

SECRETARY'S NEWSLETTER NO 10
February 1993

Forthcoming Events

13th-14th March 1993 IMHA Matlock

April 3rd 1993. Day Conference at Royal School of Mines.

June 11th-13th 1993 Study Weekend in Forest of Dean.

Note. If you've paid already, your receipt should be enclosed. **Also Note.** A few single and double rooms are now available.

July 3-4 1993 WCMS Dorset Weekend. Apply to editor

August (end) 1993. Weekend in Prague Czechoslovakia. Details from Sylvia Beamon.

October 20-24th 1993 Oppenheim near Mainz. Subterranean specialists meeting.

We welcome.

Joan Merrett, Surrey

T.O.L. Roberts, London

David Garnett, Dyfed

Maurice Febry, Gloucestershire

Dominic Osborne, Edinburgh

Gerald Tagg, Surrey

Peter Kendall, Herts.

John Woods, Northants

Dominic Clinton, London.

Moscow's Underground City

With the Soviet Union gone and with it the threat of nuclear war, there are persistent reports of vast underground bombproof refuges under Moscow. One of these, (Sunday Times 27.9.92), contains diagrams and a map.

The article by Matthew Campbell and Jonathan Bastable does not draw on their personal observations but on a Russian writer named Valdimir Gonik who is described as a former defence ministry employee. He is also described as a doctor who, in the 1960s, treated the psychological problems of employees who lived "permanently underground".

Apparently secret tunnels under Moscow date back to the 15th century when monasteries were so equipped to allow monks to escape in times of siege. Later Ivan the terrible connected his palace with his secret police quarters.

Throughout the Soviet era, Moscow was undermined with numerous and extensive underground bunkers which were linked to important government buildings. The culminating glory of these times was the building of a secret city under the suburb of Ramenki which is 6 miles southwest of the Kremlin. 70 metres below ground it was designed, in Leonid Brezhnev's time, to accommodate 30,000 communist elite and their families in comfort with supplies lasting 30 years. It is on several levels on a 500-acre site and incorporates a transport system. Connection to Moscow is by an underground railway network

which also extends to Vnukovo airport 30km southwest of Moscow. It is said that some of the network has been incorporated into the conventional underground system but most of it is still hidden from the public.

In company with the homeless and of animals and thieves, Gonik's hobby seems to be squeezing himself into and exploring some areas of this underground system and he describes general dereliction and flooding.

Gonik is most certainly of Sub. Brit. material - does anyone know his address?

Thanks to Matthew Clark for the information.

A later article in The Guardian, 10.2.93, reports Pravda as saying that an archaeologist, Ivan Koltsov, has found the lost library and art treasures of the 16th Tsar, Ivan the Terrible, in an underground labyrinth of tunnels, beneath a monastery near Alexandrov north of Moscow. Apparently the area was originally kept secret by the church but it was sealed by the Bolsheviks in 1917

American Bunkers

If the Times of 30.5.92 is to be believed the Americans were not so keen on protecting their political elite as the Soviets were.

Despite protests from both Democrat and Republican Congressional leaders, *The Washington Times* and *The Washington Post* revealed That President Eisenhower had, in 1956, had a bunker built to protect America's 540 Senators and Congressmen in the event of nuclear war. It was a very Spartan place beneath the Greenbier Resort hotel in the Alleghany mountains, West Virginia. It was not designed to withstand a direct nuclear hit.

The president himself had his own bunker at Mount Weather in the Virginia mountains which, apparently unlike the Greenbier one, is still permanently manned.

British Bunkers

British bunkers in the news are much less glamorous but they are for sale and they are cheap.

The Evening Standard, 22nd January 1993, reports that the Home Office is selling Britain's Royal Observer Corps Posts. (The ROC is now defunct.) These are 25ft by 19ft chambers installed underground equipped with no mains services and only a chemical lavatory. Here in bomb-proofed austerity two people could monitor local effects of a nuclear attack on Britain.

There are 700 of them and the deadline for tenders for the first 26 for sale, which are in East Anglia, was 3rd February. There seems to be a demand from security firms wanting safe storage facilities, from people needing to store wine and from fire services wanting to use them as smoke chambers for training their fire fighters.

If you want to buy one, and £500 might be sufficient, apply to, Richard Pulham, Room 659, Home Office, 50 Queen Ann's Gate, London SW1 9AT. Tel. 071 2732513

Meanwhile from the Newsletter of the Surrey Industrial Group, Number 70, November 1992 comes a story of attempts to preserve one. The one in question is, No.1 Underground Monitoring Post, R.O.C., Upper Hale, Farnham. The Group reckoned that as fifties-style bunkers designed with nuclear attack in mind first appeared in Surrey this one was worthy of preservation as an example. The Defence Land Agency at Aldershot who, at that time claimed responsibility for the disposal of the sites were not very interested. Their policy was to strip the bunkers, seal them, bury them and return them to the original landowners. In this case the landowners were the MOD itself but the Surrey Industrial History Group was unable to accept an offer for them to lease the site from the MOD.

On the positive side the Royal Commission on the Historic Monuments of England did make a complete photographic survey of the site and they also possess diagrams of ROC posts. In addition they were or are trying to obtain a list of all the posts throughout the country.

If you want to see a properly equipped above ground corrugated metal ROC post one will be set up at Duxford Airfield Museum near Cambridge, by the Imperial War Museum.

...and if you are now confused as regards the policies and relationships between the MOD and the Home Office - so am I!

Finally The Independent, 19.11.92 says that 20 or so large bunkers designed to accommodate regional seats of government are eventually to be sold off by the Home Office. It quotes one as being a "warren of tunnels near Horsham which is used to grow mushrooms."

West Norwood Cemetery

Those who enjoyed Bob Flanagan's talk on West Norwood Cemetery and its catacombs at the Spring Day Conference 1992 may be interested to know that he is preparing a book on notable burials at this site. Figures from the past involved in underground constructions find a place. For example, under the letter G we find,

Greathead, James Henry (1844-1896) (Grave 27,103,square 83)

Civil engineer. Contractor for the Tower Subway, 1869. Resident engineer, Hammersmith and Richmond extension of Metropolitan and District Railway, Inventor of the Greathead tunnelling shield used to construct much of London's underground railway starting with the City and South London Electric Railway, 1836. The shield was driven by hydraulic jacks. Compressed air was used for keeping out water in pervious soil. Shield also used in boring the Blackwall tunnel. Joint engineer with Sir Douglas Fox of overhead electric railway, Liverpool Docks, 1889-93. Monument:.
(ProcICE)

Pearson, Charles (1794-1862) (Grave 5,534, square 52)

Solicitor. Born in London. Admitted solicitor, 1816. Solicitor to Irish Society, 1839-62. City solicitor, 1839-62. MP, Lambeth 1847-50. Solicitor to City Commissioners of Sewers, 1859-62. Original promoter of the Metropolitan underground Railway, 1859. Favoured social and other reforms. Monument: Buried in the vault of Sir Thomas Gabriel.

Kensal Green cemetery and catacombs

On the subject of catacombs and cemeteries The Times, 8.7.91 reminds us that the Victorian Society, English Heritage and the Victoria and Albert Museum have formed the Friends of Kensal Green Cemetery. It is owned by the General Cemetery Company which was incorporated in the 1830s with the stipulation the when it was full it should be turned into a memorial park. The "Friends", a voluntary body has been formed as that time has now been reached,

The newspaper shows a fine picture of the catacombs.

Combe Down Underground Quarries

Considerable local controversy still persists over the proposals to stabilise these structures by in-filling. The local objections follow two disparate schools of thought. Firstly, that an important local heritage site will be destroyed and secondly, that the proposed work is disruptive and/or poisons the environment.

A third school says fill the quarries quickly - procrastination is making our houses unsaleable and uninsurable.

Owen Ward has been following the unfolding of this dispute and passed on numerous press cuttings to your editor which are carefully preserved.

Brian Clarke has sent a summary of the situation which is here submitted as a precis.

In the Westerfield Road area restrictions have been placed on car parking and lorry movements since it is said the road is only 1.2m thick and perched over a void.

Local residents have formed the "Combe Down Stone Mines Forum". The object is "to gather and share all aspects of Firs and Byfield mines."

The Friends of the Earth are expressing fears about the toxicity of pulverised fuel ash. Could it contaminate the water supply with heavy metals?

It has been suggested that cavities left underground could collect petroleum vapour or gas by leakage and form explosive mixtures with air.

It has been pointed out that heavy lorries involved in the infilling process would themselves cause collapses in the quarries

Councillor Jeff Manning is fighting the heritage cause. He points out that the quarries are a "World Heritage Asset."

It should be said that Bath City Council have addressed themselves to some of these concerns by bringing in alternative firms of consultants.

Sub. Brit's attitude as established in committee is this.

We consider that we are admirably placed to perform, help with or advise in an archaeological and photographic survey of the system. Already Paul Sowan has made a preliminary assessment of the quarries at the invitation of Mr. M. Froggatt , Assistant Director of Engineering. Bath City Council and Bath Archaeological Trust has asked David Pollard if he is interested in helping with an archaeological and historic assessment with recommendations on the quarries.

We wish to stress that the quarries are of World Heritage value, and although stabilisation is required for safety purposes, we hope it will be performed in a manner consistent with the quarries being important historic monuments. We are encouraged that Bath City Council are recognising the need to preserve some parts of these quarries and that there is mention of a visitor centre.

We are conscious that Bath City Council have an engineering problem and need to find engineering experts to solve it. We, as an organisation, are not engineers but have sufficient expertise of the underground to recognise a good engineering solution when we see one and also to identify those otherwise excellent engineering experts whose background experience is not in stone quarries.

Cow Pasture Limestone Mine, Sandwell, West Midlands.

Another underground limestone quarry is to be destroyed. The DoE is to give £15 million to Sandwell Metropolitan Borough Council to infill the above mine. Environment minister Tony Baldry says monitoring and repair has failed. He quotes the Black Country Limestone Advisory Panel. (Could anyone provide information on this body? Ed) Source. Building design. 22.5.92

Balls Green Stone Quarries

The Nailsworth area of Gloucestershire was once noted for the extraction of building stone from underground quarries. Although most of these structures have been sealed up those at Balls Green have survived and are gated and run as bat roosts. The National Trust own Balls Green Upper but Balls Green Lower is privately owned. Access is very stringently controlled and any one visiting them should ring 0666 53125 and be prepared to be disappointed.

This information comes from Andy Ward, Descent, 104, p31 1992. His very short article is the result of a recent visit, which was allowed, and includes surveys and brief comments on the features of the quarries. The quarries were worked from 1840-1940 and Balls Green Upper contains cranes and some rails which are illustrated with photographs in the article. There are roof-falls but passages have general dimensions of 3.5m by 4m wide. It is also noted that the stone was used in the construction of the Houses of Parliament and that within the galleries there are pools of fine crystals.

Farleigh Down Quarry

Since the firm running this important WWII ammunition dump has collapsed, until now there have been problems in access to this site. However access may once again be possible. Ring Mick MacCamley. Bath 859689. Note the site can no longer be entered underground from the adjacent old workings.

Tunnel at Pendell House Bletchingley

Pendell House is a mansion, of considerable architectural interest, built by Richard Glyd in 1636 and attributed to Inigo Jones.

Some of us recently got permission to visit the known tunnel in its garden which is the only "secret passage" I have encountered.

The tunnel starts in the shrubbery, on the bank, on the south side of the back garden which faces east. It is cut in brittle ferruginous sandstone and is arched over with rough cut pieces of sandstone presumably dug from the same trench. Thus it is

quite near the surface but at the time visited there was very little ingress of water. As the weather had been recently very wet indeed it seems probable that the outside roof of the tunnel was lined with clay.

To access the tunnel there are some stone steps up the bank to an iron gate. An equally short flight of steps leads down to the tunnel entrance. The brickwork associated with the steps and gate is modern but the tunnel portal is of rough-cut stone. Apart from having to crawl over a heap of sand which had drifted into the entrance it was quite easy to walk through the tunnel which seems designed to accommodate comfortably a tall man passing through - although there would be little room for anyone beside him. (Dimensions, 1.2 m wide, 1.8 m high). The tunnel runs in a straight line virtually south from the house (actually on a bearing 346 deg.) It has no noticeable gradient and terminates in an earth roof-fall after 29.5 m. By local tradition it should continue about the same distance to the the stream. There is no trace of an entrance in that position but the ground has been heavily worked. However there seems to be no reason to doubt that the tunnel did once stretch to the stream.

The tunnel was free from any kind of rubbish or debris from the past but a bat flew out.

The traditional reason for the tunnel is that it was for escape during the Civil War. However the real reason is likely to remain a mystery.

The site was properly recorded but for this newsletter details are withheld.

Malcolm Tadd

Working Group On Artificial Cavities

Our member in The Netherlands the indefatigable Joep Orbons now edits *Souterrains*, which is the Newsletter of UIS-Working Group on Artificial Cavities. This newsletter will be issued biannually and the first was issued in January 1993. The idea is to have correspondents in various countries, (ours is Paul Sowan,) who briefly indicate what is happening in each country. It is important for finding out the dates of international meetings and providing contact addresses in each country. A loan copy and information on the working group is available.

BOOK REVIEWS

The Bexley Deneholes. R.F. Le Gear. 1992. Bexley Libraries and Museums Dept. Bexley, Kent. ISBN 0 902541 293. pp 35. £2.00. (Obtainable from Bexley Museum for £2.60 incl. p+p.)

Deneholes, once known as 'strange holes' by some who were uninitiated into the world of underground structures. are fully and interestingly described.

Shafts and cavities were formed by the extraction of chalk for the agricultural practice of 'marling' from Roman times to the present century. The material (alkaline) was strewn over acidic fields to improve the quality, or to break up the heavy claggy soil. Other uses of the chalk were for building and road-works. The author shows that the quantity of extracted material reflects social aspects. The activity of constructing Deneholes in earlier medieval period appears to die out in the 15th and 16th centuries due to the decrease in the population from plague, war and civil unrest, consequently, causing a decline in agriculture. The 17th century saw a revival - increase in population, pressure on food production - hence more extraction from below the earth creating cavities now described as chalkwells. In the Bexley area much of the newly acquired land was situated on Thanet sand which overlaid the chalk. Most of the structures relate to field boundaries and were constructed by professional miners or well diggers as evidenced by good mining safety practices rather than 'do it yourself' farmers. Illustrations displaying how the structures were excavated are excellent.

Serious archaeological investigation into the subject was only relatively recently undertaken by John Caiger and colleagues in the 1950-1960s. The work has been continued by the author, who certainly cannot be described as a 'armchair' investigator, using his many years of caving expertise. Just as reiterated by John Caiger, practical knowledge combined with serious study both beneath and above the ground is necessary.

If I was asked to describe the booklet in one word, I would say that it was 'succinct'.

Sylvia P. Beamon. 1993

(I also have read this booklet and confirm that apart from being interesting, it is very attractively produced and well worth buying. Ed.)

From Charing Cross to Baghdad. A history of the Whitaker Tunnel Boring Machine and the Channel Tunnel. 1880-1930. Paul Varley. The Channel Tunnel Group Limited. (Eurotunnel Exhibition Centre, St. Martin's Plain, Folkestone, CT19 4QD Tel. 0303-270111) 1992. pp 228. ISBN 1 872009 23 9. Soft back. £15-95. + £2 p+p from publisher.

Paul Varley is an exceptional man. A tunnelling enthusiast from childhood, he rose to become Geotechnical Design Manager for Transmanche-Link on the completed Channel Tunnel. His book combines an innate enthusiasm for the subject and considerable

engineering and geological expertise. In addition he has performed the documentary research well.

It must be said at the onset if you are a tunnelling enthusiast or a tunnelling machine enthusiast this is a book you will need, and be delighted to have.

The book describes the history of the Channel Tunnel project which was conceived in 1802 On the eve of war with France! Further proposals throughout the rest of the nineteenth century were stimulated by the growth of railways and the need to capture the market for continental passenger traffic. These are described in some detail.

Throughout the nineteenth century military and political arguments against the tunnel prevailed but a definite step forward was the interest of Sir Edward Watkin, Chairman of the South Eastern Railway Company in 1873. This led to actual tunnel borings being made with Beaumont-English machines in the early 1880s. The one under the sea at Shakespeare Cliff was re-opened and examined during the recent construction of Channel Tunnel itself and the trial bore under Abbots Cliff will be familiar to some Sub. Brit. members. With permission from British Railways it is still possible to visit it.

Government did not approve of the continuance of the project but the Channel Tunnel Company Ltd. was founded in 1887 and fought for the tunnel until present times. The schemes started under Watkin were passed down and evolved over the years culminating in the engineer Percy Tempest's design which, in the 1920s, compared well with the design of the present tunnel.

A Sub-Committee of a Royal Commission found in favour of the tunnel in 1930 but it was narrowly rejected by free vote in the House of Commons. This is where the story ends as far as the book is concerned.

Tempest's search for a tunnelling machine led him to that designed by Douglas Whitaker which developed from efforts by the military to find workable tunnelling machines at the Western Front during WWI. These are discussed in some detail.

A great deal of the book is devoted to the Whitaker machine - the reason for this is that the author and his friends were responsible for digging it from its burial ground at Folkestone Warren in 1990. After its successful trial in 1922 the machine was left in a shed but a landslip during WWII buried it. The machine is now on view in a restored condition at the Eurotunnel Exhibition Centre, Folkestone.

This, well illustrated, book also considers the industrial archaeology of the Shakespeare Cliff site and the search for iron and coal which happened there.

Malcolm Tadd

Beneath the Lakeland Fells. Cumbria's mining heritage. Cumbria Amenity Trust Mining History Society. Red Earth Publications, 7 Silver Street, Marton, Ulverston, Cumbria, LA12 0NQ. 1992. Hard back. £14-99 + £2-50 p+p from publisher. ISBN 0 9512946 3 6. 192 pages. 128 black & white plates.

This book makes me reflect on two disparate groups of people. There are those who like mines and detailed studies of mines and little else. They are indifferent to where "the mine" is. It could be under Disney Land or under Rannoch Moor - the environment is disregarded. The other group are some nature lovers and tourists who just want green scenery. Filthy old industrial relicts should be swept aside or forgotten or at least converted into car parks.

In his introduction to this book Mike Mitchell is disturbed that the Lake District Special Planning Board and the National Trust lean towards the wants of the latter group. The landscapes of the Lake District, which are loved by most of us, are not treated as what they are - largely man-made landscapes, nor is the large impact of mining on the environment appreciated. If it was, the remaining traces of the mining industries might be valued and we might reflect on the people who laboured and died, usually for very little reward, under appalling conditions in what we now enjoy as idyllic surroundings.

To redress this balance the Cumbria Amenity Trust Mining History has spent years exploring, surveying, recording and photographing the underground of the Lake District. This book is the fruit of its labours (fine expert caving) but it does not emerge as a boring catalogue of different mines. You will not find a single plan of a mine in it, nor a single map reference.

The book is divided into chapters on the different mine types; each by different authors who have presumably specialised in that particular type of mine. If they have, it demonstrates a dedicated team effort. The mine types are, copper, slate, iron, wolfram, lead and zinc, coal, barytes and wad. The last is graphite and the famous Keswick pencil industry was founded from it. Each chapter contains a small map demonstrating the distribution of the mine type under discussion throughout the Lake District.

The chapters all follow the same format. The general history of the extraction of the mineral in the area is discussed and the areas where the mining occurred are identified. The general mining working strategies in those areas are also discussed. Finally each chapter ends with a selection of apposite black and white photographs.

The photographs hold the book together as a unified whole otherwise it would be a succession of separate chapters. They are good modern black and white photographs and all have good very explanatory captions. It is worth buying the book for the photographs and captions alone.

Many people will like this book. It captures the romance of the Lake District, pays tribute to those who once laboured in the mines and serves as an accurate and extensive information source on all types of mining in the Lake District at the same time.

Malcolm Tadd

Bath Stone Quarries and Their Tramways. Part One. Brian Clarke and Jasper Cox. 1991 B.R. Clarke, 11 Penn Gardens, Bath, Avon. BA1 3RZ 1991. ISBN 0-948951-01-X. 25 pages with illustrations. £4.00 including p+p.

The definitive book on the Bath Stone quarries has yet to be written and doubtless when it comes its author will be our own David Pollard. Meanwhile we have to be content with a few journal articles, some by David Pollard, and a small number of books which are pertinent to various aspects of the industry or which have no pretensions to in-depth research.

The booklet under review was started by Brian Clarke who is respected for his knowledge of narrow gauge railways and Simon Finch who tragically died in a road accident. Jasper Cox came later.

The authors are at pains to point out that they are not experts on the subject but are enthusiasts and are attempting to produce a booklet which summarises information about the Bath Stone Quarries and which could be of interest to those new to the subject.

The booklet under review is only part I and it contains sections on geology, winning the Bath Stone, the quarrymen, traditional quarrying methods, Ralph Allen whose quarries helped build Georgian Bath and fungi and fauna in deserted mines, mainly bats. This latter section (3.5 pages) shows a very responsible attitude to bats and will please our bat people.

The book will interest Sub. Brit. members whose primary interests do not lie in Bath Stone mines but they will also want part II. Its contents are listed in part I but it awaits publication.

Malcolm Tadd

Journals received by Subterranea Britannica.

For the benefit of new members and to remind old members, we exchange journals with the following organisations. For the

cost of the postage, Barbara Tadd will be delighted to lend you copies of any of them.

Arbeitskreis für Erdstall Forschung.
Associazione per L'archeologia Industriale.
Chelsea Speological Society
Dudley Canal Trust.
Folly Fellowship.
Grampian Speleological Group.
Groupe de Recherches Souterraines en Milieu Artificiel.
Kent Underground Research Group
Railway and Canal Historical Society.
Royal Forest of Dean Caving Club.
Societe Belge de Recherche et D'etude des Souterrains
Society D'etudes et D'amenagement des Anciennes Carriers des Capucins.
Societe Francaise D'etude des Souterrains.
Studiegroep Onderaardse Kalk Steengroeven
Surrey Industrial History Group.
Sussex Industrial Archaeological Society.
Temple Local History Group.
Wealden Cave and Mine Society.
University of Bristol Speleological Society.
West Sussex Geological Society.
William Pengelly Cave Studies Trust.

Red Earth Publications.

This small publishing company is run by the husband and wife team, Alen and Anne McFadzean. First set up in 1987 to publish Alen's first book, *Wythburn Mine and the Lead Miners of Helvellyn* it expanded to providing a service to authors who could not otherwise find publishers willing to take on research on mining history.

Although it was originally envisioned that A4 pamphlets would be published, the company is now on its fifth full scale book, *Greenside: a Tale of Lakeland Miners*; 200 pages and 48 photos. The company's fourth book, *Under the Lakeland Fells*, is reviewed elsewhere in this newsletter and those of us who attended the last Day Conference at Cambridge will recall Alen's beautifully illustrated talk of the same title.

Frustrated Sub. Brit. authors should take note of this company - it offers a full package of book layout, typesetting and printing at low prices.

Red Earth takes its name from the haematite rich soil around the village of Marton in the Furness peninsula.

(Red Earth Publications, 7 Silver Street, Marton, Ulverston Cumbria LA12 0NQ 0229 64172)