine (TBM) will be sunk to the 360m level to build the Mineral Transport System (MTS) tunnel. Once the shaft is complete, the TBM will be lowered down in sections and rebuilt underground, before being driven north to meet the other TBM travelling south from Lockwood Beck.

MINERAL TRANSPORT SYSTEM





1 MINE SITE DEVELOPMENT
2 MINING
3 MINERAL TRANSPORT SYSTEM (MTS)
4 MATERIALS HANDLING FACILITY (MHF)
5 HARBOUR FACILITY
6 OTHER CONSENTED SHAFTS

All mined Polyhalite will be transported underground to the materials handling facility on Teesside on the low impact mineral transport system (MTS), located in a 37km long and 4.3m wide tunnel at an average depth of 250m below ground. It incorporates a high-capacity conveyor belt system capable of transporting 20 Mtpa of polyhalite at 7.5m/s. The technology involved is well understood and widely used in underground mines around the world.

Along the MTS route there will be a transfer point at Lockwood Beck, located at the bottom of an intermediate shaft, which will also be used for ventilation and occasional maintenance access. Planning permission has also been granted for two further intermediate shafts at Lady Cross Plantation and Tocketts Lythe. The tunnel will also contain a maintenance rail and services including a 66kV power feeder from Wilton, which will supply the mine and a fibre optic cable for communications and control systems.

Operational access through the tunnel will be restricted to maintenance crews who will travel on the maintenance train from either end of the tunnel. Tunnel ventilation will be provided by the mine ventilation system.

Sirius Minerals PLC. Sept 2018.

Donegal's Tunnel Tigers

The Donegal Tigers are a group of young north-west Donegal men who travel the world constructing tunnels. They worked in the 1940s and 1950s on the subways of New York, Britain and elsewhere to dig the tunnels that provided important infrastructure. The 1990s saw them work on the Channel Tunnel between England and France, and they are currently being courted to work on the 17 billion euro expansion of the London subway network.

Back in the 1960's and 1970's, Neil Mulholland was one of the famed Tunnel Tigers. He took a lot of pride in the accomplishments of the Donegal men who did the work noting that before his time, Donegal men broke the world record for tunnelling in the north of Scotland: "They beat the Yanks," he chimed with a grin. Neil spent about 17 years at the work, travelling between his Rosses home and north Scotland, western Wales and the English midlands to dig tunnels and mine coal. The young men went to wherever the money was best. It was among the best-paid work in Britain. The work however would bring later life health complications for many men including Neil who at 45 was diagnosed with silicosis, the degenerative lung disease.

Neil first left his home area of Mullaghdearg Mountain, near Kincasslagh, in 1959, when he was 17. He followed his brothers, Patrick and Francie who had gone to Scotland to work earlier. Both have since died of lung cancer. There was no protective gear or ventilation in the deep tunnels, no warnings of the danger of the work or the dangers of asbestos used in construction. Over the years Neil also worked in the coal pits between Scotland and north Wales. Though the projects were different, the work remained largely the same: "The tunnels were full of dust," he recalled, "When you set off the explosives – you called that a firing – sometimes, when you would go back into the tunnel again to put up the lights you could barely see the man beside you because there was so much dust".

Because everyone knew someone who was working there, the work came largely through word-of-mouth. The men would stay on the job for months, coming home to Ireland for two months at winter, then heading back. Glasgow was the place to go on weekends for the Tunnel Tigers working in Scotland: "We drank our fill and would have the craic and go to Irish dances," Neil recalled. Neil's mother died in 1975 and he returned to Donegal to stay with his father. He and Nuala, a Rann na Feirste woman, married the following year and had three children: Sally Ann, Brian and Martin. Neil passed away from his health complications in April 2009.

Belfast-born novelist Maria Fusco is working on a new book about Ben Cruachan hydro-electric power station in Scotland. As part of her research Ms Fusco would like to talk with any Tunnel Tigers from the Donegal area. She wishes to hear about their experiences working on the hydro schemes, particularly in the 1950s and 1960s. Anyone who wishes to share their experiences with the author can contact her by email at, **maria.fusco@ed.ac.uk.**

Donegal Diaspora. June 2018**.**

AN Application has been submitted to the National Park Authority to continue extracting slate at a quarry near Coniston.

The application, submitted on behalf of Burlington Slate Ltd, requests that Peat Field Quarry would continue working until December 31, 2026.

A planning statement submitted to the Lake District National Park Authority stated, "The application is needed following the slower than anticipated extraction of the permitted reserve, following the grant of the original planning permission to extend Peat Field Quarry in 2001. “The proposals provide an update of the existing situation at Peat Field Quarry and a more appropriate and achievable progressive restoration scheme. It is demonstrated that the proposals would, through the continuation of responsible quarrying operations by Burlington Slate Limited, ensure that no undue harm is caused to nearby sensitive receptors or the character and appearance f the Lake District National Park."

Peat Field Quarry is located just north of Coniston and is one of a series of quarry workings located in the area known as Hodge Close. The quarry produces roofing slate as well as architectural and landscaping stone. Original planning permission for the extraction of slate was granted in 2001 and the permission allowed the continuation of quarrying.

An amended scheme was submitted in April 2003 for the working and extension of the quarry, permission for which expires on October 31, 2018. If granted, the permission would allow up to eight years additional work to the permitted reserve as it has yet to be fully extracted.

“The remaining reserve is estimated to be approximately 10 per cent of the 70,000m3 permitted in 2003," the planning documents say. "This equates to 20,000 tonnes of useable slate clog, the equivalent to an average annual output of 2,500 tonnes over eight years.

"Precise volumes are difficult to predict because of multiple historic workings beneath the floor and behind the current working faces."

The Mail. Sept 2018.

Rampgill trip report

Five members gathered in Nenthead on a warm sunny morning for a trip into Rampgill level. Unfortunately, Mick, who had organised the trip, was suffering from an injured arm so reluctantly withdrew from the underground trip. Our guides were three members of the NMCS. Even though there had been a prolonged dry spell, there was still a fair amount of water issuing from the portal. We were advised that the water wouldn't be over welly-depth for the first part of the trip but would get deeper later on.

Climbing the ladder into Proud's flats.

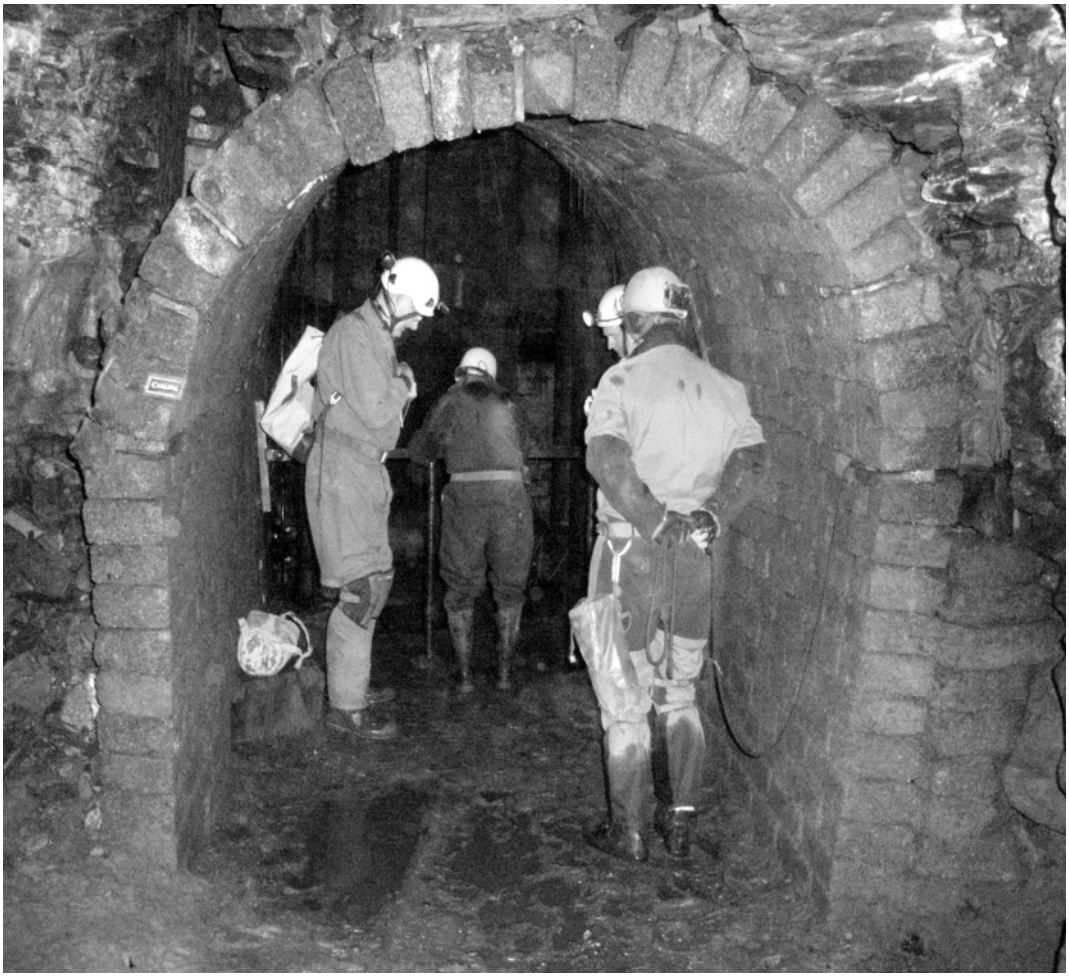
Our first destination was Brewery shaft, which housed a hydraulic power system to generate compressed air for the drills. The compressor plant was far out of sight at the shaft bottom but pipework and cisterns visible at Rampgill level were an essential part of the scheme. Continuing on past the shaft, we followed the level along Scaleburn vein to where a set of stone steps leads up to a higher level. Some original miner's graffiti is carved into the walls of the upper level but was difficult to read, however after some experimentation with lighting from different angles, it became a bit clearer.

Returning down the steps, we then passed through a short crawl, where a collapse had been dug through, to reach the underground horse whim chamber. Whims were generally made of wood, and tend not to survive, but this one has an iron frame which has remained largely intact, although it has fallen on its side. An account of it's discovery can be found in BM No .63. It wound from a nearby shaft, which is still open though covered by rails. After taking photographs, the party returned to the main Rampgill level and headed in to "Whisky Bottle" junction. There were more bottles than I remembered, new ones having been added.

Remains of wagons in Proud's Flats.

We next headed further in along the Rampgill vein to view the Rampgill engine shaft. This connects to the deep level at the bottom of Brewery shaft and provides a route up for a compressed air pipe which then heads off deeper into the workings. A bit further on we saw the remains of the Norpex lid, which featured a very clever hydraulic lock but was eventually defeated by gas cutting equipment. The mine carries on a long way beyond the lid but that section wasn't on the agenda for this trip.

Returning to Whisky Bottle junction, we then turned off along the Hangingshaw vein, a part of the mine I hadn't been in before. This used to be a very wet section, probably why I hadn't visited it, but work has been done on the falls to



Looking out into Brewery shaft.

The horse whim in Scaleburn vein.

improve drainage and lower the level. It's still wet, but only around thigh deep on me and only for short distances. The Hangingshaw branch runs below parts of Carr's and Smallcleugh mines.

After a while, we reached an aluminium ladder that took us out of the water and up into Proud's flats. A rope hanging out of a hole above the ladder marks one of the routes that connect to the Smallcleugh workings above. One member chose to wait at the bottom while the rest of the party ascended the ladder. Once up, we stopped for a lunch break before heading off to explore.

I'd been in flats in other mines at Nenthead but that was a few years ago and I was struck again by the amount of deads that had been neatly stacked in the chambers. A lot of effort must have gone into dressing the ore underground, separating the deads and packing them back into the mined spaces. In this flat, the wooden floors where the dressing had taken place can still be seen. Wagons were used to transport the good ore to the chutes where it was dropped down to be loaded into wagons in the horse level below. The rails had been lifted in the flat but the wagons had been left, though their wooden components had rotted to powder, In another area of the flat, we found a couple of wheelbarrow axles and wheels, but no sign of the rest of the barrow.

After a good look around, we descended the ladder and headed back out to day. The trip coincided with a NMCS open day so after changing out of our underground gear, we headed up to the smelt mill to take up the offer of coffee and home-made cake. A very pleasant end to a very good trip. Thanks go to the NMCS for their time and hospitality.

George Harvey

Cornwall's Oldest Mine?

An exciting new collaboration involving two Cornwall Mining Alliance members aims to study ancient mine workings in the cliffs at Droskyn, Perranporth. Last year the University of Exeter, Camborne School of Mines and Perranzabuloe Museum, together with the Parish Council, formed the 'Time and Tide' group, which has been highlighting the rich and valuable mining heritage of this coast. The group now hopes to secure National Lottery Heritage Funding to carry out a detailed study of this fragile site for the first time. It is planned to use a combination of traditional archaeology and innovative laser scanning to map and recreate these fascinating workings, which may prove to be Cornwall's oldest surviving mine. If funding is successful, the results of the survey will be modelled in the museum so that the public can appreciate this unique and important site in a safe environment.

Although it is generally believed that mining of Cornwall's rich mineral resources has a deep history, the reality is that no physical sites of prehistoric extraction have been identified. Evidence of medieval and post-medieval tin stream-workings is known and in recent years scientific studies of Bronze Age artefacts have now shown that both Cornish tin and gold were exploited from an early date. But this leaves a persistent question-mark over the earliest mining of Cornwall's copper ores.

Visitors to Perranporth are largely unaware that the massive rock arches of Droskyn that flank the beach and feature on postcards are not natural formations but instead the inner workings of ancient and historic mines exposed by increasing coastal erosion. At Droskyn Point, just below the crest of the cliff is a group of precarious mining galleries with distinctive low, rounded profiles and tool marks covering their surfaces. Based on these features, expert opinion now suggests the site is an exceptional survival of mining using the pre-industrial technique of fire-setting. Even the name of the site is shrouded in antiquity and the project has adopted 'Vugh an Vlounder', one of several variations.

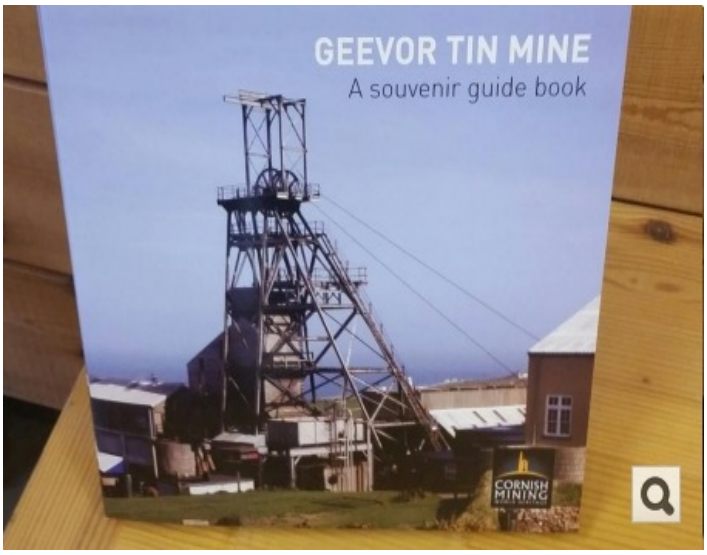
The Time and Tide group is now preparing a bid to the Heritage Lottery Fund (HLF) for a project to investigate Vugh an Vlounder, starting in early 2019 under the title 'Ancient Mining in a fragile Cornish cliffscape: digitally recreating the inaccessible'. The aim of the project is to investigate and record the site and then use the data gathered to digitally recreate the mining galleries in the museum at Perranporth. Using specialist state-of-the-art 3D laser survey technologies and geophysics to survey the site and then archaeological excavation to investigate and date the site will allow it to be reconstructed three-dimensionally using VR (virtual reality) within a new display at the museum. The project will combine the technical and academic expertise of Camborne School of Mines and the University of Exeter, the professionalism of Cornwall Archaeology Unit and the creative skills of Falmouth University. It will also draw on deep-seated local knowledge of the cliffs and mining. Rendering Vugh an Vlounder digitally 'visitable' will give access to the site to all ages and abilities in a safe environment and also counter the continuing loss of heritage through coastal erosion.

Dr G. Juleff. University of Exeter.

Sept 2018. {Edited}

Geevor Tin Mine releases new souvenir guidebook

Geevor Tin Mine, a Cornwall and West Devon World Heritage Site Key Centre and one of the best known mining attractions in Cornwall, has released a new souvenir guidebook.



The book explains Geevor's fascinating history and includes the mining and ore processing techniques used, the mine's rescue team, Geevor's place within the World Heritage Site and even the future of mining.

The book has many lovely photos of the site both new and historic, some even from our own World Heritage Office collection. Not only does the book have photography and information on the mine, but includes diagrams helpfully outlining the geographical makeup of what is going on below ground and how the ore was brought to the surface, allowing a real visualisation of the production process.

Ainsley Cocks, the World Heritage Site Research and Information Officer, was pleased to provide information for part of the book when approached and was also happy to provide some of his fantastic photography of the Site for this project.

The book is now available from the Geevor Shop, which gives visitors the perfect opportunity to pick up a copy and see Geevor itself at the same time. A lovely keepsake for everyone interested in this fantastic mine.

Cornish Mining

Iceland's Lignite Mine.

Syðridalur in Bolungarvík is known for an old lignite mine which is situated in the valley. Lignite was mined in the years of 1917 until 1921 or during and after the first World War. The reason why the mine was shut down is because coal from Europe became more accessible after the war. Lignite in Iceland is worse than coal due to the fact that volcanic ash is one of the main contents. Lignite in Iceland only includes 60% carbon but European coal includes 70-80% carbon.

The mine in Syðridalur actually consists of two mines, one on either side of the river. Gilsnáma is the one that's more known and Hanhólsnáma is the lesser known mine. Gilsnáma is more than 100 meters long but the other is around 10 meters. Inside Gilsnáma you can see some of the equipment that was used to mine, including a few hammers and a scale. To get into Gilsnáma you almost have to crawl, but once you're in the ceiling gets higher and you can stand upright. The walk up to the mine takes around 20-25 minutes on a marked trail and it's well worth the stop.

Visit the Westfjords. 2018

Grassington Moor photos further updates

On the back page of February Newsletter were four photos that I had found whilst sorting through a box of old photographs. I had taken these at Beevers Mine dressing floor on Grassington Moor around 1983, the photos showed machine plant in what was the former Beever Mine wheelhouse. My memories of the visit and my conversation with the man who was operating the plant were a little bit hazy after the passing of so many years. I received several emails from members filling in some details about the operation that was taking place on this site at the time.

The plant for reworking mine spoil was owned and run by a plumber Edwin Drake and William Tailor, who was a stonemason who worked for Bradford City Council, both men lived in Baildon, West Yorkshire. This partnership were working the mine waste heaps on the moor at weekends for Barytes, which was then taken by trailer to Horace Taylor's Dunsley Mills in the Via Gellia valley, Derbyshire. Horace Taylor ground the material for various uses including car underbody paints. The partnership was said to have worked intermittently from the early-1960s to the late 1970s, I can confirm that there was someone working until at least 1983. There is a page of good information in BM No 46, Mike Gill's The Grassington Mines.

Ed Dennison Archaeological Services Ltd. has written an at present unfinished and incomplete archaeological report regarding Beevers Mine Wheelhouse and this small part time business that was taking place on this site.

William Houston who also worked at Beevers mine with T.C. Brammall in 1965 corresponded with me to point out that the material was normally taken by independent haulers from Derbyshire in tipping wagons. I guess that my conversation on the moor in the 80s referring to the trailer load might very well have been the last few scrapings that were processed.

William H. described Edwin as being, short, tubby with brownish hair and William Taylor as medium build, white hair and specs, always wore bib and brace overalls, I think that it might have been William T. that I spoke to in the early 80s. I described their plant and machinery to W.H. as looking like scrap metal, to which W.H. wrote saying that their equipment was mainly ex- Bradford Corporation, diggers, trucks, etc. purchased from a scrap yard in Otley, Edwin was very good at refurbishing things, they generally worked weekends on a sort of hobby basis.

Colin Keighley

Fresh delay for £165m undersea Coal Mine

THE long-awaited decision on whether a £165m undersea coal mine, which will create 500-plus jobs, has been delayed again.

Work to create Whitehaven Colliery off the west Cumbrian coast was due to kick-off at the end of the year. But it has now been revealed that the planning application will not even go before county council planners for a decision until early next year. West Cumbria Mining wants to extract coking coal off the coast of St Bees, with a processing plant on the former Marchon site at Kells This isn't the first time the application decision has been delayed and the news has sent shockwave's through the community **Co**peland mayor Mike Starkie said he was "extremely disappointed" with the delay.

Cumbria News and Star. Sept 2018. {Edited}

To Be A Young Coal Miner

There can be few more formative experiences than to start one's working life at age fifteen, down a coal mine. A draughty, East Lancashire pit, whose two, one-thousand foot shafts, accessed the thirty inch, high Upper Mountain seam and whose working longwall faces were two miles distant. This was Huncoat Colliery, Accrington. Why choose mining? There was no family background, but as a small boy I had been on 'hello' terms with a miner who walked home past our house each afternoon. He cut an imposing figure, in his dirty clothes, helmet and coal-blackened face; only the whites of his eyes and teeth showing. No pit head baths in those days. I wanted to be one of those men.

A young David Hargreaves going underground at Huncoat Colliery Accrington for the first time.

Leaving school as soon as the law allowed in 1955, I hiked off to the junior employment bureau and asked what they had on offer. The man came up with three: there was an apprentice electrician at thirty shillings (£1.50) per week, a live-in farm labourer at two pounds and – this was almost a throwaway – a coal-mining trainee, for, at my tender age, three pounds, fifteen shillings (£3.75) plus a travelling allowance. It was no contest. Money was a strong consideration since my parents were habitually hard-up. So down the mine I went, despite my mother's tears and my father's dire warning that "all miners were fit for was women, gambling and drink" and that I would never mix with the 'cream' of society (Dad was of the collar-and-tie persuasion). This further encouraged me.

There was an initial 16-week training period under specialised supervision at Bank Hall Colliery, Burnley, followed by secondment to permanent work at a mine of one's choice. The area had ten or eleven from which to choose. The training comprised alternate weeks underground and at the Mining department of Burnley Technical College. Here, they assessed our educational prowess and offered us further education in the form of Day Release. This meant one day per week at school, during term time, to learn mining engineering. I was selected and thrived. Fancy being paid to learn!

This was now 1956 and Britain, pre-North Sea oil, was desperate for coal. As a gauge, the recruitment age was 15 to 44 years and subject to fitness. In our training group, I was one of the youngest whilst the oldest was an ex-POW of the Japanese, aged 42. After a brief spell on afternoons, I wangled my way onto the day shift and took an acute interest in First Aid, joining the colliery team and in union matters. At that time the National Union of Mineworkers, NUM, was arguably the most powerful in the country with a grip on over 100 'safe' Labour parliamentary seats. My regular job was as a 'timber drawer'. That meant being one of a team of four, aged 15 to 17 years, pushing a steel bogie, loaded with wooden props and bars, along an undulating tunnel, the return airway, perhaps 400-500 yards to the longwall face. Here, twenty colliers spent their seven-hour shift, each shovelling 15 or 16 tonnes of coal from the 30-inch seam onto a chain conveyor, en route to a main belt and eventually the surface, via a loco-haulage system to the shaft. Timber drawing was tough work, but we thrived on it. There was comradeship and comical moments.

A combination of my going on day release (known as 'doing the school job') and attending union meetings made me the unofficial spokesman for the under-18s. Above that age, you were adult, eligible for coal face training. An incident occurred where my alleged skills were called upon. The country was desperate for coal. Although the statutory working week was five shifts, we regularly ran a voluntary sixth, on Saturdays. The incentive was that it paid time-and-a-half. Sundays paid double-time. We opted to do a Sunday, so that the colliers would not be short of timber to start the week. For this we should have been paid about four pounds, not the standard two pounds.

Payday was Thursday and by tradition you showered and changed, drew your packet from the wages office and retired to the canteen to check all was in order. I was in early and found to my dismay that I had only been paid single, not double-time for the Sunday shift. I was two pounds light. Soon, I was joined by my fellow wolf pack, who had been similarly short-changed. In a body, we marched to the wages office to demand an explanation. The wages clerk parried, "you will have to talk to Bob, he signed the slips."

Now Bob was Mr Brooks, the dreaded under-manager. This was a statutory position at a coal mine and although they had to be suitably

cont

qualified, under-managers were traditionally chosen to fit them for their primary task of running the underground on a day-to-day basis. They were rough, tough and uncompromising. Bob Brooks fitted the bill perfectly and added to his charm by sporting a prominent nose which at some time past had been split vertically and not well repaired. He did not smoke, but he always had a bag of sweets on his desk, the only hospitable thing about him. I was despatched to see him. He was busy deploying the remnants of the afternoon shift and in no mood to talk. "Come and see me tomorrow," he offered. My mates were not pleased. He similarly rebuffed me twice the next day, Friday.

The boys were in fighting form and it was clear that my role as negotiator was on the line. So I pulled what I thought to be a master stroke. Arriving early on Monday, about 6.20 am, I went into his office in my clean clothes, implying that no settlement, no going underground. Sitting in his chair behind a large desk he asked gruffly, "how much is it?"

"Eight pounds," I responded, "two pounds each."

Reaching into his pocket, he produced a half crown piece. "I'll toss you for it, double or quits."

Left with little choice, I opted for heads.

He spun the coin into the air and slapped it with his hand as it hit the desk.

"Tails!" He tossed me a sweet and concluded the negotiation. "Now get your rags on and get down that hole."

I retreated, to face my mates and reflect on my position in society.

David Hargreaves.

The Last Coal Miners of Spain

Coal is on the way out in Europe, and it is dying a slow and ugly death. Its decline has been hastened by competition from the renewable-energy industry, cheaper imported coal from Russia and the United States and new air-quality regulations passed by the European Union. The death throes have been especially violent in Spain, where the national coal-mining industry was created by royal order in 1621 to exploit the coal basin at Villanueva del Rio y Minas in Seville. In 1990, 167 coal mines employed about 40,000 workers. Today there are roughly 40 active mines, employing fewer than 4,000 miners. The struggling industry has long been supported by state subsidies, but under a recent E.U. agreement, all subsidies must expire by 2018.

When the government issued heavy reductions to the subsidies in 2012, miners responded by holding strikes and sit-ins and by blockading roads, highways and railroad lines. Thousands of them marched to Madrid, some walking 250 miles. When they arrived on the night of July 11, 2012, they were joined by more than 10,000 additional protesters, many of whom saw the miners' fate as a symbol of economic parsimony taken too far. They fired at the police with slingshots, catapults and rocket launchers. Clashes with the police followed, and the press carried images of women and children with bloodied heads. Spain's prime minister, Mariano Rajoy, declined to hold talks with the miners. The following day, he announced new austerity measures.

"I guess it's turning into our version of the intifada," a miner from the northern mining village of Ciñera told The New York Times that year. "When somebody is determined to take away your job and what has kept families living here for over a century, you fight to the end." Another told The Guardian: "The future is as black as coal."

Since 2009, the French photographer Pierre Gonnord has photographed miners in the northern Spanish mines of Carbonar, Monsacro, Pozo Santiago, Maria Luisa, Candin, Nicolasa, Tineo, Cerredo and Villablino. The miners work as deep as 2,300 feet underground in seven-hour shifts. Gonnord photographs them after they re-emerge onto the earth's surface. The men look as if they have been standing too close to a bomb detonation. Their faces are caked in toxic dust and dried sweat, the whiteness of their eyes accentuated by coal eyeliner. Their expressions combine pride, melancholy and bewilderment. In their poses and demeanors, taken together with Gonnord's palette — dominated by olives, blacks and grays — the photographs recall Diego de Silva y Velázquez's dreamy, disconcertingly lifelike oil portraits.

Gonnord's photographs also share an affinity with Lewis Hine's portraits of child laborers (particularly those of children employed in the Pennsylvania coal mines); Dorothea Lange's Dust Bowl portraits; and, more recently, Ruben E. Reyes's portraits of foreign laborers in Dubai. A difference here is that the Spanish miners do not resent the dirty, thankless work they do. They see no better way of supporting their families. They are fighting to remain in the mines, enduring the backbreaking labour and inhaling the noxious dust, despite the increased cancer rates and reduced life expectancy.

The portraits are a vivid illustration of the challenges facing environmental reformers. A rapidly overheating world requires global remedies; many of these measures, at least in the short term, will inflict hardships that will fall unevenly on those least suited to bear them. Stories of immediate individual suffering will always speak more powerfully than a broader narrative about the gradual mitigation of existential threats. Spain, like most other nations, faces a daunting political problem: how to destroy a poisonous industry without destroying its workers? Artists face a different problem: how to avoid falling victim to sentimentality or activist stridency? Gonnord's photographs resist easy moralizing. Are these men victims or heroes? Shortsighted or calculating? Selfish or selfless? Gonnord shows us that they possess all of these qualities.

Pierre Gonnord is a photographer based in Madrid. An exhibition of his work, "The Dream Goes Over Time," is at the Hasted Kraeutler Gallery in New York through to April 2025.

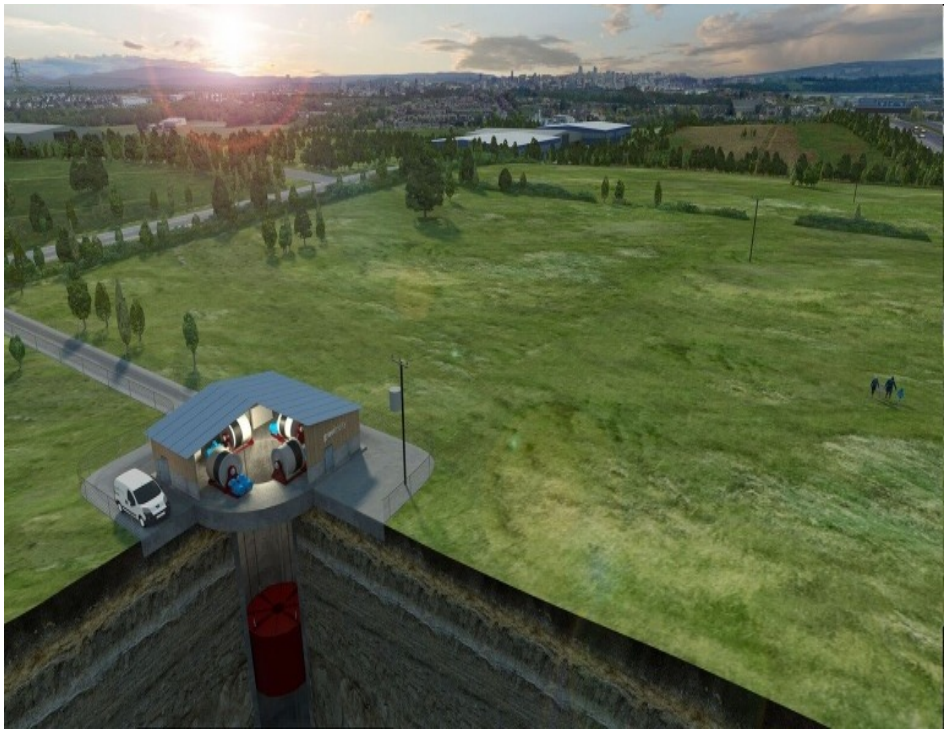
The New York Times Magazine. April 2018.

Durham Miners Hall Tour.

E4A are proud to announce the next series of Heritage Open Days at the magnificent Durham Miners' Hall. The tours will be held on Saturday January 5 at 10.30am and Wednesday 9 January 1.00 pm. Please **email kathleenhconnolly@hotmail.co.uk** to book your place. Please book early to avoid disappointment.

Education for Action. Sept 2018

UK Startup eyes abandoned mine shafts for energy storage



Disused mine shafts around the UK could soon be used as giant gravity batteries, capable of reacting to grid demands in under a second. Startup Gravitricity, which has just received a £650,000 grant from Innovate UK, plans to use abandoned shafts to house massive weights. When energy is plentiful, the weights will be winched towards the surface, in much the same way that water is driven uphill in pumped hydro storage. However, unlike pumped hydro, the system should be able to respond to fluctuations in demand almost instantly. “As we rely more and more on renewable energy, there is an increasing need to find ways to store that energy – so we can produce quick bursts of power exactly when it is needed,” said Gravitricity managing director Charlie Blair.

“So far there is a lot of focus on batteries, but our idea is quite different. Gravitricity uses a heavy weight – up to 2000 tonnes – suspended in a deep shaft by cables attached to winches. When there is excess electricity, for example on a windy day, the weight is winched to the top of the shaft ready to generate power.” “This weight can then be released when required – in less than a second – and the winches become generators, producing either a large burst of electricity quickly, or releasing it more slowly depending on what is needed.” According to Blair, the system is capable of operating for decades without degradation and could have a lifespan of around 50 years. Models from 1 to 20MW will be offered, with a part-scale demonstrator planned for later this year.

Gravitricity is currently seeking to partner with investors, including those who can bring mining experience to the team. The company is also examining a number of disused mine shafts – both in the UK and South Africa – and hopes to have a full-scale working prototype up and running by 2020.

The Engineer. Feb 2018.

The lost Manchester map that could be worth thousands

Image: Martin Dodge.

It's a lost map which details a big part of Manchester's industrial past, and it could be worth a fortune. Researchers are searching for this intricate chart which plotted the region's coal mines, and once had pride of place in the head office of Manchester Collieries. From the Industrial Revolution until the mid-20th Century, coal was king, there were pits all over the North West. Manchester Collieries was a big company, with around 20 to 30 separate pits within South Lancashire. Manchester's Bradford Colliery, a huge site which signified the region's success during the 18th and 19th Centuries, is where the Etihad Stadium now stands.

It employed thousands of coal miners during its heyday in the 1900s and was one of a large network of pits under the streets of what is now Greater Manchester during this exciting period of growth. And a beautifully illustrated map plotting out the location of these mines, Manchester Collieries, was created by graphic designer MacDonald 'Max' Gill.

Hear is a picture of the map of Manchester Collieries taken by MacDonald Gill's studios. Gill, who was famed for his world maps promoting trade, was commissioned to design the six foot by five foot map for Manchester Collieries in 1934. It took him around six months to design. It was considered a masterpiece - with colourful illustrations and added quips, and it stood proudly in the head office of the Collieries in Walkden. But it disappeared without a trace around the 1940s, when the company was taken over by the National Coal Board during the nationalisation of the coal mining industry.

The map could be worth tens of thousands of pounds, particularly as Gill's work is now seen as highly collectable.

Cont. pg. 20

NMRS visitors returning to Skelton.

NMRS visit to Skelton Park Pit August 18th

A small party of members arrived mid-morning at Skelton Park Mine in Cleveland and were met by Colin Keighley and Chris Twigg of Cleveland Mining Heritage Society. We first went into the mine power house where air compressors were once housed and D.C. power was generated, for an introductory chat and a look at some large copies mine plans of the Cleveland area, historical photos and artefacts from the site. The large derelict building is now used by a Barn Owl as its dining room.

Park Pit opened in 1872 the mine buildings were built of local stone for aesthetic reasons because the site was within view of Upleatham Hall across the valley. The site consists of a complete range of ironstone mine buildings and is grade two listed.

The party commenced the tour around the site, first looking at the Upcast Shaft and Fan House, then the Secondary Winding House, we crossed the site of the old Boiler Plant Coal Cells to look at the Downcast shaft and two Horse Gin sites then back to the Main Winding and Pumping House dated 1872, that once housed the main steam winding engine and pumping gear. Outside we explored the Boiler Plant and Flues which housed a Green's Economiser that preheated the boiler feed water before the smoke and fumes exited up the chimney. The tour then took us past the remains of the Boiler Feed Pump House, past the Power House, the remains of the Ambulance Room, and Time Keeping Office on our way to the 1909? Electricity Sub Station.

The next group of building remains visited were a pair of Earth Closets and Cart Shed, to the rear of the workshops:- The Blacksmiths Shop with remains of six hearth chimneys, a possible engineer / fitters workshop between it and the joiners Shop. Across the way was the Saddlers workshop where horse gear was made and repaired in a lean to building against the end wall of the Provender House. The Provender House contained preparation machinery and storage of feed for all the Bell Brothers horses at all of their mines in the area, Park Pit alone kept 50 horses underground. Just outside of the Provender House were the foundations of a Weigh Bridge and a small brick building that looked as if it might have housed an electric hauler?

A wide view of Skelton Par Pit taken several years ago.

After lunch and another look at the mine plans and old photos in the Power House we walked along the old Cleveland Railway extension through the military shooting range and mine explosive magazine to the site of Skelton Shaft Mine with its Guibal Fan House and collapsed shaft remains. We explored the area to see the site of the drift entrance and the old tramway remains before meeting up with members of Cleveland Mining Heritage Society who were busy uncovering remains of the winding house and boiler plant that are now hidden and overgrown in the woodland.

Cont

Skelton Shaft Mine, Guibal fan house.

Simon Chapman broke off work to give us a short but informative talk about the site. I must thank Simon for the loan of his folder of photographs, drawings, and notes that I was able to use throughout the day and I must also acknowledge that all of the information used during the day was obtained from Simon Chapman's book, Skelton Park Ironstone Mine which is one of the books in the Cleveland Ironstone Series, Industrial Archaeology of Cleveland, which is available from Peter Tuffs 01287 610139**, www.cihmag.com.**

Chris Twigg is the o/c of the Redcar and Cleveland Borough Council, Heritage Lottery Funded project, Our Industrial Heartland which is on Facebook and has a website, **www.ourindustrialheartland.co.uk**

Colin Keighley.

NMRS Book Donations for sale.

Here are a few more books that have been kindly donated to us with permission to sell them on. Payment via cheque made out to NMRS.

Railways in Camera – Archive photographs of the great age of steam from the public record office. 1860-1913. Robert Linsley H/b with d/c 244pp. B&W photos. Alan Sutton Publishing 1996 £4 + £3 p&p

An introduction to Geological Structures & Maps by G.M. Bennison P/b 64pp with B&W maps, diagrams. 3rd edition. Edward Arnold publishers 1975. Former owner`s name on front cover £2 + £2.10 p&p

Lead & Lead Mining in Derbyshire by Arthur H. Stokes
P/b 90pp, B&W illustrations. PDMHS 1996 edition. £4 + £2.10 p&p

The Mines of Cardiganshire, Roger Burt, Peter Waite, Ray Burnley P/b 94pp Mineral statistics of the area with useful grid references. Pub by Dept of Economic history, Exeter in association with NMRS. £5 + £2.10 p&p

Twenty years down the Mine, Ian Terris
P/b privately published by author 1997. 157pp. His early years down the mines, Glasgow area, 1952-1974. £3 + £2.10 p&p

Wonthaggi State Coal Mine, Charles Fahey
P/b 1996. 62pp B&w photos. A short history of the state coal mine and its miners (Australia) £3 + £2.10 p&p

The Rise of Broken Hill, Geoffrey Blainey
H/b with d/c. 184pp MacMillan of Australia 1968. B&w photos plus one colour. The story of the men who made & spent their fortunes and the miners who won their fortunes there. £7 +£3 p&p

If interested in any of the above please contact Barbara Sutcliffe email mansemins@btopenworld.com

Remember we also have an extremely good selection of out of print BMs available both the very early A4 ones and the newer A5 ones. Why get a download when you can have a physical copy.

Manchester Map cont.

Dr Martin Dodge, senior lecturer in human geography at the University of Manchester, said: "The original would have been colourful and huge, and hung on the wall of the office.

"The map doesn't seem to be in any kind of public archive, I don't think it would've been thrown away. It's one of those intriguing lost artworks, the kind of thing that if it does exist, it would be really great to find. "If it was to be found it would potentially be the only copy of it and potentially worth tens of thousands.

"This work is very collectible, very attractive, quirky, quite humorous. They are very nice things to own, and this seems to be the only one he did for Lancashire. Have you seen this map? "Have you got an elderly relative who used to work for Manchester Collieries, who took it off the wall when the company was nationalised? It's within living memory." Another individual who would be keen to trace the map is Gill's great niece Caroline Walker.

Walker, who is currently writing a biography about Gill, who died in 1947, said it would be wonderful if the map were to be found.

"It would be absolutely fantastic. If people remember it, it would be lovely. The maps he made were very beautiful and colourful. They weren't just full of formalities, but he put in little quips and places of interest. I have no idea where it is now. I have come across someone who said they saw it there when they were a small child in the 1930s. It was very costly to make, these things didn't come cheap. Max was paid about £150 for it, which would be worth thousands of pounds today," she said.

Manchester Evening News. Sept 2018.

Banks Mining invests in second Komatsu PC3000-6 excavator for new Bradley Surface Mine

Excavator rebuilt, fully tested and readied for work in under a week

UK surface mining firm Banks Mining has returned to KMG Warrington for a second frontline earthmover for their new Bradley surface mine near Consett in County Durham. Komatsu has supplied a used PC3000-6 excavator to the Bradley site which will eventually yield half a million tonnes of high quality coal over its three year lifespan that will be used for a variety of industrial markets in the UK .The choice to purchase the Komatsu follows the good service of a PC3000-6 face shovel already operating at Banks Mining's nearby Shotton surface mine in Northumberland.

The 254 tonne excavator had been operating at the Hinkley Point nuclear power station before being moved to Banks Mining's depot at Thrislington in County Durham where it was stored for a short period before being taken the 23 miles to the Bradley site to be rebuilt on site by a team of KMG engineers.

Using a pair of 200 tonne cranes, it was then rebuilt, fully tested and readied for work in under a week. As with the PC3000 face shovel working at Shotton, KMG have a permanent service engineer and a stock of consumable parts on site to ensure the excavator is kept working for the maximum time possible.

The excavator has been supplied with a 16m³ heavy duty rock bucket and will be used to excavate overburden from above the coal seams at the site, which include a number of uncharted workings from historic deep-mining activity. In line with The Banks Group's 'development with care' approach and its focus on operating to very high environmental standards, the PC3000-6 uses a single V12 engine that delivers 1260hp, which is a similar power output to that of rival twin-engine machines while using less fuel and having significantly lower servicing costs.

The excavator had under 9,000 hours of operation when the Banks Group purchased it, but with the machine stripped into its component parts, the opportunity was taken to replace major bushes to the front end equipment. The new owners also opted for a comprehensive noise reduction package to be fitted to the excavator before it went to work. Comprising insulated enclosures for the radiator cooling fans, hydraulic oil coolers and hydraulic pumps, the enclosures feature movable slats to direct the noise emitting from the components to be directed toward the air or ground to minimise environmental noise emissions.

Prior to the PC3000-6 going to work, the KMG engineers undertook a full service as well as a planned maintenance clinic on the machine to ensure that it would be immediately able to operate to its full potential. Robbie Bentham, plant director at Banks Mining, says: "The Komatsu PC3000-6 front shovel based at Shotton has surpassed our expectations in terms of build quality, reliability with exceptional back-up support from KMG, and we are confident that the backhoe, which is ideal for tackling this type of ground, will deliver likewise at Bradley.

"We take our environmental responsibilities extremely seriously, and while the Komatsu is already a quiet machine by industry standards, the addition of the noise reduction equipment will help immensely."The UK still requires coal to meet a range of essential industrial, household and electricity generation needs, and it is undoubtedly in the national interest to continue to invest in skilled mining jobs in North East England at locations such as Bradley and Shotton instead of increasing our already substantial reliance on coal imports from overseas."

UK Plant Operators. Sept 2018.

Winewall Quarry

Here is another snippet of information following on from Graham`s plea for our members to contribute to our Newsletter.

Two contributing factors encouraged me to look into this.

Present day remains of Blacksmiths workshop.

My former head teacher saying she would throw her basket used each day for school into the quarry on her retirement (it is her property)

Taking one of my grandchildren metal detecting there.

I must state that the property is on private land which is fenced in, with a locked gate and there is no admission to the general public.

Barrett`s Directory of Burnley & District 1908 states "Winewall is a hamlet in the township (Trawden), and here are superior quarries" This is also stated in the 1949 publication of the same name.

There are two quarries at Winewall where thickly bedded sandstones were worked. It is thought they were probably worked by Critchby, Armstrong Company to provide stone for their mill and factory settlement at Cotton Tree. By the mid 1860 Emmott & Duckworth were in possessions and by the following decade James Atkinson took over. Henry and Joseph managed the business later but by about 1886 it was only Joseph involved. At that time he reopened Bank Quarry (SD9102 3959) For a short time Winewall Quarries were worked by Charles Mitchell of the Black Rock Inn, Trawden. Wall stones, paving and engine beds were produced.

In 1905 Joseph Atkinson failed but he still continued to manage the quarries under his wife`s name and in Barrett`s directory he is named as a Winewall quarry master. The business was offered for sale after his death as a going concern. Buildings were basic including an office, and plant included three steam cranes, four hand cranes, two stone carts and three wagons. The architect William Henry Atkinson (who built Holy Trinity Church, Colne) and his brother, John Robert (a builder and joiner of Shaw St., Colne) continued the quarrying and the 1912 OS map shows all three Winewall quarries working. By 1917 both partners had died and without a formal assignment of lease George Fort took over. By 1922-23 he was reported to have no assets.

After WW1 Trawden Urban District Council periodically extracted stone for a few small projects including constructing shelters on the recreation ground. Later it was used by the same District council as a tip until an amalgamation with Pendle District Council. It has now been landscaped and is used for sheep grazing. However the southern and eastern working faces can be seen from the road.

Before the quarries actually closed sometime in the 1920s a blacksmith`s shop, stables, crane and sawmill existed. The photo shows the present day remains of the blacksmith`s shop. A great deal of the stone was used in local mills for the engine beds and for the many town pavements in the area.

References
Barrett`s Directory Burnley and district both 190 and 1949
Geology of the County around Clitheroe & Nelson HMSO 1961
The History of Colne
Industrial Heritage: A guide to the Industrial Archaeolog

Barbara Sutcliffe

One of the quarry faces still in evedence, with grandson Lewis.

BOOK REVIEW

"The Louisa Mine" by L G Luescher. ISBN 978-0-9955675-0-4. Cost £3.50 + 50 pence package and postage. In 2016, Lorraine Luescher published a 24-page booklet on the Louisa antimony mine, which is situated near Glenshanna Burn, about 11 miles north of Langholm in southern Scotland. Mining began at Louisa in 1793, and continued intermittently until 1922, when about 50 miners were employed.

The booklet is well illustrated with high-quality colour photographs showing the levels, the landscape and the processing sites. There are grid references for all the features. The booklet includes the mine location, transport links, local geology, a detailed history of the mine's development and information about the people involved. Fragmentary remains of early smelting sites are carefully described; but in later years the ore was assessed for purity in a small furnace at Louisa and then despatched, by road and rail, for smelting elsewhere. It is these additional transport costs which probably contributed to the final closure of the mine.

Starting in 1979, Dr M J Gallagher surveyed the area, boreholes were drilled and samples analysed. The ore is a mixture of stibnite, galena, arsenopyrite, jamesonite and chalcopyrite. It is thought that the nineteenth century miners found pure stibnite in pockets up to 20 inches thick. All in all about 100 tons of antimony were produced.

The documentary information about the mine is reviewed, and the industrial and economic developments set in the social history of the parish. The local parish library of Westerkirk still exists and contains 8000 books, including some of the original books presented to the miners in 1793: it is the oldest lending library in Scotland. The school (which was built by the mining company in 1794) still stands.

The remains of Louisa Mine look well worth a visit: permission should be sought from the land owner on glendinningfarms@btopenworld.com.

Thomas Telford was born in Westerkirk, and, in 2007, Lorraine Luescher wrote a booklet about him, "Thomas Telford, 1757-1834, an Eskdale Tribute", which concentrates on his work in Scotland.

Lorraine Luescher is making a special offer to NMRS members. Every one who orders a copy of "The Louisa Mine" booklet before 31st December will receive a free copy of the publication on Thomas Telford.

Sallie Bassham.

Landfill Mining. A future source of raw materials

Decontamination of landfills and open dumpsites could prove profitable -- both financially and for the environment. This is demonstrated by Yahya Jani in a new dissertation in environmental science from Linnaeus University.

Environmental pollution, health threats and scarcity of raw materials, water, food and energy are some of the greatest challenges our world is facing today. At the same time, landfills and open dumpsites are still the dominant global waste disposal options, despite the fact that the long-term environmental impact in the form of emissions of greenhouse gases and contaminated leachates is significant. However, much of the environmentally hazardous waste that has been dumped at landfills can be recycled as energy or reused as valuable raw materials in different industries according to Yahya Jani, doctor of environmental science and chemical engineering.

Landfill mining -- the tool of the future

In his dissertation, landfill mining is suggested as a tool to achieve an enhanced circular economy model. Viewing the landfill waste as a potential resource instead of as a problem is a common thread in Yahya's research.

"More than 50% of the deposited waste dumped at landfills and open dump sites can be recycled as energy or reused as raw materials. These materials can be used as secondary resources in different industries instead of being forgotten or viewed as garbage," Jani explains.

His research also includes the extraction of metals from Småland's art and crystal glass waste and different fine fractions.

Extracting 99 % of the metals

"I developed a method that enables the extraction of 99% of the metals from the glass waste that was dumped at Pukeberg's glassworks and published the results. It is the first published article in the world that deals with recycling of metals from art and crystal glass," says Jani.

In his research study at Glasriket, Jani also used chemical extraction to recycle materials from a mix of glass waste and soil fine fractions smaller than 2 mm. The technology involves mixing old glass waste with chemicals to reduce the melting point of the glass waste in order to extract the metals.

"The methods I've developed to extract metals from Småland's glass waste can be used to extract metals from all types of glass, like, for instance, the glass in old TV sets and computers. Thus, this method can be further developed at an industrial facility for the recycling of both glass and metals of high purity. This can also contribute to a restoration of Småland's glass industry by providing the industry with cheap raw materials. In addition, the extraction of materials from old landfills contributes to the decontamination of these sites and reduces the environmental impact and health threats" Jani concludes.

According to the European commission in 2017, 60% (that is to say, 1,800 million tons) of the annually produced waste from 500 million EU inhabitants end up in landfills. In his dissertation, Jani shows that the extraction of valuable materials from this waste could contribute to reducing the overuse of natural resources on Earth and reduce the emissions of greenhouse gases like carbon dioxide and contaminated leachates, which are responsible for pollution of water resources. Decontamination of these places will contribute to a significantly reduced impact on both human health and the environment.

The results from Jani's dissertation shed light on the need to view the dumped waste as a secondary resource and landfills and dumpsites as future bank accounts where future raw materials can be extracted instead of viewing them as a burden for human health and the environment.

Science Daily. March 2018.

For Submission of articles please use the following email:

glt2top@gmail.com

Editors Notes.

1. As this Newsletter is representative of its members interests, hobbies and working lives. Why don't you tell the membership what your interest is or what your hobbies are and what you have done throughout your working life? As long as its connected in some way to mining all articles will be published. If you need help or guidance in doing so please contact me.

2. Have you noticed that a few members have made appeals for information in the last few issues? These have meet with a very good response. So if you have something puzzling you that's mining related why not ask the membership for information?

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Model railway fan who spent 40 years building up a collection has his ashes put inside toy coal truck so he can enjoy his hobby forever

Peter Hurst kept his huge collection and detailed model railway in his attic. When he died aged 88 in January his sons Simon and Paul wanted to honour him. A little coal truck now carries his ashes around his intricate and amazing hand-built railroad system

This model railway enthusiast had his ashes put inside a toy coal truck so he can enjoy his hobby from beyond the grave forever. Peter Hurst spent 40 years building up his collection of over 40 locomotives. He made a detailed miniature village with a functional railway from scratch. When he died in January his sons Simon and Paul, wanted to honour his lifelong passion.

Mr Peter Hurst.

His model was inspired by the Great Western Railway which Mr Hurst became familiar with while living as an evacuee in Wales. He married his wife Betty in 1956 and built a prototype of the tracks at the family home in Essex, before moving to Kent where he had huge loft space at his disposal.

The landscape was constructed with paper mache and sawdust. Mr Hurst also built a bridge for the trains to travel across. Some of the tracks were remnants from the first model railway that Mr Hurst had built. Even though the bulk of the work was completed by 1976, he still continued to add to it.

Mr Hurst Ashes inside coal truck.

The impressive structure eventually measured 28 ft long and 18 ft wide. The town was inhabited by around 60 tiny figurines, who could drink in four miniature pubs and worship in three churches. There were two schools and 50 livestock were dotted around the countryside. There was even a mini windmill that sat up on the hills.

VAT inspector Mr Hurst collected Hornby trains, some of which are now worth more than £500. He had 40 locomotives, including some which were more than 50 years old. The collection also included 50 coaches, 50 trucks and ten guard vans, as well as eight parcel wagons and a crane train. His proud son added: "As children we respected it. Dad let us play with it but we didn't mess around with it. One time one of the trains came off the track and went into the water tank in the loft. Fortunately it wasn't damaged." Grandfather-of-three Mr Hurst, who died of dementia, can continue to share his passion with his family from beyond the grave forever.

Mail-on-Line. March 2018. {Edited}. Sent in by a member.