



Contents.

Page.

1. Presidents jottings.
2. Clapham schoolchildren.
3. John Bailey 1810.
Library News.
4. British Gypsum.
7. Lake district mining
history.
8. North Pennines mineral
Expo.
9. 100k visitors centre at
Bothwellhaugh.
10. The Burton link.
Cornwall Lithium.
11. Yalvskogo mine new
world record.
Len Cook.
12. Two friends visit Mossdale.
Leiths group.
13. Visit report Nenthead.
14. Gold Rush Patagonia.
15. Sirius minerals.
16. Forest of Dean memorial.
16 miners missing.
17. Visit report Fox Clough.
18. Bishop Auckland gallery.
Parys project 2020.
19. Luxemburg space mining.
20. Oswaldtwistle mining past
saved.
21. Kent mining Museum.
Diamonds confiscated.
22. Visit report Jet mines
24. Sledge hammer engineering
New washing plant unveiled.

Editor. Graham Topping
Chapel lodge. Chapel Lane.
West Bradford. Clitheroe.
Lancs. BB74SN. Tel:-
07973905883. Email:-
glt2top@aol.com

**Please note that the
deadline for
inclusion in the Feb
2018 Newsletter is
the 24th Jan. 2018.**

Presidents Jottings.

At the time of writing this I am looking forward to our **Autumn meeting**. The reports I have received demonstrate how busy members on the Committee have been this year. These reports, as usual, will be in the Members' area of our website. If you need a paper copy please contact me.

As usual we will be having some interesting short presentations from our members at the Autumn meet. David Lewis is talking about the free miners of the Forest of Dean, Steven Daniels is telling us about the forgotten history of the Union of Democratic Mineworkers, David Johnson will be explaining about brickworks on the North Anglesey Coast, Graham Topping informing us of some aspects of British Gypsum and Colin Keighley will be passing on news of Cleveland Mining Heritage Society and their activities in N.E. Yorkshire. In this package you should find the **2017 memoirs** and the **BM103** monograph, the latter held back for many of you due the poor quality of the original printing. Those who received an original copy will also find a replacement from us. There should also be a **membership renewal form for 2018**. Please attend to this as soon as possible. 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.

As mentioned last year the lack of Committee nominations using the form sent out in years gone by has encouraged us to discontinue this and instead list Committee positions. If you are interested in any of the positions all you need to do is to contact the Secretary in writing at least **28 days before the 2018 AGM** with the signature of a proposer and seconder and the position you are interested in. The Secretary's address is, **NMRS Honorary Secretary, 91 Ightenhill Park, Burnley, Lancashire, BB12 0LL.**

The present officers are listed below.

President
Vice President
Membership Secretary
Secretary
Treasurer
Publications Editor
Librarian
Newsletter Editor
Meets Leader

Barbara Sutcliffe
Malcolm Street
See post script.
Mick Cooke
Tim Cook
Richard Smith
Sallie Bassham
Graham Topping
Mick Cooke

NAMHO Representative Sallie Bassham
Website Administrator Malcolm Street
Committee Member Len Morris
Without portfolio James Cleland

Since Sallie wrote her Library report for this newsletter we have received a very **generous donation of a copy of “Yorkshire Collieries -1947-1994” by Eddie Downs.** This book has 678 pages and tracks the history of all the Yorkshire Collieries encompassed by the NCB with each one traced from origin to demise. As well as mining history, any relevant social history is also included. Very comprehensive. Our members at our Autumn meeting will have a chance to look at it. Priced at £25 with £7.50 carriage (it is very heavy!) if anyone is interested please contact me for Eddie’s contact and for each copy sold he will make a generous donation to our Society. We have also received some interesting books from Julian Holmes. Once the Library has had first pick the rest will be available to members.

On behalf of NMRS I would like to welcome the following new members.

Steve Dickinson -Ambleside
Calum Dunn
Chris Jarvis - Leeds

We were sorry to learn of the death of a founder member Len Cook who Rex and I met a few years ago when we visited him to collect some of our publications which he had kindly donated to NMRS. I have also just heard of the death of Lindsay Greenbank on 12th October. Many of you will remember him and his late partner Mick Sutcliffe, who originally started the exploration of Rogerley Mine in Weardale

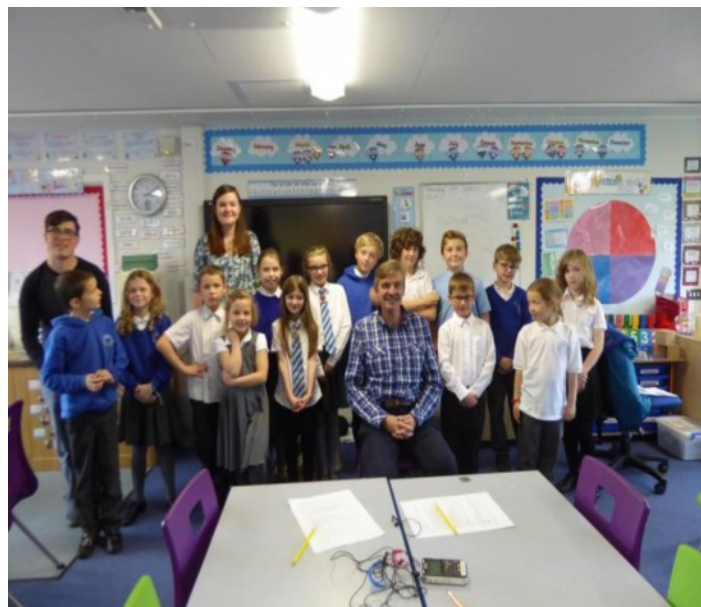
On behalf of all on the committee I would like to wish you all the Seasons Greetings for Christmas and the New Year, thank you all for your support in 2017. **Just a reminder that the 2018 AGM will be on April 28th at Mealbank Hall Ingleton. More details will be in the Febuary newsletter.**

Post script. Written after Our Autumn meeting. I am relieved and very pleased to inform you all that on Saturday Gary Topping, Grahams brother stepped forward to offer his services as Membership Secretary, proposed and seconded by members present. Thank you Gary and THANK YOU Malcolm.

Barbara Sutcliffe

Clapham schoolchildren engage in lively conversation on quarrying in the dales national park.

CLAPHAM schoolchildren visited nearby quarries before hearing about the challenges of removing valuable stone in a national park.



Friends of the Dales chairman. Mark Corner. With Clapham schoolchildren.

Mark Corner, chairman of Friends of the Dales, formerly the Yorkshire Dales Society, spoke to the children about quarrying as part of an oral history project for the Ingleborough Dales Landscape Partnership - a project led by the Yorkshire Dales Millennium Trust and funded by the Heritage Lottery Fund.

Earlier, the seven to ten year olds had visited Dry Rigg and Arcow quarries with Bobbie Millar, director of Quarry Arts, who is running the project. After answering prepared questions from the children, Mark said: “It was a privilege to chat with the children who were really engaged and saw the challenges of producing valuable quarried stone within the setting of a national park. They had a particular interest in wildlife and were pleased that any impact in this regard was being managed sensitively.”

He added: “As a conservation and education charity it is always good to have the opportunity to discuss issues, and it was particularly refreshing to do so with such enthusiastic and aware young people.”

Craven Herald & Pioneer. October 2017.

“General View of the Agriculture of the County of Durham with observations on the means of its Improvement” by John Bailey 1810.

As mentioned in the August newsletter Bryan Dixon has sent us a photocopy of section V which is on minerals, from this book which is in his possession. The photocopy is now in our Library.



Map showing the Lead Mine district with the Coal and Limestone further East.

Regarding the coal, at the time the book was written, most from the northern parts was mainly for export and that from the south and west was used at home. Thirty four collieries from the northern part are listed, giving the details of the proprietors, the occupiers, number of seams, the thickness of each seam, the depth of the working pits, the distance from the river and the number of men employed. Similarly there is a list of 35 collieries in Durham where the coal was mostly used in the southern part of Durham and the northern parts of Yorkshire. There is also information on the methods of removing coal from the pits and the rails used.

The lead mine section lists all the lead mines working in Derwent, Weardale and Teesdale in 1809. A total of 83 mines are named along with their owners and occupiers. Only 15 are named as making good profit, “many of the others raise little ore, and some are working to a considerable loss.” There is also a small amount of information on iron ore. At the time of the book there was a millstone quarry about four miles north of Stan-

hope where the best quality millstones were produced. The bed of stone was 21 feet thick with about 10 feet being of real millstone quality. The average number sold each year was forty.

Other topics covered in the photocopy include, grindstones, slates for roofing, silver sand, limestones, whinstones (for repairing roads), an argillaceous stone (used for making bricks) and yellow ochre used by colour makers.

Please contact Sallie if you are interested in borrowing this photocopy.
Barbara Sutcliffe.

LIBRARY NEWS

Thank you to Iris Brown for a generous donation from the library of her late husband Ivor – see the August Newsletter for a tribute written by Mike Gill. The gift includes many NMRS Newsletters; books on gold mining in Scotland and in Ireland, on lead mining in Yorkshire and on Great Britain’s iron ore industry; and Ian Tyler’s “Seathwaite Wad”.

Thank you to the Russell Society for several copies of the Journal of the Russell Society and the Camborne School of Mines Journal for 1974, 1988 and 1994 to 1999.

Thank you to the North Pennine Caving Club for several mining items from the library of the late Jack Myers, including maps, plans, Journals of the Leeds University Mining Society, books on mining in Cornwall, many NMRS publications, Mineral Resources Consultative Committee publications on barium and on fluorspar, several publications, by Jack himself and by his colleagues from Leeds and elsewhere, on surveying and on resistivity; and large, superb quality, original copies of photographs used in Bob Clough’s book on Yorkshire smelt mills – I will bring these to the Autumn meeting.

Thank you to Phillipa McCann for several books on lead mining in the north of England and for Frank Atkinson and Frank Booker’s books in the David and Charles’ Industrial Archaeology series – for North-East England and The Tamar Valley respectively.

Thank you to Rob Needham for books on Ground Penetrating Radar and on Coniston Copper Mines.

Sally Bassham { Honorary Librarian }.

NMRS - Newsletter Nov 2017

The national firm that is keeping mining jobs in Nottinghamshire

One hundred years ago, small gypsum companies came together to form British Plasterboard in East Leake. Now British Gypsum., Richard Tresidder goes underground to see how gypsum rock is mined for the construction industry. I am 80 metres underground in a Toyota pick-up heading towards Costock on the Notts-Leics border 3.7 miles away.



Heidi Barnard head of environment and sustainability with Jeremy Elvins the minerals manager. Outside British Gypsum's Marblaegis mine.

Our journey of a little over a quarter of an hour had begun just outside East Leake at the entrance to Marblaegis mine owned by British Gypsum. At the wheel is mining supervisor Matt Kennedy and we are joined by Jeremy Elvins, planning and estates manager and head of environment, Heidi Barnard. The gypsum mine is worked continuously in three shifts, with five men per shift extracting a minimum of 650 tonnes, explains Jeremy. Gypsum is calcium sulphate, a mineral rock used by man through the ages, notably for sculptures. A rich seam runs south of Newark through south Notts, Derbyshire and on to Fauld, Staffs, and was extracted in the medieval ages to carve magnificent Nottingham alabasters and exported across Europe. The Vanderbilts, the American rail, road and shipping magnates, used alabaster from Tutbury in their luxurious house in Newport, Rhode Island. Today East Leake is home to British Gypsum, now owned by the French conglomerate Saint-Gobain, manufacturing plasterboard on which the construction industry heavily relies.

A team of men, using a machine called a Joy Miner, cut away at the gypsum face about 6.5 metres wide by 2.5 high and over a year extract approximately 300,000

tonnes. There are enough reserves to last until 2042 depending on the rate of demand. Mining on an industrial scale began in 1917 and as the Toyota follows the underground lane, twisting and turning, the light from its headlights reveals caverns to the left and right of old workings with substantial pillars in between to support the roof.



Supporting pillars left in old workings.

The deeper underground, the bigger the columns to carry greater weight. Parallel grooves on the gypsum walls and ceiling of the corridors tell the story of earlier drill and blast working methods. The method today uses a £2.5m Joy Miner designed for British Gypsum which uses a rotating drum with tungsten teeth and continuously cuts at the gypsum face. The temperature is remarkably cool walking the 150 metres to the face,



Safe haven 90 Mts underground

about 13 degrees centigrade, says Jeremy. Matt leads and draws our attention to a “safe haven” which gives protection in the event of a problem such as an equipment fire. We had earlier received a rigorous health & safety brief as we here toggged up with helmet, light, emergency breathing apparatus and instructions about the underground colour codes for safe passage and no entry. The ground is uneven, wet and muddy as we approach the gypsum face. Suspended strings, a method first used by the Romans, and laser beams allow a precise and accurate cutting path to be cut.

About half of the new recruits of the 26-strong mining team worked for British Coal. Gary Oliver, the Joy operative, was formerly at Thoresby Colliery. “I might



Gary Oliver and Matt Kennedy @ Marblaegis mine East Leake.

change my career – do a bit of modelling,” banter Gary leaning against the Joy Miner posing for our photographer. Jeremy explains:

”Very few work at the actual face with others carrying out maintenance, mechanical, electrical and managerial roles.”The gypsum is cut and fed via conveyor to the back of the cutting machine and into a shuttle car which transfers the rock to a primary plant to be crushed into a uniform size. It is then transferred on an underground conveyor to a secondary crusher called a sizer and then to the surface. The fine-grained gypsum is sold for cement rock. The coarse and purest grade is used for making plaster and plasterboard. First, it is crushed and distributed in the homogenizer shed, where it emptied into a sweeping overhead arc movement before a slice is cut diagonally for a representative mix to be transported to the factory on another belt to be made into plasterboard.

About 300,000 tonnes of gypsum is mined annually to meet the huge demand for plasterboard, today a sophisticated material manufactured in many forms for the construction industry. East Leake is the UK headquarters of British Gypsum, employing 700 staff. The site is essentially hidden away between two hills. A rail head brings in DSG (de-sulphur gypsum) from coal-fired power stations where limestone is used to remove sulphur, the cause of acid rain, from emissions. DSG is chemically almost the same as the mined product.



Materials handling conveyor.

But the sources of DSG are in decline as coal-fired power stations close to meet EU emission levels. Nearby Ratcliffe-on-Soar will be one of the last to close and could close by 2025. A consequence is that British Gypsum has stepped up extraction by 50 percent from 200,000 tonnes. “The UK’s switch to lower carbon power generation is resulting in a rise in the recycling of waste plasterboard and in production of mined and quarried gypsum”. “The East Leake factory is benefiting from having £6.5m of investment in a modern high-efficiency gypsum mill to allow it to fully convert from DSG,” adds Jeremy.

British Gypsum gives a great deal of attention to innovating with a dedicated research and development team. It recently released magnetic plaster and its product Habito, is plasterboard strong enough to hang 15kg on a single screw. The output of manufactured plasterboard is sufficient to cover Wembley Stadium football pitch 10,000 fold. It is part of the Saint-Gobain UK Construction Products Division whose sales are around £500m.

British Plaster Board, later British Gypsum, was founded 100 years ago in 1917 and over time similar businesses, Cafferata, Gyproc Products, J W Sheppard,

were are of “national importance” for the manufacture of gypsum-based products such as plaster and plasterboard, key materials for the construction sector.



Loading Gypsum underground

British Plasterboard eventually became a company quoted on the London Stock Exchange. East Leake remains the head office of British Gypsum’s UK operation. The corporate name changed to British Gypsum in 2006 on the company’s acquisition by Saint-Gobain and the name BPB was consigned to history. Says Heidi: “East Leake is the centre of its plaster, plasterboard and ready-mix joint cement business. It is essentially about the internal part of a building. “Our sister company, Formula, in Newark, is a niche supplier of manufactured agricultural gypsum and high grade gypsum such as plaster for dental mouldings and food grade gypsum. It needs to meet the highest standards if it is going into foods.”

The head office site is a campus of buildings where the company invests heavily in developing innovative products. About 60 are engaged in research and development. The most recent is magnetic plaster to which whiteboards, pictures, children’s alphabets and so on can be attached. Heidi: “There are technical limits on the amount we can recycle but we are testing the boundaries, looking at ways to increase the volume

without impacting the performance of the product, for instance, structurally, acoustically or in a fire. “We have had a successful recycling scheme for 17 years but we are always pushing the boundaries without compromising on quality and guarantee.”

About 400 staff are involved in sales, marketing, HR, purchasing, environment, geological, mining, essential operations and support services. Their skills are extensive, from NVQs through to those with doctorates. Heidi, who started as a cleaner, has a degree and MA in economics, and is a post grad in environmental sciences. Jeremy is a mining geologist.

The end of DSG from coal-fired power stations has meant recruiting more mining staff, up from ten to 26, says Jeremy. When Marglaegis is exhausted – around 2042 – Jeremy says there are reserves elsewhere in the UK. “Our aim is to produce in the UK. The fall in the value of the pound against other currencies encourages home production.”

The nature of the industry brings environmental challenges, not so much from mining but production of plasterboard, says Heidi. The fall in DSG will reduce the energy consumed in its haulage from power stations but more rock will have to be processed, using more energy. Manufacturing plasterboard is energy intensive which needs to be controlled and efficient. Heidi explains: “In layman’s terms, we mine the gypsum, heat and grind it up, add water to turn it into a slurry, sandwich it between two bits of paper. It starts to set and crystallises before going through different dryers. We then cut it up.”

Saint-Gobain’s policy is only to buy “green” electricity in the UK. “We don’t buy fossil fuel-based electricity although we are a big gas user. We use natural gas but ask ourselves if we should use our own energy.” Manufacturing on Boots site in Beeston will continue ‘for sure’ says new boss. The processes use a significant amount of water from the site, such as ground water, pumped out to keep the mine dry.

Any surplus is discharged into local watercourses. Production is sophisticated. First extracted hundreds of years ago leaving us with a rich heritage of Nottingham alabaster carvings, gypsum remains an integral and vital part of the country’s construction industry.

The Nottingham Post. July 2017.

Working to protect Lake District's celebrated mining history.

The Lake District played a vital role in the history of copper mining but the remains of its industrial past were in danger of being lost. A £455,000 project involving nearly 90 volunteers is helping to put that right.



Lake District National Park archologist, Eleanor Kingston and volunteer Bob Mayow. At Penny Rigg Copper Mine near Timberthwaite.

But in the mid-19th century they were hives of industrial activity, where about 600 people were employed in copper mining. The men worked at Coniston Copper Mines and Penny Rigg at Tilberthwaite in the shadow of Coniston Old Man.

Although it's been decades since commercial mining ended, the landscape is still dotted with old mine workings, mill buildings where the ore was crushed, wheel pits, processing areas where ore and waste stone were separated and spoil heaps, which tell the story of an industry that dates back to the 16th century and was supported by Elizabeth I. That history has been at risk but a two-year project to conserve it and to make it more widely known is now more than halfway through and has already been declared a success. The project, which will end next March, has two parts - to conserve the old mine workings and preserve them for the next 50 to 100 years, and to provide information for local people, schools and visitors.

The project, which has been funded by a £455,000 Heritage Lottery Fund grant, was partly prompted because the Coniston Copper Mines site, which is a Scheduled Monument but which has been slowly deteriorating and is currently on the at-risk register.

The hope is that once the project is complete, it can be removed from the register. Mining in the area began centuries ago and Elizabeth I was responsible for bringing over miners from the Tyrol in Austria who had the skills to work in the industry. Some went to work in Keswick and others came to the Coniston area. A journal entry, made by a curate called Robert Dowson, records how he was brought to look at new mines at Tilberthwaite in 1617 by someone called Towsie, whose father had been one of the original Tyrollean miners. Dowson watched miners carry out a technique called fire setting, which was a pre-gunpowder technique used to help them extract the copper ore.

Lake District National Park archaeologist Eleanor Kingston said the project would ensure the story of the area's industrial past was preserved. "The Copper Mines are a really important part of Cumbria's history. They've been here for over 400 years; they're integral to the way the valley and Coniston village itself developed in terms of buildings and housing for miners. "I think it's something to be celebrated and to keep so that people are reminded of the heritage that's on their doorstep. "It's important as well because Coniston itself, just in terms of mining history, is one of the important places in the north west. "It's one of the earliest starting places of industrialisation in that Elizabethan period. We always talk about Manchester and Liverpool but the mining and quarrying that were going on here were really important."

Experts from a company called Heritage Consolidation Ltd are carrying out work to conserve the mine workings, taking down and rebuilding structures where necessary. Meanwhile 87 volunteers have been involved in survey work to measure and make drawings of the sites and in research and pulling information together. Volunteer Bob Mayow travelled from his home in St Bees to take part, helping to produce detailed site surveys. He said it was an evocative area where it was easy to imagine the harsh conditions and hardships that the men endured: "These people didn't have Gore-Tex and Pertex, they had woollen clothing, maybe leather and they didn't have safety equipment."

Interpretation panels will be put up at key places and project work has been carried out with local schools. Project partners are the Lake District National Park, the land owners, the Ruskin Museum in Coniston, Cumbria Amenity Trust Mining History Society, YHA Coniston and Grizedale Arts.

CATMHS chairman, Warren Allison said that at its

peak, not only did the area support about 600 miners but there were many other people involved in ancillary industries, such as gunpowder manufacture, which in turn required coppicing.



Part of the wheel and wheel well and mill buildings at Penny Rigg.

“If you think of Coniston and the Lake District, everybody thinks they’re out of the way and we’re isolated but we’re not. The Lake District really is an industrial landscape - it’s not a natural landscape, it’s been fashioned by man. “People were coming in from all over the county to work there. It wasn’t just people from Cumbria, they were coming in from Ireland as well. You’ve got a huge influx of people coming in, in a very short period of time. In the 1850s it was one of the biggest copper mines in the country.” He said the work in local schools was particularly important because the resources were on the doorstep but often unknown: “Most people would walk through those places and not realise what they’re walking on. The Lake District was a huge mining area.”

The North West Evening Mail.

August 2017.

North Pennines Mineral Expo

Northern Mines Research Society was very pleased to be invited to participate in the first North Pennines Mineral Expo held at St John’s Chapel, Weardale, Co Durham, the last weekend in July. This event, organised by Enrico Rinaldi and his wife, Felicity, had as its aim to pay homage to the historical mining area in the heart of the North Pennines. It certainly achieved this. Both days were extremely busy helped by all the publicity by various media throughout the country. The biggest coup was a

special exhibition for the National Museum of Wales of fluorites from the Robert King Collection. Many of these had previously belonged to Henry Harwood (1886-1975). Those displayed were all from the Weardale and Alston area. One of our members, Mark Hardy, also brought along some large fluorite plates from the Rookhope area, one of which were particularly gemmy.

Another of our members, Ian Shield, kindly helped Rex to unload on our arrival and from that time on we seemed to be continually chatting. I had taken along some of our information boards and a selection of our publications appertaining to the area as a whole. Sales were brisk helped by the inspection copies that visitors could thumb through. The most popular one was “Miners and Farmers.” Several of our members came for a catch up and I was pleased to meet Judith Sutcliffe for the first time.

Other interesting displays were from Killhope Lead Mining Museum, The Russell Society, a stand devoted to Spar boxes and the Weardale Museum and High House Chapel at Ireshopeburn. The latter brought along several albums of old photos of the area including mining related ones. These aroused a great deal of interest from the local attendees. Also there was a small selection of mineral dealers with both local and overseas specimens.



Enthusiastic collectors.

What really pleased me was seeing some of the miners who we had had dealings with when the mines were still in production. Unfortunately we were only able to stay for the Saturday but apparently the Sunday was

just as busy with the added attraction of a photo competition and music from Stanhope Silver Band. I had provided activities for the children – a wordsearch with minerals specimens on completion, and a poetry competition. Again I left prizes.

I was really pleased to have a catch up with Cal & Kerith Graeber who had been so generous of their time when they hosted NMRS meets up at Rogerley Mine over the years. This has sadly come to an end as the Americans have ceased operation at Rogerley and passed the operation onto others who will probably mine much more commercially to the detriment of societies like ours. We were really privileged to be able to visit and had a waiting list each year. Cal & Kerith were here to formally end their association with Rogerley and we must also thank the late Mick Sutcliffe and Lyndsey Greenbank who originally started the whole enterprise as amateur enthusiastic collectors.

Barbara Sutcliffe

Plans for £100k visitor centre to mark “lost” mining village under the loch at Strathclyde Park.

Plans are being hatched for a visitor centre that will tell the story of the ‘lost’ Lanarkshire mining village of Bothwellhaugh. The village was demolished in 1965 to make way for Strathclyde Park, its loch and the M74 motorway. Funding options are currently being investigated to create the centre on the site of the old Raith farm workers’ cottage off Bellshill Road, with project costs estimated at £100,000.



The Bothwellhaugh with Palace Pit in the background. Inset same shot today.

Former village resident and chairman of the Bothwellhaugh Ex-Residents Committee Alistair Griffiths. Who was brought up in the village during the early 1950s – explained the idea for the visitor centre came from members George McPhee and Elizabeth Swarbrick. But the project has a personal significance for Mr Griffiths, whose mother Isabel lived in Raith cottage as a child. He added: “I think it’s a great idea to keep the memory of the village alive and pass it on to future generations. I hope we can pull the project off. It won’t just be of interest to people descended from those who lived at Bothwellhaugh, but to everyone interested in Lanarkshire and mining history.”

The Scottish Daily Record.

August 2017. Edited.

Soutra quarry granted nine-year extension

The operator of a hard rock quarry has been given planning permission to extend its life by nine years. Back in 2009, the Skene Group, which currently extracts an annual 450,000 tonnes of greywacke – a hard sandstone - at the Soutra Hill facility, was granted an 18-year consent by Scottish Borders Council.

On Monday, the firm’s proposal to extend that consent to 27 years was approved by SBC’s planning committee. Councillors heard there were no objections to the application which will see the quarry – beside the A68 near the Midlothian county border – lowered by 36 metres to access an estimated 3.9million tonnes of additional material.



Soutra Quarry.

One member of the public wrote to support the extension “on the grounds that it will safeguard jobs and provide the region with aggregates, ready mix and concrete blocks”.

Boarder Telegraph. August 2017.

From the Channel Tunnel to Cross-rail - discover the Burton link.

Building a locomotive for use deep underground in the coal mines was a head-scratching problem in July 1980. Diesel engines would be toxic to workers and couldn't cope with the dust-filled air, while electric motors had to contend with travelling through more than a foot of water.



Clayton Equipment. Originally based at Hatton and now based at Burton. Are masters in building underground locomotives.

Derailments were commonplace and repairs had to be completed on the move with simple tools. If the list of problems wasn't already complex, the locomotive needed to be small enough to be lowered in the cages to the bottom of the mine. The answer behind all of these issues was discovered by Hatton-based firm Clayton Equipment Ltd. The company secured a contract with the National Coal Board – it's largest UK customer – to design and build a high-speed rail car. The answer was a 24-seater vehicle capable of reaching speeds of 25mph.

Clayton wasn't new to this work, the firm already exported locomotives to Greenland's glaciers and to deserts in Tunisia. The firm exported 60 per cent of its products with its main orders being in Ghana for gold mining and Zambia for copper mining and Canada for minerals.

The firm was founded in 1930 and tackled day-to-day engineering before setting up in locomotive manufacture in 1950. While business boomed at first, it was hit hard when British Railways started to produce its own machines during the modernisation from steam to diesel between 1957 and 1965. Plans for a Channel Tunnel were scrapped in 1975 after some tentative

tunnelling tests at Shakespeare Cliff. If this original tunnel plan had continued, Clayton had locomotives lined-up ready for use. Some Clayton machines lay unused and rusting in the original Channel Tunnel for years after the project had been scrapped – only for the plan to be revitalised in 1984 and work finally started in the UK in 1988.



The Clayton Locomotive at Customs House London. About to ride the new Elizabeth line for the first time.

Clayton continues to design and build innovative locomotives and it was a Clayton locomotive used by London Mayor Sadiq Khan when he inspected work on the Crossrail project. Clayton is now based at Centrum 100, in Burton.

Burton Mail. August 2017

Lithium mining in Cornwall gets £1m boost

A project to explore for lithium in hot springs in Cornwall has received a £1m investment. Global demand for lithium - used in batteries for mobile phones and cars - is expected to triple in the next decade. One of the investors said Cornish Lithium could become a "very significant player" in the industry. The money will be used to decide where to put the first drill holes.

CEO Jeremy Wrathall said the county is the only current known source in the UK and the company will use data to "prioritise the best locations for subsequent drilling and sampling". "There is a lot of excitement in the technical world about this," he said. "We hope to be the domestic source of lithium for the UK." He said the £1m investment would be enough for more than a year - but that production is at least five years away.

The investors are Peter Smedvig, founder of investment firm Smedvig Capital, Keith Liddell, a metallur-

gical engineer and former mining CEO, and Chris von Christierson, director and principal of mining firm Southern Prospecting. Mr Liddell told Reuters he believed Cornish Lithium could become a "very significant player" in the lithium industry in Britain and Europe. High levels of lithium were identified in the water in Cornish mines in the 19th Century, but there was no market for it at that time.

The government plans to ban new petrol and diesel cars from 2040, raising the prospect of a huge increase in demand for lithium. In January, Cornish Lithium said it had reached a mineral rights agreement with Canada's Strongbow Exploration, which bought South Crofty tin mine in 1998. Strongbow Exploration will get royalties from any lithium extracted by Cornish Lithium.

The metal would be extracted by drilling at least 400m (1,300ft) into rock and pumping out lithium-laden water.

Most lithium is produced in South America, Australia and China, but the UK government has earmarked it as a metal of strategic importance to the country.

BBC News. August 2017.

Russia's Yalevskogo mine sets world coal production record

The Russian Yalevskogo mine operated by the Siberian Coal Energy Company (SUEK) recently surpassed the world record for monthly coal production from a single longwall system. The mine produced 1, 567 000 tons of raw coal in July 2017. The mine, formerly known as Kotinskaya, surpassed its own national record and challenged the world record by mining 1 407 300 t in the month of May.

Last year, SUEK ordered Cat® longwall equipment for a face extension from 300 to 410 meters. The extended longwall started operating in April 2017, and it quickly established new production records in the 3.8-meter-thick seam – without any lost time injuries on the face and with full compliance to national safety laws. In 2016 Yalevskogo mine produced more than 4.5 million tons of thermal coal, and production is expected to increase significantly this year. Growing a longwall face, SUEK combined Cat roof supports from other longwall faces to extend the face the additional

110 meters. Three different types of Cat roof supports were integrated into the system. To match the face conveyor to the different roof support types, Caterpillar manufactured custom clevis mountings (connection between AFC pan and roof support base) to ensure that all face roof supports have the same tip-to-face distance of less than 412 mm, according to Russian regulations. The tip-to-face distance is critical to maximise roof integrity and limit dilution. The two-leg Cat roof supports each have a width of 1.75 meters and support capacity of 725 t. The hydraulic legs are specially plated to resist the corrosive environment of the mine.

The longwall system includes a Cat AFCPF6 armoured face conveyor (pan width 1142 mm) as well as a Cat BSLPF6 beam stage loader – both driven through Cat CST drives, featuring no-load motor startup, AFC soft start, synchronised heavy load startup, and accurate load sharing between as many as three drive motors. For the face extension, the installed power of the face conveyor was upgraded to 3 x 1000 kW. The beam stage loader includes a SK114 crusher with 400 kW installed power. Pan width is 1342 mm.

The longwall is fully automated with Cat face automation, including Cat programmable mining controls and condition monitoring software, facilitating full automation, monitoring and remote diagnostics for all face equipment. All information can be transferred to the surface in real time to support optimising longwall performance.

Additionally, the electro hydraulic roof support control system for the Yalevskogo mine offers special operating modes to boost both productivity and safety. The system can reactivate some regions of the face and resume production even though the face has been put into a safe mode in response to detection of an electrical fault, sometimes caused by a broken cable between two PMC-R controls. Before reactivation, strictly defined conditions must be observed.

World Coal. August 2017.

Leonard (Len) Cook

The Society regrets to announce the death of Leonard (Len) Cook, one of its two surviving founder Members, in August. Len, a surveyor, was an active caver and was involved in exploring and extending the Stump Cross – Mongo Gill cave system during the 1950s. Len is survived by his wife, Sylvia.

Mike Gill.

Two Friends visit Mossdale Caverns.

Friend and myself made the trip up to Mossdale on the anniversary of the tragic accident. The return trip to Conistone at lunch time, was unexpectedly informative, with the meeting of numerous groups of people making the same journey. For many of them a now regular but always tinged with sadness visit.



As well as bumping into fellow club member Ken Makin from Todmorden. We also spoke with Alan Brook, Paul Everett and Dave Brook, {see photo}.

The Brook brothers told us of their involvement, during and after the tragic event. Mr Everett disclosed, how he was meant to be with the Mossdale party. However because of a late arrival on his part he had missed the group at the rendezvous point and by chance met up with another group of cavers. He went on to spend a long time with them trapped but in a safe area above the flood water in a different cave system.

We had a chat with John Ogdens, who's best friend was one of the six who had perished. Also with fellow caver and Colne resident, Frank Barnes. And last but not least another chat with Jim Cunningham and his friend.



Having no involvement with caving myself and having never meet any of these people before except Ken Makin. I have to say that under the circumstances how friendly, willing and informative they all were. A real credit to their sport and mankind. I must also recommend the reading of the 50 anniversary report which was put together by Mick Melvin. A very memorable day indeed.

Gary Topping.

Leiths Group acquire Fyfe Glenrock. Scottish quarrying and construction materials group.

ABERDEEN-based Leiths (Scotland) Ltd. The largest family-owned independent quarrying and construction materials business in Scotland. Have acquired the business of Fyfe Glenrock, an Aberdeenshire-based supplier and processor of high-quality natural stone products, for an undisclosed sum.



Fyfe Glenrock, the Scottish arm of stone wholesalers Pisani, who went into administration in June this year, have a history dating back to 1846, when the then John Fyfe Ltd established their business at the famous silver-granite quarries at Kemnay. Today the business operates from a purpose-built facility in Oldmeldrum, where 19 staff cut, polish and engrave natural stone sourced from the UK and around the world, including Scandinavia, China, India, Portugal and Brazil.

The company has been involved in many prestigious contracts including the supply of walling and flooring to the Scottish Parliament Buildings at Holyrood, in Edinburgh. More recently, Fyfe Glenrock supplied a Leiths contract with all the natural stone products used in the urban regeneration project at, The Green in Aberdeen.

Commenting on the acquisition, Ian Leith, chairman of the Leiths Group, said: 'The acquisition of Fyfe Glenrock adds another quality business to the Group's portfolio. "I personally look forward to working with the team and developing a company that has deep roots in Aberdeenshire and that I have long admired."

Agg-Net. August 2017.

NMRS - Newsletter Nov 2017

Visit Report – Nenthead Mines (Surface Walk) 30th July 2017

Five of our members enjoyed a fascinating surface tour of the mining remains at Nenthead. Despite some small showers and threatening clouds, the weather was kind, allowing us to visit the main parts of the site in comfort. Pooling our individual knowledge, we were able to give a good account of the mining features, geology, and history of the site. Starting from the car park, we inspected the portal to the Caplecleugh Low Level with its water flow recording equipment apparently installed earlier this year, before crossing the yard to find similar equipment in the entrance to Ramgill Level.

Passing the remains of the water power exhibit from the old heritage centre, we soon arrived at the site of the smelt mill, with its massive central wall and re-constructed water wheel. It must have been a wondrous site in its heyday, with the noise and the heat as vast quantities of ore were processed. Next on the itinerary was the portal to Carrs Mine, which is now operated as a show mine by the Nenthead Mines Conservation Society, and which may form the basis of a future NMRS field trip. From Carrs Mine, we descended to the level of the River Nent to take a closer look at the surface geology. Various minerals were on display including galena, sphalerite, fluorite, quartz, and calcite. A short distance from a small waterfall there is a good exposure of metasomatised limestone which can be distinguished from the more usual limestone by its rusty brown appearance



due to the presence of iron and manganese compounds. Occurring alongside mineral veins, this altered limestone is often further mineralised, and was worked underground as flats, including the famous Ballroom Flat usually accessed from Smallcleugh Level that was next on the tour. After spending some time inspecting the Smallcleugh Portal, and site of the adjacent mine shop, we walked across to the other side of the valley to have lunch by the re-constructed mine shop adjacent to Capelcleugh High Level. In the afternoon we investigated the Handsome Mea Reservoir, before finally returning towards the smelt mill once more, to admire the magnificent remains of the water wheel pit that was associated with the smelt mill.

Finally we made our way to the top of Brewery shaft, where we inspected the surface remains and buildings unfortunately from the outside only, before making our way back to the car park at the end of a fascinating day.

A Group Member.



Gold Rush : Patagonia

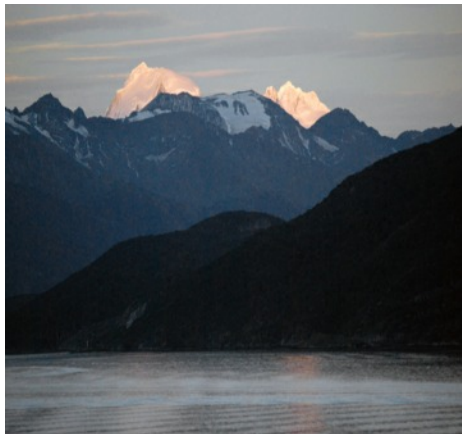
Preamble : Earlier this year I was in Patagonia and whilst speaking to a local girl, she mentioned ‘the Yamana’ in the context of the primitive natives who had arrived on Tierra del Fuego 6,000 years ago. In asking for more information she said Europeans subjected the tribes to genocide during a gold rush in the 19th century.



The region known as Patagonia at the tip of South America. Showing the land boundary of Tierra-del-Fuego. Divided between Chile and Argentina.

By this stage, I knew that the first navigators who explored the region, such as Magellan, had kept their distance on account of the many fires burning on the large island, hence the name Tierra del Fuego

(Land of Fire). Only later, they realised the fires were to keep the local inhabitants warm ... for the simple reason, they wore clothes. When Europeans arrived in the 19th century, men such a, natural sciences; others



A view from the Beagle Channel of Patagonian landscape at daybreak.

established missionaries so as to convert the ‘heathen savages’. In 1879, a Chilean naval expedition reported there was gold dust in many of the streams and rivers on the west coast of Tierra del Fuego, but it took time for a gold rush to kick off. When a steamship ran aground on the tip of mainland Argentina, the men sent to assist found gold in quantity at Zanja a Pique. The first reports of the riches appeared in Punta Arenas but when the news reached Buenos Aires in 1884, the gold rush began in earnest.

Julio Popper. In 1886, a Romanian engineer, Julio Popper who was working in Buenos Aires, accepted a

contract with a simple aim - to assemble a company of miners from the city’s immigrant population and exploit the southern gold fields. He included 18 militiamen in his group and set up two camps on the big island of Tierra del Fuego. Popper handed out rough justice to gold miners and thieves who contravened his strict regulations; his militia had little hesitation in obeying Popper’s orders to shoot any of the natives who trespassed on the lands. With justification, the tribes believed they had entitlement to traverse the land and to hunt the sheep from the many embryo farms that now began to populate the island. In spite of Popper’s enforcement of very arbitrary laws, his gold recovery was a great success, but in the process, he earned the title - “Terror of Tierra del Fuego”.



Typical landscape of beach, forests and mountains. Where the early natives would eke out a living.



The one-gram gold coin minted by Popper in 1889. Which features his name and mining tools.

To facilitate communication, Popper printed his own stamps, incorporating his initial ‘P’, mining tools and a gold pan in the design. The stamps covered postal costs from the scattered mining camps to the nearest town, Punta Arenas, where Chilean or Argentinian stamps augmented the localised version. Popper’s drive and motivation also led him to build his own mint in which he processed his gold into one-gram and five-gram gold billets.

Popper had recovered great amounts of gold, but soon after his mysterious death in 1892, the gold rush petered out. No one knows the reason for his death, but with justification, his contemporaries suggested he received poison ...from “the men he offended in the south.”

The author’s research.

In Patagonia, I had obtained two pictures of the genocide, but there were no photographs of the gold rush activities. As always, the Internet saved the day and it helped me to recover many photographs of the primitive tribes (naked and clothed). Just as I was about to call it a day, I came on the trailer for a film shown at

Cannes in 2000, entitled *Tierra del Fuego* and based on a novel written about Popper. A handsome Argentinian film-star played Popper, who stands in front of the cathedral in Santiago relating his life's story, which emphasises how his desire for wealth and power led to poverty and ruination. *Tierra del Fuego* was the obvious place for shooting such a film and, knowing the region, I enjoyed securing a few film-stills representative of the gold rush days.



A still from the film, *Tierra del Fuego*. Showing Popper surveying the beach where his miners are recovering gold.

A still of "gold dust" from a scene emphasising the riches of the gold dust.



The postage stamp issued by Popper to facilitate communication between his Mining camps and the town of Punta Arenas.

The portrait of Julio Popper featured on a Romanian postage stamp issued in 1986.

Any reader anxious to augment my brief references to Patagonia's early natives should tap 'Selk'nam genocide' into the World Wide Web ... and go from there.

And finally ... For some unimaginable reason, in 1986 Romania issued a postage stamp to honour Popper, which combined his portrait, a map of Patagonia, Popper's own stamp, one of his gold coins and a gold pan. I can only think it was to raise finance among philatelists but a copy of my booklet, *Gold Miner's Diary*, goes to readers suggesting a better reason on finlaggan@hotmail.com.

Dr. R. M. Callender. FRPS.

Sirius Minerals answers some of the big questions about its massive potash mine.

Work is about to start on the main construction of Sirius Minerals' potash mine within weeks. Sirius answers some of the big questions about the largest mining project Britain has seen in decades.



Where will the potash come from?

The £2.3bn project will mine Sirius' fertiliser product - Polyhalite - from a deep underground seam that stretches hundreds of kilometres into the North Sea. It's one of the largest ever discovered.

When will the first Polyhalite be reached?

If everything goes to plan, the first Polyhalite will be reached by 2021. Within three years, the project wants to reach 10 million tonnes of production a year.

How deep will the project dig?

The mine shaft will be more than 1.5 Kilometres deep.

How large is the project area?

Over time, miners will dig far out - Sirius has mineral rights covering 200 square miles. The company says its "area of interest" is more than 700 square kilometres, starting under the North Yorkshire moors and going out in a 'triangle' shape under the North Sea.

How long is the project expected to last for?

Cont overleaf. .

A long time; a 50 year mine life is assumed from first production, but the shaft system has been designed to last 100 years.

What happens to the Polyhalite once it's mined?

It travels to Teesside for processing and shipping via a 37km underground conveyor belt.

Where will the underground tunnel go?

The tunnel, which will take around two years to build, will pass through mainly rural areas - avoiding towns and villages. It will start at Woodhead Mine, south of Whitby, and travel 37km to Wilton.

An "intermediate" mine shaft is being built at Lockwood Beck, near Lingdale, which will act as a turning point between two different underground conveyor belts.

How deep is it?

The depth of the tunnel is much shallower than the mine, but at 360m it's still SIX times the height of the Transporter Bridge. It will be 4.3 metres wide.

What disruption can residents or businesses expect while the tunnel is being built?

Large circular boring machines will be used to dig the tunnel - but Sirius says people won't be able to hear work being carried out.

This will be one of the biggest mining projects ever undertaken in Britain.

Gazette Live news. August 2017.

Memorial to free miners killed in the Forest of Dean.

A new memorial has been unveiled to remember freeminers who died in mining accidents in the Forest of Dean.

The 7ft (2.13m) monument made of steel and stone stands next to Pan Tod beacon on Ruardean Hill, Gloucestershire and records the names of 50 men. It has been built by ex-miner Ernie Hughes whose father Leslie died at the Northern United colliery in Cinderford in 1951, aged 45. Mr Hughes said he had wanted to set up the memorial "all his life". He said: "We wanted to set up the monument so everybody would have a record of what went on in the mines." The former leader of the House of Lords Baroness Royall,

who lives in nearby Blaisdon, helped Mr Hughes with the unveiling of the memorial. She said: "It's sad because it's a memorial to people who died, but it's a great celebration of our traditions and heritage in the Forest of Dean. The wealth of the Forest of Dean was built thanks to mining."



The memorial made from steel and stone. Stands next to Pan Tod beacon on Ruardean Hill.

Freeminer is the ancient title given to a Forest of Dean miner who has earned the right to work personal plots. To qualify, freeminers have to have been born in an area known as the Hundred of St Briavels and to have worked underground for more than a year and a day. Several hundred Forest of Dean men used to work in small mining operations although in recent times their numbers have declined.

A new mine opened in the region in 2013 as part of an effort to attract young people into the industry.

BBC Wales News. Sept 2017.

Russia's Alrosa searching for 16 miners missing after accident.

Rescue teams are searching for 16 workers missing in a mine owned by Russian diamond miner Alrosa after the pit flooded on Friday, the company said. "A total of 102 miners have been brought to the surface and another 33 miners have been located in the mine in Yakutia in eastern Siberia and are being evacuated, it said. There were 151 workers underground when the accident happened". No casualties have been reported so far, and there was no word from the Alrosa on the chances that the 16 missing miners could be rescued. The water flooded into the mine shaft from an open-cast mine above it earlier on Friday. State-controlled Alrosa is the world's largest producer of rough diamonds in carat terms.

Reuters Aug 2017.

Fox Clough and Trawden Collieries field trip.

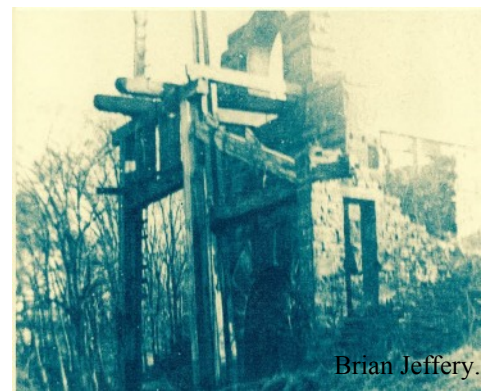


G Topping

Eleven members turned out for the archaeological surface walk to, Fox Clough and Trawden Collieries in Colne. I must apologise to Sallie for the mix up which resulted in her missing the trip. Our member Neil Catlow brought along two young relatives who thoroughly enjoyed the trip and also got involved. Our leader Gary Topping had prepared a hand out, which gave an overview of the history as well as some interesting maps to peruse. Neil had some previous knowledge of the site and he provided a great deal of information in the form of maps down loaded to his mobile device. We discovered that someone has been tidying the site up which made the archeology a lot easier to see. So whoever it is they are doing a good job.



Here are two photographs of the engine house at Fox Clough. The left one is how it looks today and the right one is how it looked circa 1910. We believe and it was agreed on the day that the shaft which is below the wooden head frame was used for pumping. Two coal seams were worked at the colliery, Lower Mountain and the Union.



Brian Jeffery.

Trawden colliery, 1874 - 1890. A continuation of Fox Clough, their pit tops only being about 200 mts apart. Also recorded as working the Lower Mountain Seam. The two collieries were connected under-ground for ventilation and pumping. This site was also opencast in the 1950s but not much remains. It was reported that the coal was 48 inches thick which is unknown for the Lower Mountain Mine in light of this I would have to conclude that it was probably the Union Seam. This was supported by the opencast workings in the 1950s which found old workings from the colliery. Also during the work some wooden tools were discovered and these are now exhibited at the Townley Craft Museum in Burnley. All in all a very good site to visit with some good archeology still remaining. Access is a bit difficult with the approach path being very muddy but well worth the effort.



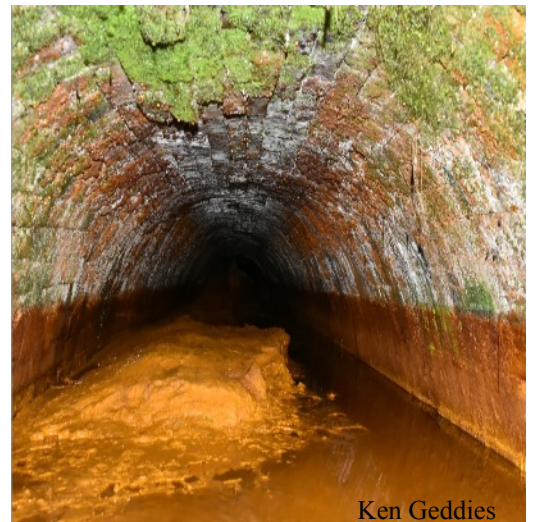
Ken Geddies

Fenced off drift entrance to Trawden Colliery workings. Union Mine.



Ken Geddies

A stone arch bridge over the river at Fox Clough. Probably The connecting access road to Trawden Colliery.



Ken Geddies

A photograph looking up the drift. Which is brick lined and about 8ft wide and 5ft high. **Graham Topping.**

Soon to open Bishop Auckland gallery celebrating North-East mining heritage awarded £250,000.

A CULTURAL hub designed to celebrate and preserve County Durham's coal-mining heritage has been awarded a quarter of a million pounds. County Durham Community Foundation (CDCF) has awarded its biggest ever donation of £250,000 to the new Mining Art Gallery – which opens in Bishop Auckland next month.

The grant, which represents the largest single donation in the charity's 22-year history, will be used to fund two gallery rooms dedicated to everyday life in the county's mining communities, including popular hobbies, working men's clubs, domestic duties and the Durham Miners' Gala.



GRANT: Barbara Gubbins CBE, chief executive of County Durham Community Foundation, and David Maddan, chief executive for Auckland Castle Trust, outside Old Bank Chambers, in Bishop Auckland, which is being transformed into the Mining Art Gallery

It was made possible thanks to an unrestricted grant to Durham-based CDCF by the Northern Rock Foundation when it disbanded in 2016, which was then allocated by the foundation for heritage through the arts projects.

Barbara Gubbins CBE, chief executive of CDCF, said: "When CDCF received the unrestricted gift from the Northern Rock Foundation, we recognised this was a real opportunity to support cultural projects in County Durham that would have a real benefit to the local community and resonate with its rich heritage.

"The Mining Art Gallery offers the perfect way to deliver this and build on the legacy of the Northern Rock Foundation, as well as that of CDCF."

The Mining Art Gallery, created by Auckland Castle Trust in partnership with the Gemini Collection of Mining Art, will pay tribute to the North-East's mining heritage and explore why miners, unlike many other industrial workers, chose to express themselves uniquely through art and creativity.

It will feature works from across the Great Northern Coalfield, including artists such as Norman Cornish and Tom McGuinness, with an active learning and engagement programme giving visitors different ways to engage with the region's past.

David Maddan, chief executive for Auckland Castle Trust, said: "The Mining Art Gallery will have a real resonance for many people across the North-East who lived and worked in the region's mining communities.

The Mining Art Gallery will open on Saturday, October 21, with community previews from Saturday, October 14.

The Northern Echo. September 2017.

Anglesey Mining targeting production in 2020 for Parys project as metals prices rise.



The repeated rise in metals prices has given a boost to the project's fundamentals. The uplift in base metals prices has prompted Anglesey Mining plc (LON:AYM) to shift up a gear in developing its Parys Mountain project - aiming to complete a definitive feasibility study in the first half of next year.

Assuming financing talks are well advanced by the middle of next year, construction at the North Wales site could start before the end of 2018 and initial output in the first half of 2020, the firm said. The recent rise in metals prices have given a boost to the project's fundamentals.

Since July's scoping study, all metals to be produced at the mine have risen, with copper now at US\$3.10 per pound, compared to US\$2.50 a pound two months ago. Zinc has increased to US\$1.40 per pound compared to US\$1.25 per pound in the study and lead has moved to US\$1.09 per pound compared to US\$1.00, Anglesey said.

Using the July prices, on a base case the pre-tax net present value (NPV) is US\$33.2mln, or £26.6mln and an indicated internal rate of return (IRR) of 28.3%. But using the longer term metal price projections (US\$1.35 for zinc and US\$3 for copper) the NPV rises to \$43.2mln, or £34.6mln and the IRR moves to 33%. Moreover, the July study was based on only the 2.1mln tonnes of indicated resources reported in 2012.

Consultant Micon had also reported a further 4.1mln tonnes of inferred resources which were not incorporated in the scoping study. Anglesey reckons a high proportion of these inferred tonnes will be converted into indicated probable reserves once exploration drilling from underground takes place. These would be processed through the same plant and would significantly increase the projected 8 year life of the mine to 15 or 18 years and enhance the NPV.

Major steps in the short term, that Anglesey will now take at Parys include beginning an environmental impact assessment and converting the scoping study to a DFS. It also aims to kick off talks with potential providers on project finance, including investment funds, metal traders, smelters and banks. Beaufort Securities repeated a speculative buy' on the shares saying today's news was positive and set out a development timeline

Whilst more detailed work is required to complete the DFS which will provide the platform for project funding discussions, we continue to be encouraged with the initial economics and look forward to further updates as Anglesey executes its planned timetable for development, it said. Anglesey shares shot up almost 24% to 3.63p on Friday.

proactiveinvestors.co.uk. Sept. 2017

Publication news.

Due to some recent donations we have a selection of out of print BMs. If you prefer a physical copy as opposed to a download. Please contact me. A4 £10.00 A5 £8.00.

Barbara. mansemins@btopenworld.com

Luxembourg becomes first European country to pass space mining law.

The government of Luxembourg is moving forward with an ambitious plan to profit from asteroid mining by passing a law that defines the conditions companies must fulfill to obtain a licence for launching a space mining mission.

The bill, approved by a vast majority (55 votes against only two), makes the tiny nation the first European country to offer a legal framework ensuring private capitals their rights over resources they mine in space, the government said.



Digital rendition of a mining operation in space.
{ Source Mine Stories }

Before trying to become Europe's hub for space mining, Luxembourg already had a long-standing space industry, which has played a significant role in the development of satellite communications.

The legislation, over 18 months in the works, defines the conditions companies must fulfill to get a licence for launching a space mining mission. Luxembourg, one of the euro zone's wealthiest countries, had been studying a possible involvement in the emerging space mining industry since 2013. But only in February last year it officially announced an initiative to promote the mining of asteroids for minerals.

A few months later, the government reached an agreement with a US-based company, Deep Space Industries, which will be conducting missions to prospect for water and minerals in outer space. Both parties are currently developing Prospector-X, a small and exper-

imental spacecraft that test technologies for prospecting and mining near Earth asteroids after 2020. Weeks later, in June last year, the nation announced the opening of a €200 million (\$228 million at today's rates) line of credit for entrepreneurial space companies to set up their European headquarters within its borders. And in November, it bought a major stake in US-based asteroid miner Planetary Resources in a deal worth \$28 million (€25 million at the time). The goal of the investment is to help the Redmond, Washington-based firm launch its first commercial asteroid prospecting mission by 2020.

Luxembourg's approval of space mining legislation follows a similar move by former US President Barack Obama, who in 2015 signed a law granting American citizens rights to own resources mined in space. But the only international legal body available dates back to 1967. The Outer Space Treaty, signed by the US, Russia and a number of other countries, says that nations can't occupy nor own territory in space.

"Outer space shall be free for exploration and use by all States," the treaty says, adding that "outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." Geologists believe asteroids are packed with iron ore, nickel and precious metals at much higher concentrations than those found on Earth, making up a market valued in the trillions of dollars.

Mining.com. July 2017.

Celebrations after key part of Lancashire's historic industrial past situated in Oswaldtwistle saved for future generations.

AN EAST Lancashire town's industrial heritage has been saved for future generations. The Aspen Colliery, off Blackburn Road, Oswaldtwistle, are home to beehive coking ovens, known locally as the 'fairy caves' which played a key part in Lancashire's industrial past, has been removed from Historic England's Heritage at Risk Register. After being heavily used in the 19th century, vegetation took over the site and tree roots began to destabilise the rocks. It was added the Risk Register in 1998, and its condition continued to deteriorate as it was subject to anti-social behaviour. However, repair work was carried out by owners Hyndburn Council, Regenerate

Pennine Lancashire (now Growth Lancashire) and Historic England, which was completed in spring.

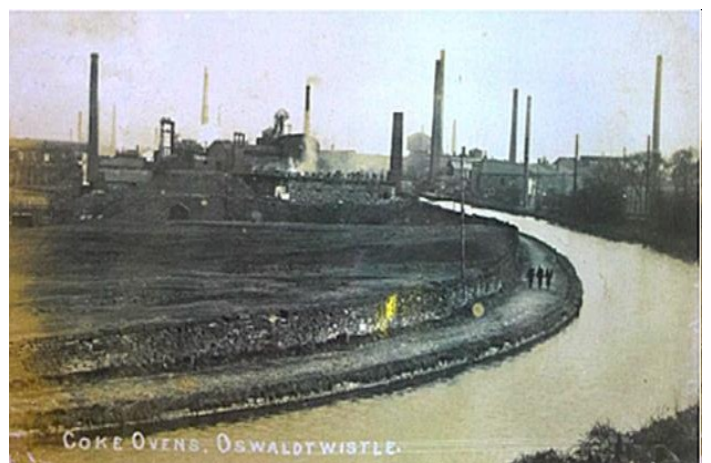


Aspen colliery coke ovens today.

Now its future has been confirmed after being removed from the 'at risk register'. Councillor, Paul Cox, deputy leader of Hyndburn Council, said: "It's absolutely brilliant news. "It's good to see that investment from outside funding is coming in to the borough, it's fantastic. I think preserving these historical landmarks is vitally important. It's looking good for the future."

A Hyndburn Council spokesman said: "Hyndburn is proud of its industrial heritage and the unique contribution that Accrington and its surrounding townships made to the industrial development of the nation. "They are a monument to the forgotten who worked, and died, mining and processing coal in the area."

More than £40,000 of grant funding was given to the project from several historical and regeneration groups. A Historic England report found the beehive coking ovens to be the most complete 19th century example in the North West and one of only 11 to survive in the country.



Aspen colliery coke ovens. Mid 1800s.

Coal mining is thought to have begun at Aspen in the early 19th century and the coking ovens were used to burn off impurities in coal to produce the higher value, higher quality coke. Production continued for around a hundred years and employed thousands of local people until the colliery closed in 1930.

In 1977, the site became a Scheduled Monument, the highest level of protection afforded to heritage in England. Prior to the repair two of the banks of ovens partially collapsed, and the third was 'likely to follow'. Historic England and Hyndburn Council have also entered in to an agreement which will see scrub cleared from the site for the next five years.

Charles Smith at Historic England said: "It's fantastic that after almost 20 years on the Heritage at Risk Register, the rare beehive ovens at Aspen Colliery are now ready to face the future. "We're looking forward to seeing interpretation developed at the site to add to people's enjoyment and understanding of this unusual part of Oswaldtwistle's heritage".

Lancashire Telegraph. Sept 2017 edited..

Mining museum opening next year gains over 500 artifacts.

The Kent Mining Museum, due to open at Bette-shanger Park near Deal in 2018, have become custodians of over 500 artefacts relating to the history of the Kent Coalfield. The collection, on loan from Dover Museum, includes mining workwear, signage, equipment and ephemera and will form part of the museum displays and its research archive. The collection move comes after the museum recently completed its storeroom. With new environmental monitoring equipment, funded by a donation from the Association of Independent Museums, the Kent Mining Museum is able to care for and help preserve items relating to its mining heritage. Darran Cowd, museum and heritage manager, said: "To be asked to take care of this substantial collection is a big vote of confidence for the Kent Mining Museum. "Many of the items will form parts of the displays when we open the doors to the museum next year. There are deep links between the coalfield and the wider communities of the Dover area and we continue to work closely with Dover Museum to collect and promote the heritage of the area." Jon Iveson and Dr Lynda Pearce of Dover Museum facilitated the loan and made their own

knowledge of the coalfield available to the museum project. The museum is actively looking for further stories and items about the Kent coal field.

Kentnews.co.uk. August 2017

Tanzania confiscates diamonds from British mining company

The Tanzanian government has announced the seizure of diamonds worth an estimated \$29.5 million after accusing British company Petra Diamonds, of undervaluing the financial worth of the gems.

Minister of Finance Philip Mpango stated on Sunday that he had "nationalized" these diamonds, extracted from the Williamson Diamonds mine, 75% owned by Petra Diamonds and 25% by the Tanzanian government. The diamonds were seized on 31 August at the Dar es Salaam International Airport while being exported to Belgium.

Williamson Diamonds documents give these diamonds a value of \$14.7 million (pre-market) while the actual value is \$29.5 million, according to the Tanzanian authorities.

The Finance Ministry said in a press release that two former senior mining officials, quoted in a parliamentary report on alleged embezzlement linked to diamond mining and trading, resigned on the orders of President John Magufuli.

The former Minister of Mines, George Simbachawene, who until his resignation was also Minister of State for Local Government, and the former head of the National Mining Company (STAMICO). Along with Edwin Ngonyani, Deputy Minister of Public Works and Transport until Thursday. These two ministers resigned at the orders of President Magufuli, who had just received the findings of two parliamentary reports that put them in question. President Magufuli demanded that all current government officials be blamed for this case and leave without waiting for them to be dismissed.

A tug of war has developed between the large foreign mining companies operating in Tanzania, after a parliamentary report accused them of dumping their production, resulting in a loss of tens of billions of dollars in taxes and royalties since 1998.

Africanews.com

Guisborough Jet Mines.

Field trip. "2nd September 2017.



Ammonite fossil preserved in Jet shale. {C. Twigg}



Clear signs of hand picking in Jet shale. {G. Usher}



Narrow passage higher in Jet shale. {C Twigg}



Nodule of soft clay in Jet shale. {C. Twigg}

Approximately 180 million years ago, when the area that is now North Yorkshire was closer to the equator and enjoyed a warmer climate, auricularian trees (an extinct relative of the monkey puzzle tree) flourished. Sometimes storms would wash the trees out to sea, where eventually they would become waterlogged and sink to the sea floor to be buried in the marine muds. Over vast periods of time the wood was compressed and heated causing it first to be carbonised and then impregnated with traces of oil formed from other organic material trapped in the surrounding mudstone. These processes resulted in the formation of the semi-precious mineraloid* we know today as jet.

Jet is thus a form of fossilised wood, but unlike other fossilised woods, can be intricately carved into jewellery and can take a high polish. Jet used for jewellery is typically a very intense black colour, so much so that it has given rise to the expression 'jet black' meaning a colour that is the blackest of blacks.

Jet has been prized for its ornamental qualities since Neolithic times, but it was not until the Victorian era that jet took on mass popularity. Following the death of Prince Albert in 1861, Queen Victoria took to wearing black, including jewellery made from jet. This made jet highly fashionable – especially amongst widows – and drove both the jet mining and jet jewellery industries in the north east of Yorkshire, particularly around the Whitby area where a small jet jewellery industry remains to this day. The popularity of jet reduced dramatically when Queen Victoria stopped wearing jet jewellery, thus causing dramatic decline its production. By the end of the 19th century the jet industry was a small fraction of its former size. The remains of the jet mines can be traced along many of the hillsides of the North York Moors, and usually take the form of a line of spoil heaps following the contour of the mudstone. Behind the spoil heap is often a depression in the ground that marks the collapse of the underground workings. Because of the soft nature of the mudstones, and the fact that the mines have been dormant for over a century, few jet mines remain accessible, and those that are tend to be small in size. Not so the jet mines in the western end of Guisborough Woods, thus making them the ideal location for a Northern Mines field trip in September.

A small but enthusiastic group of mine explores gathered with Chris being our guide for the day. Chris eagerly shared his knowledge of the mine and led us safely through the labyrinthine passages: this is one place that should definitely not be entered without the guidance of someone familiar with the workings.

The mining technique used appears to have been the driving a series of tunnels into the hillside near the base of the mudstone layer, which is some 30 feet thick. It is the waste from these tunnels that produced

a chain of spoil heaps along the hillside, joined by a track that has now been taken over by the Forestry Commission as an access route through the modern day woods. These original tunnels must have been of a fair size to accommodate the next stage of mining - which was to work the roof in the manner of an overhand stope. The miners, who were known as 'jetties', used a sharp pointed pick for this purpose, the tell-tale marks of which were still clearly visible in some places. Gradually the roof of the tunnel was brought down, with the miners searching through the debris for the randomly disseminated pieces of jet. It is this random nature of where jet is found in the mudstone that made jet mining financially a very precarious occupation. In addition to working the access tunnels, side branches were cut in a manner resembling a pillar and stall working thus leaving a checker pattern of tunnels crisscrossing through the ground.

Gradually the tunnels were extended upwards towards the upper horizon of the mudstone, whilst simultaneously the floor level rose as the discarded waste rock accumulated underfoot. Because broken rock takes up more volume than it does in the undisturbed condition, the size of the passages gradually diminished as the workings progressed upwards - becoming both narrower and less tall. By the time a section of the mine is worked out the tunnels remaining are approximately two to three feet wide and of stooping height. It is these passages that are accessible to the explorer today.



Dimensions of main Adit at bottom of Jet Shale. {C. Twigg}

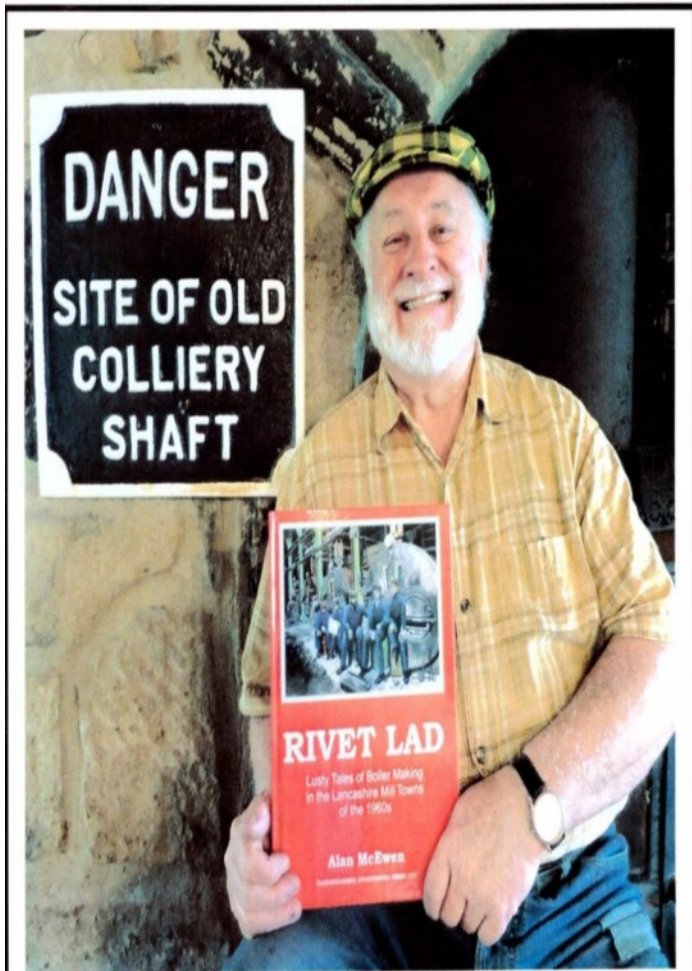
In places the workings are particularly close to the surface and tree roots can be seen hanging from the roof. The passage of time, and the soft nature of the rock, means that several sections of the mine have collapsed completely; especially where forestry vehicles have passed overhead. It is some of these collapses that now provide access to the workings, the Forestry Commission helpfully marking (most) of the entrances with a fence and a handy yellow sign warning 'danger drop'. Because this mine is unusually well preserved it is to be hoped that the Forestry Commission will act to preserve this important part of Guisborough's industrial archaeology, and not inadvertently destroy what remain when it comes time to harvest the trees above the workings.

Besides the labyrinth of tunnels, the group was able to see numerous pick marks on the roof, as well as some in-situ jet that the miners failed to remove. Artefacts were unfortunately scarce, with the remains of a shovel being the main item. The group was also told of a badger's skeleton, with a ferocious gin-trap still attached to its leg, in a remote part of the mine where the unfortunate creature must have crawled to die in peace. After several joyous hours underground, we emerged again into daylight from under a holly bush only a short distance from a well trodden path through the woods. As a kind of bonus expedition, we followed this path to the site of Cod Hill Ironstone Mine, which lies in the strata a short distance beneath the mudstone of the jet mines. After a recce of the mine site we finally followed course of the railway incline that had served the iron mine, and arrived back at our cars having had a superb expedition.

Our thanks are extended to Chris Twigg, for making the trip possible, and for sharing so freely of his knowledge.

*A mineraloid has no crystalline structure, and a relatively variable chemical composition when compared with true minerals.

Geoff Usher.



Master Boiler Maker Alan McEwen is a man from the Steam Age. His new book: **RIVET LAD – Lusty Tales of Boiler Making in the Lancashire Mill Towns of the 1960s** – is chock full of how Carrot Cramphorn, together with Reuben Ramsbottom, Teddy Tulip, Paddy O'Boyle and the Author – all rough-tough, hard-as-nails Boiler Makers, carried out major high-skilled repairs to Lancashire and Cornish Boilers, Cochran Vertical, Economic Boilers and, a Ruston Proctor Stationary Loco Boiler. This high-quality, A4 format, hard back book is a must for steam and engineering buffs.
 PRICE: £35.00 plus £3.00 p&p to UK addresses.
 Overseas enquiries please contact us by email: lankyboilermaker@btconnect.com
www.sledgehammerengineeringpress.co.uk



Guaranteed to get them washing up!

This lead mine tub has been cleverly converted into a kitchen sink. It is fully functioning with hot and cold running water. The designer wants to remain anonymous but should be fairly easy to replicate if this is your thing.

Anonymous.

Disclaimer

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

Data Protection Act

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