

THE NORTHERN MINE RESEARCH SOCIETY



Newsletter

February 1995

Annual General Meeting & Dinner - 1995

The AGM And Dinner will be held at the Dog and Gun, Glusburn, Keighley, West Yorkshire, (NGR SD 993444) on Saturday, 25th March. Although there is no accommodation at the Dog and Gun there is plenty of B&B locally. Taxis are plentiful and reasonably priced. The AGM will commence at 17.00. Dinner will be 19.30 for 20.00. The bar will open at 17.00. The cost of the dinner is £10.95. Members staying in the area may like to visit Ingleton Coalfield, Sutton Clough, Cononley Mine and the Earby Mining Museum. Meets have been arranged for both the Saturday and Sunday.

A booking form for the dinner is attached to the newsletter.

DINNER MENU

(A) Home Made Soup

(B) Melon

(1) Steak and Kidney Pudding

(2) Roast Beef

(3) Pork Chop in Cider Sauce

(4) Grilled Plaice

(5) Broccoli and Cream Cheese Pie*

(6) Broccoli and Mushroom Tagliatelle in White Wine Sauce*

Choice of Sweet

Coffee

* Vegetarian Dishes

The following meets have been arranged for the AGM & Dinner weekend.

Saturday, 25th March.

Ingleton Coalfield

Leader; B. Bond. Tel: 01524 241857 .Meet at 1, Beech Terrace, Tatterthorne Lane, Ingleton at 10.30. This is a surface meet. Lunch will be at The Bridge Inn, Tatham. Visits to Richard, Grove & Nellie Pits. Also arranged is a visit to Clintfield Colliery. (See 1994 Memoirs - p. 128.) This meet will finish by 16.00.

Sunday 26th March.

Sutton Clough (am) & Cononley Mine (pm)

Leader: Hazel Martell. Tel: 01535 635388. For Sutton Clough meet at the start of Hall Drive at the junction of West Lane and Ellers Road at 10.30. For Cononley Mine meet at the end of the track at NGR SD 975461 at 13.00.

Earby Mining Museum.

From around 16.00, by courtesy of Mr. P. Dawson. Admission £1.00.

Diary Dates

Saturday, 13th May.

Britannia & Facit Underground Stone Quarries

Leader: J. Knowles. Meet at Shawforth P.O. NGR SD 891202 at 10.30. Numbers are limited so participants must contact the leader Tel: 01274 871012) after Easter to book.

Saturday, 10th June & Sunday, 11th June,

Cross Fell/Nenthead.

Start from Kirkland Church, NGR NY 645325, at 10.30 each day. Cross Fell is home to numerous unexplored mining remains. Prospective attenders should anticipate route marches of over 20 miles and finishing at 22.00 each day. Bearing in mind the nature of the terrain and the elevation, Nenthead is proposed as an alternative in the event of bad weather. Leader: Roger Bade. For further details contact Roger. Tel: 0181 540 6229 (Home) or 0171 283 7500 (Work).

Friday, 14th July, to Monday, 17th July.

NAMHO Conference.

This will be hosted by the Shropshire Caving and Mining Club. The venue is Lilleshall National Sports Centre, Newport, Shropshire. The centre has full catering facilities plus reasonably priced single and twin rooms on site, so there is no need to search locally for accommodation. There will also be camping on site for tents and caravans.

There will be something for everybody including talks, seminars, surface and underground trips and a social event on Saturday evening.

For further details and a booking form please send an A4 self-addressed envelope to: Adrian Pearce, 72 Hopkins Heath, Shawburch, Telford, Shropshire, TF5 0LZ. Tel: 01952 405362.

Saturday, 19th August to Friday, 25th August.

International Symposium on Souterrains.

The city of Maastricht will host a symposium about man made underground structures. This symposium is one in a series on this topic that have been held all over Europe in the last 10 years. First Maastricht, then Paris, Naples, Bath and Prague; and now it is time to organise the event in the Netherlands once again.

In the area around Maastricht there is a lot of limestone, better known as Maastrichtien, that outcrops. This has been a very good building stone through the centuries. The area was cut in half by the Dutch-Belgium frontier 155 years ago. The history and techniques of extraction in both countries will be discussed at this symposium.

The postal address is:

International Symposium on Souterrains,

c/o P.J. Orbons,

P.O. Box 1614,

NL 6201 BP MAASTRICHT,

The Netherlands.

There will be six symposium days. Every day has its own theme which will be shown through presentations and visits. After the six day-symposium there is the possibility of a two day post-symposium. This will be more relaxing and a programme for it will be produced later.

The provisional programme is:

Saturday August 19.

Arrival and registration.

Sunday August 20.

Beginning and the end of the underground. Visit to flint mines, touristic exploitation and opencast quarrying.

Monday August 21.

Quarrying and the use of limestone. Visit to a working underground quarry with restoring workshop.

Tuesday August 22.

Safety. Presentations and visits at stabilisation works and securing subterranean quarries.

Wednesday August 23.

Study day. Poster presentation, films, computer programs, and SOK exhibition. In the afternoon, official visit by the Council of the City of Maastricht in the Natural History Museum. Rest of the day off.

Thursday August 24.

War and peace. Military use and refuge in the subterranean sites.

Friday August 25.

Special use. Visit to the Jesuits' quarry. The symposium ends in the afternoon.

Saturday and Sunday August 26 & 27.

Post-symposium with additional programme, to be filled in later.

The symposium is organised by a working group of the SOK, the Study-group Subterranean Limestone quarries. This study-group is part of the Natural History Society in Limburg.

Presentations by host-speakers are welcome. A presentation may last a maximum of 30 minutes including questions. On the pre-registration form you can apply for a presentation.

The costs of the symposium will be kept as low as possible. We will try not to exceed the total costs of £130. This covers the cost of transport, food, visits and paperwork. The dinner on Wednesday afternoon is not included.

Places to stay will be organised separately. The city of Maastricht offers a wide variety of hotels in all price ranges. There are several camp-sites around Maastricht. There will be the possibility of a free stay at an improvised location.

On the final registration form that will be sent to you in February you can register your definite choice concerning the place to stay. Transport to and from the lodgings will be arranged.

During the symposium there will be a SOK exhibition in the Natural History Museum in Maastricht about the Belgian and Dutch quarries.

The official languages of the symposium will be French and English. All paperwork will be available in both languages.

Anyone who sends in the pre-registration will be updated on the symposium. There are no obligations, but you are certain to know the latest facts.

The final registration form will be sent in February 1995. We hope to have all the registrations in by May.

Saturday, 14th October.

Mining Remains in The Halifax Area.

Leader: M. Street. Tel: 01422 839749. Meet at Shibden Hall, Halifax. NGR SE 107258 at 10.30.

Saturday, 11th November.

General Meeting, Slides, Pies & Peas.

Sicklinghall Village Hall NGR SE 364484 at 14.00.

Society Business

Notes of General Meeting held at Sicklinghall on 12th November, 1994.

The meeting was attended by 27 members. An apology was received from Bob Burns. The secretary had intended to be present but was indisposed.

The minutes of the AGM held at The Miners Arms, Greenhow, on 19th March, 1994, were read and approved.

Reports were received from the following Officers of the Society.

Treasurer

Colin Hindle reported that the increase in subscriptions for 1994 had led to only a small loss of membership; 349 full members as opposed to 364 in the previous year. The total membership is 397. Donations of £590 had been received in 1994.

Between 19th March and 12th November, 1994 24 new members, including family members, had joined the Society. The deaths of Dave Blundell and J. M. Burnett were reported. A member who had known Dave paid tribute to him.

Editor

Hazel Martell reported that the 1994 Memoirs were not yet available. They had gone to the printers and would be distributed before Christmas. (Unfortunately, this has not proved to be the case - Ed.)

Sales income is up about 20% on 1993 and there is enough money in the publications account to pay for the memoirs. However, £2,000 is to be transferred from the General Account towards their cost.

Reprints of BM 44 (Dartmoor and Tamar Valley) and BM 40 (Darren) are being considered. BM 35 (Goginan) and BM 38 (Marrick) have been reprinted.

PRO/Newsletter Editor

Keith Nolan reported that he had taken over from Phil Clayton with the August newsletter. The single sided printing of the August newsletter was an error by the printers and would not recur.

Contributions to the newsletters were welcome from all.

The November newsletter was almost complete and would be issued with the Memoirs.

Librarian

Eleanor Greenough reported that 18 loans had been made since 20th May, 1994. BM 12 and BM 15 have been added from John McNeil's collection. Donations have also been made by Tony Oldham and Bridget Howard. Peter Claughton has donated two of his own books. An updated library list should be available shortly.

Recorder

Mike Gill reported that due to his house extension works, the records were effectively closed. However, he had responded to letters received.

NAMHO Representative

Sallie Bassham said that she had not been able to get to the NAMHO field meet in the Forest of Dean In August, 1994.

The Chairman asked any member willing to lead a meet to contact any committee member before the end of 1994. Discussion took place on the AGM and Dinner, 1995 and Pies & Peas, 1995. Service was very slow at The Miners Arms in 1994 and it was agreed to try The Dog & Gun at Glusburn for 1995. Mike Gill had elicited a menu priced at £10.95. The meeting agreed a date of Saturday, 25th March, 1995. After considerable discussion on changing the venue for Pies & Peas, where Harry Houghton proved the old adage that organisations have no memory, only people have memories, the meeting concluded that we should stick to the established Sicklinghall formula. The date for the next Pies & Peas is Saturday, 11th November, 1995.

The committee suggested to the meeting that there should be no increase in subscriptions. A motion that subscriptions should remain unchanged was proposed by A. Sinar, seconded by H. Houghton and was carried.

In accordance with the constitution, members who had not paid their subscriptions by 1st April in any year were struck off. The Chairman thought that this was a little harsh as in 1994 a cheque had got lost in the post. Harry Houghton said that past practice was to state in each February newsletter that if your membership card is not enclosed, you have not renewed. This is the longstop against errors and members should raise queries at this stage with the Treasurer. (See note below - Ed.)

Thanks were expressed to Sallie Bassham for persevering with officialdom and getting a cheque for £146.80 from the Inland Revenue in respect of covenanted subscriptions.

Note. The subscription renewal form is sent out with the November newsletter. Due to the late distribution of the November, 1994 newsletter it will not be possible to send out the membership cards with this newsletter. This year, if you do not receive your membership card with the May newsletter, and you have paid, please query this with the Treasurer.

Nominations for the Election of Officers

Please note that nominations for the election of officers must be sent in writing, with a proposer and seconder, to the Secretary, at least twenty eight clear days before the date of the Annual General Meeting. The Society has not so far been inundated with nominations.

In particular, we are unsure whether Malcolm Street will be in a position to carry out all aspects of the Secretary's job. These include agendas, minutes, annual programme cards and responses to membership and general enquiries.

The Society really does need someone to take on some of these duties. If you feel that you can help, please contact any committee member as soon as possible.

November Newsletter

Apologies are hereby tendered on behalf of the Society for the late distribution of the November newsletter.

Sorry folks! Your Editor will do his best to ensure that it doesn't happen again.

Bolivia, Butch Cassidy and British Mining Engineers

Mike & Claire Bell

At about seven o'clock in the evening of 6th November, 1908 two American bandits rode into the tiny Bolivian village of San Vicente, high in the Andes. They found lodging at the house of Bonifacio Casasola, where they ordered sardines and beer and began to settle down for the night.

Two days earlier the pair had held up Carlos Pero, his son Mariano, and Pero's servant, Gil Gonzalez, and stolen a payroll belonging to Aramayo, Francke and Company, one of the many mining companies in Bolivia. The two bandits also relieved the three luckless Bolivians of a mule and fled by a circuitous route to San Vicente, apparently intending to cross the mountains into Chile. Unfortunately for the outlaws, news of the robbery spread remarkably quickly. Parties of troops and police began to scour the countryside and at half-past three in the afternoon of the 6th November Police Inspector Timoteo Rios, Captain Justo P. Concha and two soldiers arrived in San Vicente.

The arrival of the two Americans was reported to the small military party. Inspector Rios led the two soldiers and the local corregidor, Clito Bellot, to the Casasola house. One of the soldiers, Victor Torres, was in the lead. As he approached the door of Casasola's house he was shot dead by one of the Americans. A few more shots were exchanged by the two sides with no further injuries to the Bolivians. At about six o'clock the following morning the Bolivians gingerly entered the small room where the two Americans had taken refuge. They found both men dead, one in the doorway, the other behind the door on a bench. The pair had apparently died from self-inflicted wounds. An inventory was made of the personal effects of the two men, who were probably buried in the nearby cemetery.

For years the deaths of the two Americans and the Bolivian soldier remained nothing more than a footnote to history. In 1969, however, the film 'Butch Cassidy and the Sundance Kid' revived interest in these two outlaws from the twilight days of the American frontier. The film also revived a long-forgotten dispute over the fate of the two bandits. Some said that one or both men had returned from South America to live out their days in the United States. There was even doubt that there had ever been a gunfight in San Vicente. In the last few years, however, the relentless work of historians Anne Meadows and Dan Buck has revealed the details outlined above. Meadows and Buck even managed to have a grave opened in San Vicente in an attempt to prove the identity of the two men; only to discover that they had opened the wrong grave. So a shred of doubt remains over the two bandits killed in San Vicente. All the circumstantial evidence points overwhelmingly to the pair having been Robert Parker and Harry Longabaugh, known as Butch Cassidy and the Sundance Kid, but it is possible that another pair of luckless Britons or Americans carried out the robbery and met their deaths in the lonely Andean village. Evidence to prove either outcome definitely would be invaluable to historians.

So what is the connection with mining and Britons? Surprisingly, there were several Britons in Bolivia in the first decade of this century who might have been able to throw more light on the identities of the two men killed in San Vicente. Mike and Claire Bell are very anxious to trace descendants of these people in case they have information which may help directly, or add to background information concerning the situation in Bolivia at the time.

The tin and silver mines of Bolivia attracted large numbers of Americans and Britons in the last decades of the nineteenth century and the first decades of the twentieth. The most important in terms of those likely to have been involved with this affair was a man who may have been called **A. G. Francis**. In 1913 Francis published an article in the Wide World magazine entitled 'The End of an Outlaw'.

In this article Francis explained that he had been employed to supervise the transportation of a large gold-dredge from the village of Verdungo in the valley of the Rio San Juan de Oro in Sud Chicas province, to a new site near Esmoraca, at the source of the river. Francis described how he met the two bandits who spent some time with him before the robbery. He also recounted how the pair reappeared just after the robbery and insisted that he accompany them on the road to San Vicente. They left him on the morning of the day they were killed. So far, all attempts to trace A. G. Francis have proved fruitless. It is possible that the name was a pseudonym as the man collaborated with the bandits to a limited extent, but a couple of interesting possibilities have been uncovered. The first is a man named **Walter Richardson Grant Francis**, who died at his home at 65, Longridge Road, Earls Court, London in 1920 aged 50.

W. R. G. Francis' obituary in the Transactions of the Institute of Mining Engineers indicates that he was born in Swansea in 1869, and educated at Rugby before becoming a student at the Royal School of Mines. He went to Peru in 1892 and over the next sixteen years occupied positions at Huanchaca, Potosi, Oruro and other mining camps in Chile and Bolivia. In 1910 he went to Mexico and from there to Spain. He was taken ill in 1919 and returned to London. Francis' will indicates that he had a wife, Mary Amelia Victoria Yamudio Flores. The will also indicates that he had at least two brothers, Reginald John Edwards Francis and Arthur Aubrey Francis. There is a possibility that A. G. Francis was either W. R. G. Francis or a relative. W. R. G. Francis was certainly in the right place at the right time.

The Register of Wills lists many A. G. Francis', but the most promising is **Atwell Richardson Grant Francis** who died in 1940. The coincidence of middle names suggests a connection with W. R. G. Francis although no link has yet been discovered. Atwell, who was known as Grant Richardson died in Guildford, leaving a son, Douglas Baseley Grant Francis, and a daughter, Valerie Mary Grant Francis. So far no direct link has been discovered between this A. G. Francis and the article in Wide World Magazine.

Another key Briton was **Malcolm Roberts**, the manager of Aramayo, Francke and Company. Roberts worked in Bolivia for many years and exchanged correspondence with the Bolivian authorities about the killing of the two Americans. Roberts' obituary in the Transactions of the Institute of Mining Engineers shows that he returned to England and died in Lake Road, Wimbledon in January, 1933. He left a wife, Marthe Renée Marie Roberts, and three children, Victor Gerard (or Genaro) Roberts, Fernando Walter Roberts and Elena Matilde Roberts.

A third Briton who had a connection with the two Americans was **Professor James Archibald Douglas**. Douglas was Professor of Geology at Oxford University from 1937 until 1950. Later he moved to the Isle of Wight and died in February, 1978. Between 1910 and 1912 Douglas travelled in the Andes. Some time after he returned to England he donated a saddle to the Pitt-Rivers museum in Oxford. The acquisition notes indicate that Douglas bought the saddle from a man named Enrique Hutcheon, who was connected with the two men killed in San Vicente. Indeed, one of the dead bandits was carrying business cards for Enrique Hutcheon.

Finally, Mike and Claire are trying to locate the descendants of **William Gray**, who represented the interests of the Penny-Duncan mine in Oruro, Bolivia and was also the British Consul in the area. Gray corresponded with the American Consul in Antofagasta in 1910, suggesting that he knew the two men killed in San Vicente.

Will anyone who can help in the search for the descendants of any of the above please contact Michael Bell at 50, Alpha Close, Balsall Heath, Birmingham, B12 9HF. Tel: 0121 440 0404 or Claire Bell at the science and Technology Department, Birmingham central Library, Chamberlain Square, Birmingham, B3 3HQ. Tel: 0121 235 4392.

Books

The Tin Streams of Wendron - Justin Brooke.

The art and history of tin streaming in Cornwall is a sadly neglected subject, and yet tin ore from surface fluvial deposits has been a very important source over the centuries, probably as far back as the Bronze Age.

Here at last is a book that brings tin streaming out of the shade of hard rock mining. The distinguished history and ingenious techniques employed are revealed. The Wendron and Cober valley, whose importance was once second only to St. Austell, is the focus of this admirable book which covers the period from ancient times right up to 1945.

The underground mining history of the area was described in *Wendron Tin* - Hamilton-Jenkins (1978), who prominently acknowledged help from Justin Brooke. The tin streaming book reveals the history of the area from an entirely different and yet complementary angle. Several sections of the book would be equally applicable to any Cornish tin streaming area.

The author, Justin Brooke, is a mining historian, a linguist and a bard of the Cornish Gorsedd to mention but a few of his many talents. He has also generously assisted numerous mining historians with their researches over many years. His new book is well researched and pieces together a complex jigsaw of historical, technical and business events which, together with many human anecdotes, produces a very readable history. Highlights include a fascinating insight into the techniques of tin streaming from vanning to stamping. Most of the photographs, sketches and maps are first-rate. The most evocative photographs are of the tin streamers themselves alongside their small processing plants. Added to these are a series of specially drawn sketches by Clive Carter which bring extra life to the streaming methods described in the lively text.

Twelveheads Press have produced an attractively designed hardback using high quality paper and numerous illustrations. The text is well referenced with useful appendices, a bibliography and an index. For anyone wishing to open a window on the little-known world of Cornish tin streaming, this is a book which should not be missed.

The book is available from Twelveheads Press, Chy Mengleth, Twelveheads, Truro, Cornwall, TR4 8SN. The cost is £12.95.

R. Alan Williams

Images of Industry - Coal - Robin Thornes.

As the title implies, Robin Thornes' book is a pictorial record of the architecture and monuments of the coal industry in England. His selection of high quality photographs are part of a RCHME survey of coal mining sites and settlements from all periods. They are not intended as a history of the industry, but they do give the reader a good insight of the types of features which might still be found incorporated into later developments. The text accompanying the photographs gives a concise account of each topic covered, and the bibliography points the reader to more detailed sources.

As all but a few mines are cleared away, books like this will serve to remind us of the rich legacy of industrial building styles which has gone. They will also give purpose to the communities left stranded without them.

Published by the Royal Commission on the Historical Monuments of England (RCHME). ISBN 1 873592 23 X, size 245 by 188 mm; softbound, 146 + xii pp. The cost is £14.95 + £1.50 p&p.

Mike Gill

Dictionary of Arts, Manufactures and Mines - Andrew Ure.

(Facsimile extract by Colin Lansdell)

This booklet of 26 pages is an extract from the section on mines in the book by Dr. Andrew Ure, who seems to have every letter in the alphabet, and then some more, after his name. The original publication date is 1840. Rarely can so much have been packed into so few pages. Admittedly, the type is very small due the reduction to A5 size and a magnifying glass is probably required reading equipment for those of us past the first flush of youth, but the effort is well worth while.

The book opens with a general section on mineral deposits, the structure of veins, etc., and observations on where and in what form the various minerals are to be found. There follows a discourse on tools and equipment used in mining. The next section entitled "of mining in particular" describes in great detail methods of mining, underground timbering and masonry work. The methods of working in German mines are discussed at some length.

The book concludes with a section on ventilation and a comparative table of celebrated mines in Europe and America, the mines concerned being in Cornwall, Saxony and Mexico.

This little book is a must for all mining enthusiasts and the good news is that it only costs £2.50 (including p&p.) per copy. The bad news is that the number of copies available is limited and it is first come first served. It is obtainable from Colin Lansdell, 10, Lorraine Gardens, Norwich, NR3 4DH.

Grazing Slatelands - photos by Roger Tiley.

These are photographs of the North Wales slate landscape with an introduction by Dr. Merfyn Jones. This must be one of the first "coffee-table" mining books with a superb selection of detailed photographs which the reader will want to return to again and again. The tonal shadings and unusual angles make this a must for the mine historian. The extended exposures give rivers and clouds a surreal appearance. The book is of 125 pages with 41 plates. The price is £13.95 + £2.50 p&p. from Tony Oldham, Rhychydwr, Dyfed, SA41 3RB.

1995 Subscriptions

Just a reminder to say that if you haven't yet paid your 1995 subscription, can you please let the Treasurer have your cheque as soon as possible? The renewal form was sent out with the November newsletter and membership certificates will be sent out with the May newsletter. Don't forget that if you pay UK income tax you can make your subscription worth more to the Society, at no extra cost to yourself, by completing the deed of covenant. Thanks for your support!

Old Pig

A pig has put Harrogate council in a bit of a pickle. The Roman "pig" is actually an ingot of lead dating back to AD 81 and found in a field near Pateley Bridge in 1731.

Museum experts want to keep the pig in the Harrogate district because of its historic importance, a quest which could cost up to £6,000. Ideas for raising the cash are now being explored.

From The Harrogate Herald. 30th November, 1994.

Lynda Dollery

Guided Mining Trips on Alston Moor

Are you a keen mining enthusiast who visits a locality, sees a mine and has a longing to descend to its murky depths, only to find that it is impossible to gain permission to do so? If so, and the locality is the South Tyne valley or Alston Moor, then read on.

Clive Seal offers his services to members visiting this area who wish to make an underground visit to one of the collieries of Alston Moor which at present mine anthracite. This is an ideal trip for the novice and a very easy one, but bear in mind that a coalmine can be a fairly damp and dirty place, so wellingtons and old clothes are required. Due to conditions the maximum number in a party is six, and even then it can become a little sardine-like. However, even if you are on your own, please contact Clive if you are interested.

Although Clive's historical knowledge of lead mining is not as good as coal mining, he also offers his services as a guide for those wishing to visit Smallcleugh Mine. A whistle stop trip calling at the Brewery Shaft first, round the flats to the ballroom and back via the horse road takes about two and a half hours. Although there are no climbs involved, there are a lot of tight crawls and water over the wellies for the first twenty yards. If that is too much for you but you would still like to look at something, get in touch with Clive and he will see what he can find for those who prefer to keep high and dry.

All enquiries to Clive Seal, The Cottage, Town Green, Slaggyford, Carlisle, CA6 7NS. Tel: 01434 382 429.

New Irish Zinc Mine

Specialist engineering group Davy International has landed a contract to build a zinc and lead mine in Ireland as part of a Trafalgar House consortium. Davy, along with Cementation will design and build the mine and processing plant at the site in Galmoy, County Kilkenny. The contract, said to be worth tens of millions of pounds will start shortly and the mine is expected to be in operation by mid-1986. Arcon International, the Irish-based developer of the mine has signed a letter of intent on the deal with Davy, but final negotiations on price continue.

When it is up and running Galmoy will employ around 200 people and will be one of Europe's largest producers of zinc and lead concentrates.

Simon Chapman

Finally

Thanks to all who contributed to this Newsletter. This is your newsletter and is, in many cases, the only channel of communication between members, so please, keep the contributions rolling in - they are very much appreciated.

Contributions for the May newsletter by 15th April please to: **Keith Nolan, West End Cottage, Woodhall, South Duffield, Selby, North Yorkshire. YO8 7TG. Tel: 01757 638503.**

The views expressed in this newsletter are those of its correspondents and are not necessarily agreed with or shared by the Northern Mine Research Society, its officers or the editor. The accuracy of submissions is the responsibility of the authors and will not necessarily be checked by the editor for validity.