THE TREVITHICK SOCIETY

KOWETHAS TREVITHICK

NEWSLETTER 163 SPRING 2014

Reg. Charity
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The first Trevithick Day in Wales

CHAIRMAN'S ADDRESS

Punching below our weight

Our HLF funded digitisation project is now well under way and, as we write, the finer points of our lease for the former Holman Bros. building in Trevu Road, Camborne are being negotiated. These are both progressive steps that will improve this Society's public persona.

During recent months this Society has developed an active relationship with the Cornish Mining World Heritage Office, Camborne School of Mines, the Institute of Cornish Studies and Kresen Kernow, the new record office to be built in Redruth. It has also been developing its links to the Heritage Lottery Fund, Cornish educational bodies and external organisations such as Trevithick 2014, which recently celebrated the first Trevithick Day in South Wales.

The Society has led a respectable life for some 79 years and has tended to hide its good deeds and achievements under the proverbial bushel. The eventual acquisition of a home and the development of relationships with the above and other bodies will provide this Society with the potential to undertake an improved service for Cornwall's industrial heritage. It will also enable it to develop its public face and associate more with those people who are concerned how Cornwall's industrial past achievements are represented.

At the moment the Society is punching below its potential weight and it is up to its members to see how it might improve in the future.

Finally I would like to make a plea for new Council members to ensure the Society can continue moving ahead. In particular the posts of Treasurer, Curator and Programme Secretary need filling, however, Council members 'without portfolio' are welcome to join.

Philip M Hosken

EDITORIAL

There is nothing to report regarding the Puffing Devil, other than the crew will assemble in the coming weeks to undertake maintenance, steam it for its annual boiler test and spruce it up in readiness for its first outing on the streets of Camborne during Trevithick Day.

Colin French

Established 1935

FIREWORKS!

Having seen the excellent display of fireworks in France that was used as an attraction and background to explain Denys Papin's achievements in early steam, this Society was keen to emulate the experience on the evening of Trevithick Day this year. The idea was to use Heartlands as a venue and have music synchronised with the fireworks interspersed with explanations of Trevithick's life and achievements.

With real steam and video projections on the engine house wall we reckoned it would be a spectacle to be admired and remembered, an excellent way to get across Cornish inventive heritage to thousands of people at one time. While the HLF agreed that it was a good idea to teach people, especially children, about Trevithick they did not warm to the fireworks and preferred us to seek partnerships with other organisations. While understanding their approach we felt that there was little time left in this year for schools and others to plan and rehearse theatrical and musical displays.

However, we intend to pursue the idea and will make plans for a successful show next year. For this we will require a wide partnership of participants and will seek a fireworks sponsor.

We look forward to receiving ideas from schools, theatrical groups and discussions with possible sponsors.

P.M.H.

DIGITISATION DEVELOPMENTS

Many museums and archives are digitising their collections to improve collections management and enhance public access and to develop e-learning and create e-commerce opportunities.

In July 2012 the Trevithick Society was awarded £40,000 by the Heritage Lottery Fund for its digitisation project. The project aims were to make more of the collections accessible to the public via the Trevithick Society's website and improve collection care and conservation. Creating and publishing online collections from records, documents, photographs and objects was also designed to involve community participation activities and develop school learning resources from the digitised collections.

Online digital collections enable files to be accessed by individuals using the website of the museum or archive in question. Besides accessing text and image files, sound and moving images can be incorporated and searching the database for key words makes the collection easy to use.

To ensure the collection is easy to use there needs to be preparation for digitising and planning the ways files are linked and the ways in which the digital assets are managed. The Trevithick Society stands to gain a great deal from this development so we do not want to implement a poorly designed and executed project that has but a short operational lifetime fraught with the minefields of copyright and intellectual property.

I came to the project 15 months after it started and set about locating the collections, prioritising the work and the logistics of removing items to a studio where the work could be carried out. With larger object collections it would be more straightforward to photograph the items on site.

Since a major part of the project budget was allocated to the development of learning resources it was important to get up to speed with the stated objectives to ensure they could be delivered.

I knew the extent of the workload - the best estimate suggested over 70,000 items needed to be digitised and catalogued! However, we now have a team of volunteers (young people, older people, graduates and professionals, men and women), equipment (cameras and scanning equipment and computers and ancillary kit) and we also have accommodation in a small but practical studio on the Heartlands site. We are using museum and archive sector best practice procedures and we have a learning consultant able to provide guidance to make best use of our collections for schools.

Sean Croft has redeveloped the website and the digital collections, under the title Opus, will provide information and images of all TS artefacts. Publishing collections records is the main aim of the project to promote wider understanding of their significance in the industrial heritage of Cornwall.

The collections represent an under used resource in terms of learning opportunities and one of the project aims is to ensure that the collections are more widely promoted, particularly for Key Stage 3 (UK pupils aged between 11 and 14). Resources for schools are required in all HLF projects and in Cornwall much material has been produced because of the World Heritage status. We aim to use the TS collections to benefit literacy needs and accommodate Curriculum requirements by filling a gap in provision.

Retrospective documentation ensures an organisation knows the identity and location of the items for which it is responsible but it is also a continuous process of improving incomplete collections records to enhance knowledge. All collections are only as important as the knowledge we have of them and how we can use them to extend our understanding. This project enables us opportunity to enhance collections records by gathering knowledge from experts, society members and volunteers, schoolchildren and

the public at large and by encouraging contributions from people to add to the significance of the database.

You can become involved with the project and help it to develop in various ways - if in Cornwall please come and assist with the digitisation work and for all of you wider afield please help us with identification of objects and adding new information - the website will lead you through this process shortly.

This developing body of knowledge will shape future decisions about managing collections and enable the Society to be in a strong position to seek funding and support for its projects. This work needs to continue long after the end of this specific project to encourage new people to become involved in the Society and help develop it's aims and to safeguard it's collections for future generations. Please get in touch.

Alan Renton,
Project Manager
alan@trevithick-society.org.uk

TREVITHICK'S OTHER ENGINES

While there is a great deal of space devoted to Trevithick's high pressure steam engines, little is heard of his water, or hydraulic, engines. In these he successfully developed the work of various predecessors such as Fludd, Belidor and Hoell.

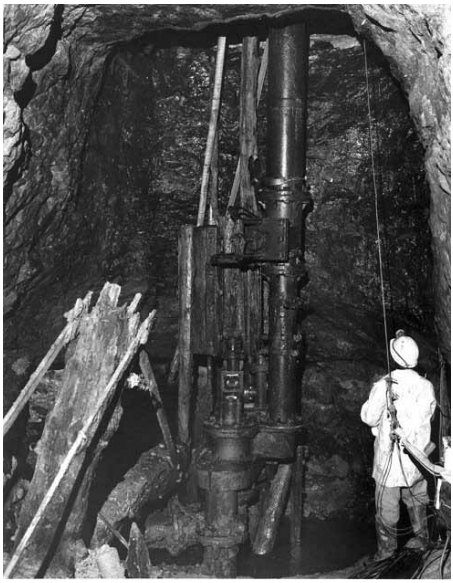
In these single acting engines the gravitational fall of water is employed to drive a piston in a cylinder rather than turn a waterwheel.

Trevithick's first such engine is believed to have been installed at Roskear at the end of the 18th century and was followed by one at Wheal Druid. The engines require a considerable head of water and that is seldom available in Cornwall. However, when Trevithick received an enquiry from Derbyshire he knew that a successful engine could be built in the Buxton area. He worked on this at the same time as he was building a tram track engine in South Wales and was annoyed that he had to battle for payment. In a letter to Davies Giddy about two years later he wrote,

'The[y] are the most ungreatfull clowns in the world. I have been 4 times at Derbyshire and sent them two men and once at Coalbrookdale for them, and paid my own expense and the mens. I sent them abt £60. I have been out for two years and before I cud get them to pay mee one farthen expense I was forced to threaten law … I have traveled near two thousand miles on their account … at Different Times which I shall never receive one shilling for …'

To follow this theme in more detail and discover how the illustrated engine worked, I suggest that you put 'Trevithick Reichenbach pump' into Google and open the Douglas-Self web page.

P.M.H.



Trevithick's water engine which is now preserved at the Peak District Mining Museum at Matlock Bath in Derbyshire.

DOWN TO THE SEA IN SHIPS

A lot of research has been undertaken and many books written about Cornish mines and industries. Students and authors have delved into the depths of mines and recorded the types of engines used, the numbers of men employed and the output of their labours. They have searched through cost books to discover how much coal was consumed and estimated the fuel consumption of the Cornish and West Devon mines. In addition, there has been research into the output of the iron foundries at Hayle, Camborne and Perranarworthal. The fuel consumed in the mines and the furnaces along with the quantity of iron products manufactured has been estimated to be in thousands of tons.

Yet Cornwall had no coal and precious little iron. It depended upon Wales, mainly the south, to provide both of these products. So great were the coal mining and iron production in South Wales that at one time it supplied most of the world's demand. Even Richard Trevithick became embroiled in its activities and it's where he produced and operated the world's first railway locomotive.

But, how did those thousands of tons of coal and iron get to Cornwall? We have searched museums and libraries in both Cornwall and South Wales but found very little has been published about the fleets of little ships that carried these commodities over a period of two centuries.

There are several illustrated books that list the maritime disasters on the Cornish coasts but, although they tend to pander to sensationalism, they also serve to explain the dangers faced by seamen of old. In the years before harbours were built, the little colliers would run up onto the beaches at high tide and settle so that their cargoes could be discharged into sacks or unloaded as pig iron. Copper ore was then loaded for the return voyage to be smelted in South Wales.

The little ships that served the demands of the Cornish mining and manufacturing industries made regular voyages to the beaches and inlets on both the north and the south coasts. Those who successfully navigated around the dangerous Land's End often had the advantages of rivers and tributaries on the south coast where they could unload in relative safety.

We say 'little ships' because that was what they were. Examination of the inner harbours at Portreath, Porthleven and Charlestown reveals that they were only intended to accept the smaller ships of the day.

But who sailed them? Preliminary examination shows that the majority were manned by Cornish families. Generations of fathers and sons sailed into the turbulent seas around the west coast of Britain. Without the aid of weather forecasts and with the necessity of making a living they would often set out into stormy waters and never be heard of again. Their fate would

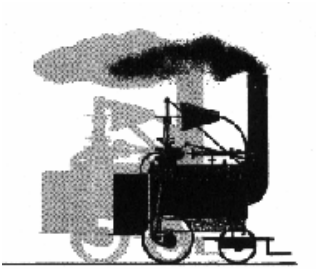
become one of the maritime statistics to be found in records held at the CRO and harbour masters' offices.

These little ships and their brave crews were the lifeline that kept the Cornish industries in business. Without them and the materials they carried the Cornish mining and manufacturing industries could not have existed as they did. Our industries relied entirely on the bravery of their crews, yet little or nothing has been researched or published.

This Society is aware that research into the supplies of fuel and materials to Cornish industries constitutes an essential part of Cornwall's industrial history. It therefore encourages anyone with any information or interest in undertaking at least some of the research to contact us.

This omission in Cornwall's industrial history has been discussed with Dr. Garry Tregidga, the Director of the Institute of Cornish Studies at Falmouth University who gave a very positive response, recognising that it is a potential area for study. He received several responses in the first few days from people who recall the little ships or had family connections. A research into this subject can have many off shoots into the manner that Cornish engines were exported, how Cornwall's first trains connected the harbours, how its ships developed and how other commodities were brought in. Please either contact Garry at G.H.Tregidga@exeter.ac.uk or me at chairman@trevithick-society.org.uk. Falmouth University has links to the Centre for Historical Maritime Studies at Exeter University.

P.M.H.



FIRST TREVITHICK DAY IN WALES

It was exciting to join the first Trevithick Day celebrations in the Merthyr Tydfil area. Known as Trevithick 2014, the day started at Abercynon on the 21st February, exactly 210 years since Richard Trevithick had arrived there to complete the world's first railway journey. His high pressure steam locomotive had hauled ten tons of iron and about 70 people the 9½ miles from Samuel Homfray's foundry at Penydarren. On this occasion there was a group of local mayors and councillors to unveil a substantial hoarding recalling the significant event. A group of children from Abercynon Primary School gathered for a commemorative photograph to remind them of their local history and members of Côr Meibion Abercynon, a local choir that proudly displays an image of Trevithick's locomotive as its symbol, added joy to the occasion.

The photograph on the front cover shows a banner depicting Trevithick's achievement at Merthyr in 1804, held from left to right by Cllr Ann Crimmings, Mayor of Rhondda Cynon Taff, Cllr Graham Davies, Mayor or Merthyr Tydfil, Philip Hosken, Trevithick Society.

While Trevithick's endeavours are well documented in history books a group of local people were well aware that there was little appreciation of the significance of his achievements, either locally or in the railway heritage movement. While there have been sporadic references to his presence in the area, the construction of the Trevithick Trail along part of the original tram track and the decoration of a tunnel, little importance had been attached to this first railway journey. The value of this event to the understanding of local heritage and the economy of the Merthyr Tydfil area had barely been appreciated.
The small but tenacious group who could see the numerous advantages for the people of Merthyr, their children and the town's business economy as they sought recognition for Trevithick's historic activities. It has been led by Rob Thomson over the years and it's been encouraging to see the continuing support of the Graham Davies, Mayor of Merthyr, Morgan Chambers and other familiar faces.

The group now has status with Morgan Chambers as the chairman of Merthyr Tydfil Heritage Regeneration Trust and Dr. Hefin Jones as chairman of that trust's Trevithick Committee. Their link at Merthyr Tydfil County Borough Council is Alex Stephens, the Share Heritage Project Manager who also kindly escorted me about during the day.

The Trevithick 2014 project was funded with a development grant from Merthyr Tydfil County Borough Council and the day continued for us at the Redhouse, the former Merthyr Town Hall with singing from Merthyr Aloud and a presentation of the events surrounding Trevithick's epic journey entitled 'Steam' by the drama students of The College, Merthyr Tydfil, produced and choreographed by Chris Ford and Ian Davies. The students also performed at Edwardsville Primary School, Head Colin Davies, and Cyfarthfa Junior School, Head Owen Morgan.

Following the theatrical and musical presentations there was an 'Any Questions?' session where I joined Joe England, Chairman of Merthyr Tydfil Heritage Forum, and Huw Williams, Chairman of Merthyr Tydfil Museum & Heritage Group, both members of the Heritage Regeneration Trust. We fielded a number of questions concerning Trevithick, his locomotives and events that occurred on the journeys.

It is hoped to stage a further steam based heritage festival connected to Trevithick's achievements in Merthyr Tydfil during the coming summer. There are also plans for a working replica of the 1804 locomotive to be built and operated on the site of the former Cyfarthfa iron furnaces, just across the dual carriageway from the intended £50m Trago Mills store. The costs and technical feasibility are currently being examined by Ffestiniog Railway at Porthmadog. Seeing is believing and the existence of a regular working replica is sure to attract all manner of railway and

steam enthusiasts from around the world. As a central attraction for the general heritage of this once important, prosperous industrial and mining area it will be seen as the Holy Grail of early rail transport running on Sacred Ground.

The Trevithick Committee at Merthyr Tydfil is to be congratulated for its tenacity and devotion to exploiting one of the most important events in railway history. It was a good day in South Wales, a land of rugby and roundabouts. It finished with Wales beating France 27 – 6 at the Millennium Stadium, Cardiff.

P.M.H.

CORNWALL INVADES WALES AGAIN

In the above report there was mention of Trago Mills, the large Cornish originated discount warehouses to be found in the Glynn Valley, Falmouth and Newton Abbot. After several years of negotiations, we know how the Robertsons fight to achieve what they set out to do, a 200,000 sq. ft. store costing £50 million is to be built on the site of the former Heolgerrig brickworks at Merthyr which Trago has owned for the past 20 years.

Dvorak music and steam.
Antonin Dvorak, 1841 - 1904

Huw Williams was on the above Any Questions? panel. He included an item on Dvorak the composer.

As a 9 year old, the Czech composer Antonin Dvorak, saw the railway being built by his home. From that moment he was fascinated by trains and said of the locomotive later in life,

"It comprises so many parts, so many different components, and each has its own importance, each has its proper place. Even the smallest bolt is where it is meant to be and fastens something together! Everything has its purpose and role and the result is astounding. This engine is then set on its railway track, they pour coal and water into it, a man pulls a small lever and then the big ones start to move and, even though the carriages weigh several thousand hundredweight, the engine speeds along with them like a hare. I'd give all my symphonies if I could have invented the locomotive!"

Carnot's praise for Trevithick and Vivian.
Sadi Carnot, 1796 - 1832

While it has nothing directly to do with Trevithick Day in Merthyr, I thought you might like to read what Frenchman Sadi Carnot, one of the pioneers of thermodynamics, said of two Cornishmen in his 1824 memoir:

"Besides the high-pressure double-cylinder engines of which we have spoken, there are also high-pressure engines of one cylinder. The greater part of these latter have been constructed by two ingenious English engineers, Trevithick and Vivian. They employ the steam under a very high pressure, sometimes eight to ten atmospheres, but they have no condenser. The steam, after it has been introduced into the cylinder, undergoes therein a certain increase of volume, but preserves always a pressure higher than atmospheric. When it has fulfilled its office it is thrown out into the atmosphere. It is evident that this mode of working is fully equivalent, in respect to the motive power produced, to condensing the steam at 100 deg. C, and that a portion of the useful effect is lost. But the engines working thus dispense with condenser and air pump. They are less costly than the others, less complicated, occupy less space, and can be used in places where there is not sufficient water for condensation. In such places they are of inestimable advantage, since no others could take their place. These engines principally employed in England to move coal wagons on railroads laid either in the interior of mines or outside them."

P.M.H.

DISTRIBUTING THE SHERBORNE MERCURY

The significance of the Sherborne Mercury as being the most widely circulated early newspaper in Cornwall was recognised by H.L.Douch, Curator of the Royal Institution of Cornwall. His work was used by D.Bradford Barton in *The Cornish Beam Engine* 1966 (p.20 and Appendix I p.270f).

Nigel Tangye's Cornwall's Newspapers 18th and 19th Century (Trevithick Society 1980) lists the Sherborne Mercury (in seq) as published from 24 February 1737, printed at Sherborne, Dorset by W.Bettinson, using London pages printed by G.Price. It was also called Weekly Advertiser. The Cornwall Centre has copies 1737 to 1865 on microfilm. Plymouth Library has copies 1740 to 1826 at least.

Something that I had wondered was, how were such early newspapers distributed in the eighteenth century so far from Dorset?

In reading a source for early Methodism in St.Austell (T*he Life, Character and Literary Labours of Samuel Drew* AM London: Longman, Rees, Orme, Brown, Green & Longman 1834 [Jacob H. Drew]) I came across the following.

"At the time my brother Samuel was an apprentice, my father was chiefly employed in what was called riding Sherborne. There was scarcely a bookseller at that time in Cornwall; and the only newspaper known among the common people, was the Sherborne Mercury, published weekly by Goadby and Co., the same persons that issued the Weekly Entertainer. The papers were not sent by post, but by private messengers, who were termed Sherborne men. My father was one of these. Between Plymouth and Penzance, there were two stages on the main road, each about forty miles; and there were branch riders, in different directions, who held a regular communication with each other, and with the establishment in Sherborne. Their business was to deliver the newspapers, Entertainers, and any books that had been ordered; to collect the money, and take fresh orders. Almost the whole county of Cornwall was supplied with books and papers in this way. My father's stage was from St. Austell to Plymouth. He always set off on his journey early on Monday morning, and returned on Wednesday." (p.40f)

For sake of completeness, on the Weekly Entertainer …

"In some part of my servitude, a few numbers of the Weekly Entertainer were brought to my master's house. This little publication, which was then extensively circulated in the West of England, contained many tales and anecdotes which greatly interested me. Into the narratives of adventures connected with the then American war, I entered with all the zeal of a partizan on the side of the Americans. The history of Paul Jones, the Serapis, …" (p.32)

The father in the larger quotation is Samuel Drew's father, Joseph. Their residence was St.Austell and the year was approximately 1780. The war in the second quotation was of course the American War of Independence.

The larger quotation unveils the infrastructure to distribute the Mercury. Men, horses, money, publications of several sorts, orders and enquiries all passing in flow through a well-designed system probably largely unseen even in its day. It's this sort of infrastructure that makes the eighteenth century still in many ways a closed book, and which an almost casual comment in a publication far removed from the process described can open to us today.

Colin C Short

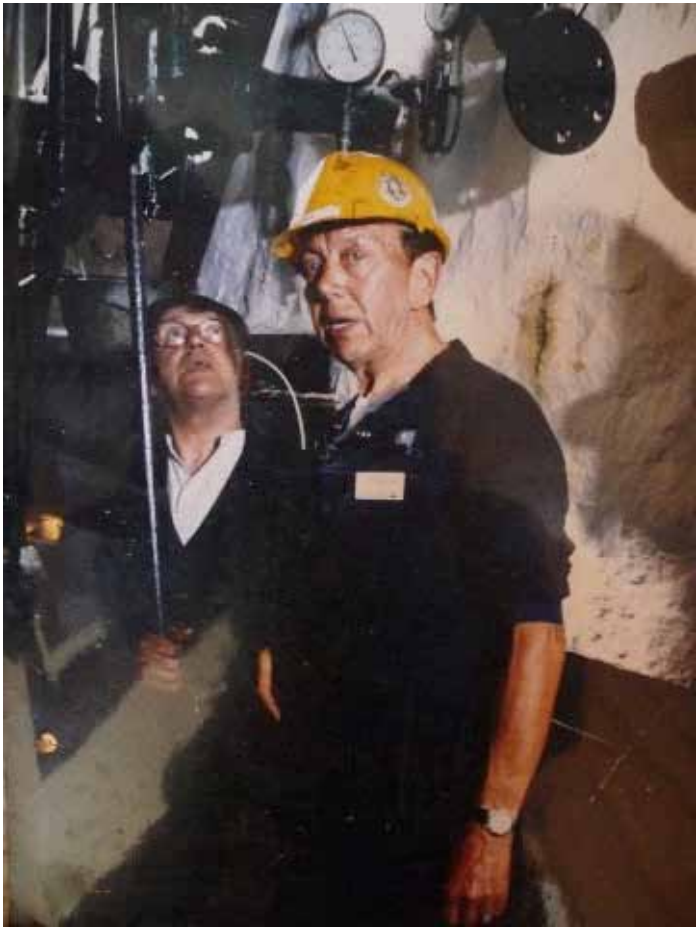
LEVANT REPORT

Levant has remained open on Fridays over the winter period with a steady stream of visitors despite the rough weather conditions. The Whim engine had not undergone a major inspection of its bearings since 2001 so the beam was lifted to inspect the main trunnion bearings and also those of the sweep rod and parallel motion. Normal engineering practice is to allow one thou clearance per inch diameter on bearings, and other than one of the loop bearings on the parallel motion showing 25 thou clearance, all of the others bearings were showing very little over limits. Our NT contract engineer is John Treloar and he took that bearing away to his workshop for machining. A problem was identified with the brake mechanism as the bolt securing the brake beam to the outside wall was loose and practically rusted through. This has been re-fixed and brackets beefed up.

The guards have now been replaced and the engine repainted in preparation for the first official steaming day of the season on Sunday March 16th. Thank you to all the Levant volunteers for their assistance in what at times was heavy and difficult work.

I am sorry to report that just before Christmas, our longest active volunteer Tom Barr passed away after a sixteen month battle against cancer. He was one of the original 'Greasy Gang' that was ably led by Milton Thomas with the whim restoration starting in 1984. Although he lived in Surrey, Levant was his second home and he regularly spent the whole months of June and September at Levant for very many years, driving the engine and conducting tours of the site. Tom was a well known figure at Trevithick events and he will be sadly missed. Sympathies are extended to his wife Rene and family. The picture here shows him teaching Fred Dibnah how to drive the engine!

Ron Flaxman.



WELSH COAL MINING WINDERS - OFF THE BEATEN TRACK

On the 1st January 1947 over 1400 coal mines were transferred from private ownership to form the National Coal Board. Many of these mines were small units, i.e. drift mines and shallow shaft mines and were closed in the early days of the NCB.

Considering that a very high proportion of the remaining mines were shaft mines equipped with winding apparatus, the majority being steam powered, very few original winders have survived the "scrap man". From the hundreds of steam winders in operation throughout the industry only a few have been "saved" and restored.

In a previous article I described three sites where steam winders can be found in the Midland counties of England. These sites are at Bestwood and Papplewick in Nottinghamshire and Pleasley in Derbyshire.

Three winding engines, still in their original engine houses that have escaped the scrap man are certainly worth visiting. Two of the sites are located in South Wales, Cefn Coed Colliery Museum, near Neath and Big Pit National Coal Museum of Wales at Blaenafon. The third engine is located at The National Coal Mining Museum for England at Caphouse Colliery near Wakefield, West Yorkshire.

Cefn Coed Colliery Museum
South Wales

This museum site is located at the Cefn Coed Colliery which was sunk by the Amalgamated Anthracite Company in 1926, raising coal for the first time in 1930. Cefn Coed was at one time the deepest anthracite mine in the world working at levels of over 2500 feet (425 fathoms - 800 metres). Working at these depths brought many operational problems in roof and roadway control, plus build up of the deadly methane gas. These conditions were a contributory factor leading to the closure of Cefn Coed in 1968.

The site was saved from demolition by the local council which opened the colliery site as a museum telling the story of Cefn Coed colliery, South Wales mining, the locality and Welsh anthracite mining.

Cefn Coed Colliery is located near the village of Crynant in the Dulais Valley, five miles north of Neath (O.S. Grid Ref. SN785033).

The majority of the surface buildings have survived including winding engines, compressor house, boiler house, pump house and a "surface/underground" gallery area.

The boiler house is home to six Lancashire boilers, once coal fired, but converted to methane gas drained from the underground workings at a later date. The compressor house also houses an exhibition area with artefacts related to the Welsh mining industry.

There are two winders at Cefn Coed - the first being a Morlais colliery steam winder manufactured by Andrew Barclay & Co. Ltd. of Kilmarnock in Scotland in 1880. This winder has a very unusual design of winding drum and is a static exhibit.

The second winder is the No.2 shaft winder, still in its original site, powered by an electric motor for demonstration purposes. The engine was manufactured in 1927 by Worsley Menses of Wigan in Lancashire and is a horizontal duplex cylinder which has been beautifully restored.

Other exhibits at Cefn Coed include the Neath Model Railway Societies layout celebrating the age of steam in the

Dulais Valley. Also in the exhibition area is a unique gas tram which was still in use in Neath in 1920.

There is no underground access at Cefn Coed, but the museum have constructed an "underground gallery" on the surface which gives the visitor an experience of life and conditions underground in a coal mine.

Big Pit Coal Mining Museum
South Wales

Just 38 miles along the A465 Heads of the Valley Road from Cefn Coed Museum is the Blaenafon Industrial Landscape World Heritage Site, designated by UNESCO in 2000. Within this World Heritage Site is located Big Pit - the National Coal Mining Museum for Wales (O.S. Grid. Ref. SO237088).

Big Pit is located on the eastern edge of the South Wales coalfield near the town of Blaenafon in an area that yields a combination of steam and bituminous coal.

Coal Mining at Big Pit began around the mid 1850/60s with a mine named Kearsley's Pit, this being renamed Big Pit in 1880 after having its shaft diameter and depth increased. The last coal face stopped working in November 1979 with the colliery finally closing in February 1980.

Most of the surface buildings remain together with the new display and exhibition areas showing the visitor the story of the coal industry in South Wales.

So what remains at Big Pit today? Like Geevor, Big Pit was spared a visit by the scrap man, and similarly has been transformed from a production mine into a well established working museum - complete with most of the original mine's surface buildings and infrastructure. In addition both museums have established exhibition buildings displaying the history of coal mining, engineering and machinery, all packaged as an educational tour.

Starting from the reception area the visit to Big Pit includes the tram circuit creepers and tippler around the pit head, lamp room, an unique underground visit, saw and mortar mill, winding and fan house, pit head baths and exhibition buildings, explosive magazine, blacksmiths fitting and welding shops (still in use today) and the superb Mining Gallery built into the hillside above the mine. To complete the visit one must not miss the "pit canteen" for a well deserved "bacon butty". As mentioned before, the museum have added several new buildings under the heading of Operation and Resource Building, Conservation Workshop and Stores, Education Room and Mining Gallery.

Conservation and Education and all aspects of mining disciplines play a very big part in Big Pit's operations. In the Conservation and Resources Building the museum have set out displays of mining machinery, including a small coal face section showing self advancing coal face supports armoured face conveyor (commonly known as a Panzer) and power loading machinery. The seam height is under 3 feet and gives the visitor a very good indication of the arduous conditions miners worked in to win the coal.

Big Pits' famous underground tour around the pit bottom section of the mine is an experience not to be missed. After descending 300 feet (50 fathoms/90 metres) in the original mine cage the visitor is taken on a 50 minute circular tour which includes pony stables haulage engine houses, roadways and coal face in the capable company of a former South Wales coal miner. The visitor wears the regulation pit helmet and cap lamp and belt with battery and self rescuer. During the visit our guide will tell you how the coal

was won from the coalface and transported to the pit bottom to be wound up to the surface for processing.

Big Pit Winders

Main Winder

The original steam winder was replaced in 1952 by a "modern" electric winder during a modernisation programme in the early days of the National Coal Board. This new winder was supplied and installed by the Uskside Engineering Company of Newport, South Wales. The 19th century foundations and cast iron structure of the original winder are still visible outside the present winding house.

This winder is the one used to lower and raise visitors for the underground tour. Inside the winder are displays of equipment associated with many aspects of winding which include winding rope samples, rope and capping samples, detaching hooks and many more exhibits of winding equipment still in use in today's modern mining industry, very similar to Geevor's winding house.

Visitors are allowed in to the winding house when winding is in operation and you are able to hear all the correct operations for a winding, including all the correct signals/bells and watch the complete man riding process taking place. Photography is allowed, but not flash!

Elled's Winder

Adjoining the under ground visiting waiting room is a small red-roofed building known as Elled's Winding House. This was used to house a small haulage engine which hauled coal out of a small drift mine, known as Elled's Mine, located down Elled's Slope. The drift opened in the late 1940s and was abandoned due to geological conditions in 1951. The engine house is at present used as a store, but the museum hope to re-install an engine and put the building back on display.

Big Pit's Water Winder

Adjacent to the Powder Magazine Big Pit have re-erected a 19th century Water Balance Winding Engine from Brynpwllog Colliery (also known as Roser's Pit) located in the Rhymney Valley. This form of winding was very common in South Wales during the first half of the 19th century and was used in the mines around Blaenafon, including Big Pit.

Big Pit Mining Gallery

The Mining Gallery, complete with simulated underground road ways, is built into the hillside above the mine. The Gallery houses a multimedia representation telling the story of South Wales coal from the very early days right through to the sophisticated highly mechanised industry of today. The museum have created the sights, smells and sounds of mining right through the Gallery so that you think you have been "beamed" down through the strata to the actual workings 300 feet below. Using state of the art technology you are taken, via the introductory theatre, through roadways, headings and coal faces showing the mining scene. During the visit to the heading station you are able to hear and see shot firing. Well, when the shot was fired all I can say is that it was as clear as near as you can get to an actual shot fire.

Having retired from the mining industry for over 15 years I thought I had lost all habits connected with underground visits. In one of the roadways the lighting levels were lower. What did I do - put my hand up to urn my cap lamp on to switch on my cap lamp - even though I was not wearing a cap lamp.

Entry to the museum site is free, although there is a small charge for use of the car park. A small price to pay for the facilities available to the visitor.

National Mining Museum for England
Cap House Colliery Winder

The National Coal Mining Museum for England is located on the western boundary of the vast Yorkshire coalfield at Overton, near Wakefield, West Yorkshire. From the colliery yard the view east is of the vast conurbation of West Yorkshire, comprising many major towns and cities. Among this conurbation are the towns/cities of Leeds, Wakefield, Dewsbury, Huddersfield and many other well known locations.

To the west the view is out to open moorland and hills of the foothills of the Pennine Chain dominated by the concrete Emley Moor TV transmission tower, rising from Emley Moor to a height of 1084 feet (330 metres).

The concrete tower, Grade II Listed replaced a 1265 feet (385 metre) steel lattice tower which collapsed during an ice storm on 19th March 1969. The tower is the tallest free standing structure in the UK and the 7th tallest in Europe.

Cap House mine was sunk around the late 1790s, Nationalised in 1947, uniting with Denby Grange during the British Coal Barnsley Area West Side Project in 1981 and finally closing in 1985. The West Side Project was a vast undertaking linking several mines located to the west of the M1 Motorway. These mines were linked via underground conveyor systems and surge bunkers and drift conveyor to a vast coal preparation plant at Woolley Colliery.

Many of the earliest buildings at Cap House include the chimney, heaps stead (headgear) and winding house dating from 1876. In fact the winding house and heap stead are in constant use every day the museum is open.

Cap House, like Geevor and Big Pit, was a productive unit and fortunately did escape the scrapman's torch, and like Geevor and Big Pit has many similar features located around the site. Additional features at Cap House not found at Big Pit include dry screen plant, nature trail and an underground type rope haulage up to Hope Pit.

The workshops and exhibition buildings contain a massive collection of coal mining memorabilia, machinery, many "hands-on IT" related equipment etc., etc., telling the story of coal down the ages in the UK. There is also a well-stocked library and conference facility enabling students of coal mining many avenues of study in their researches.

Cap House Winder

Supplied and installed in 1876 by Davis of Derby the engine is a twin cylinder slide valve with a 36 inch stroke (91 cm) x 16 bore (40cm) operating at a man riding speed of 9 metres per second. When on coal winding the two single deck cages held two 5.5 cwt tubs giving a maximum shaft output of 33 tons per hour from the 11 feet diameter, 440 feet deep (134 metres), downcast shaft to the New Hards Coal Seam.

The winder is no longer used for man riding but kept in low steam for demonstration purposes only. The winding engine that takes visitors on the underground tour is a Needham Brothers and Brown electro/hydraulic winding engine operating a single cage, carrying 20 visitors at about 4.5 feet/second (1.45m/sec).

Cap House Underground Tour

After collecting lamp and respirator at the "lamp cabin" you descend to the New Hards Seam via the downcast shaft. On the way to the shaft top from the lamp cabin the visitors are "invited" to step onto what appears to be a sheet of glass

set into the concrete. Once the visitors have gathered around the central area of the glass your guide then switches on lights below the glass surface, revealing to the startled visitor that they are standing on a large piece of safety glass on top of the 400 feet plus deep Furnace Shaft, about the same height as Blackpool Tower.

Furnace Shaft was sunk in the very early days of the mine and was used for ventilation. At the bottom of the shaft a fire was lit causing currents of air to circulate around the mine.

On reaching the pit bottom the visitor is taken on a tour showing mining from the very early days right up to modern rimes. Using many mining items and machinery visitors are shown how children and women worked down the mines, how machinery developed, how coal was won at the coal face and transported to the surface for processing - and many more coal mining procedures. Many of the displays have “hands on experience” and school children are invited to dress up in period clothes and re-enact mining scenes of yesteryear.

Norman Tarry

TREVITHICK IN IRELAND

One of the remaining William West models of Richard Trevithick’s wheeled steam locomotives from about 1796 resides in the Steam Museum at Straffan, Co. Kildare, just west of Dublin.

Described as the ‘gem of the collection’ it is a part of the extensive Richard Guinness collection of steam engines, pumps and other equipment that are located in what was once the Great Southern and Western Railway Church that stood at Inchicore in Dublin. Now known as the Power Hall it is located in the 18th Century Lodge Park Walled Gardens at Straffan.

The museum has a fine selection of industrial high-pressure steam engines including a huge beam engine used in the Middleton whiskey distillery in County Cork,

a pumping engine employed in Jameson’s distillery in Dublin and a large beam engine installed in Smithwick’s brewery, Kilkenny, in 1847; they occasionally run on steam. It also has a Cornish boiler and several smaller engines.

The Trevithick connection with the Guinness family was established by the late Mr. Frank Okuno, great grandson of Francis Trevithick. He attended university in Ireland after WW2 and it was his home for many years.

Refreshments are available at the Steaming Kettle Tearoom and further details are available from Mr. Robert C Guinness at info@steam-museum.ie or 353 (0)1 -6273155. There is a website at www.steam-museum.ie and an intriguing video at http://www.youtube.com/watch?v=C2n-r_Qu9qQ

The museum is connected to the Industrial Heritage Association of Ireland, http://www.ihai.ie.

P.M.H.

SOCIETY HOME AT LAST?

The Society has obtained Planning Consent for a Change of Use in respect of the former Holman Bros showrooms next to the railway level crossing in Camborne. As we go to press the draft lease is being examined by solicitors.

It will be the first interesting building to be seen by passengers alighting from trains. It has already attracted international museum attention under its proposed title of 'Camborne, Cradle of Locomotion'.

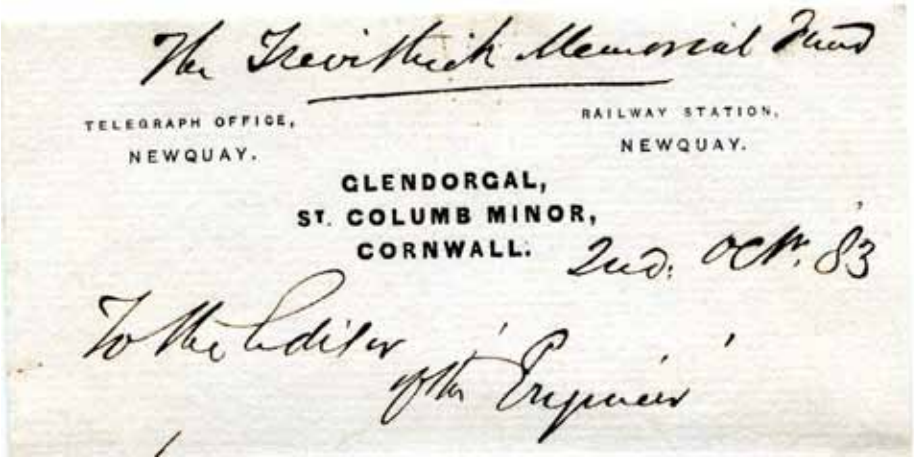
P.M.H.

WHEAL BUSY FACE LIFT

This spring, a pumping engine house, associated boiler house and adjacent chimney, at Wheal Busy, will be subject to much-needed building conservation work.

This conservation project is being undertaken by Natural England in partnership with the Tregothnan Estate, the landowner, with the works funded through the Natural England Higher Level Stewardship (HLS) scheme.

The HLS project is also to fund the preparation of a conservation management plan for the mine smithy, which is a remarkable extensive stone and slate building.


The Trevithick Memorial Fund

TELEGRAPH OFFICE,
NEWQUAY.

RAILWAY STATION,
NEWQUAY.

GLENDORGAL,
ST. COLUMB MINOR,
CORNWALL.

2nd. Oct. 83

To the Editor
of the Engineer

Sir Richard Tangye's letter.

Following a kind gift by Ms Moira Tangye we are able to examine the letter written by Sir Richard Tangye from his summer retreat to the Editor of the 'Engineer', the then journal of the Institute of Civil Engineers, in October 1883. He was clearly indignant about an item in the magazine concerning his donation to the Richard Trevithick Memorial Fund.

Something else is apparent in the letter, the admission by a major industrialist that his company's fortunes were derived to a great extent from the development and manufacture of high pressure steam engines and boilers based on Trevithick's designs. The Tangye factory, named the Cornwall Works, opened on a three acre site in Smethick, Birmingham in 1864 and expanded to 20 acres by the time it was taken over in 1950.

The Tangye brothers' belief in the contribution made to their fortunes by Trevithick and their Cornish background was so strong that they both chose the name Trevithick for their sons' middle names and every product the factory produced bore a Cornish coat of arms.

The Trevithick Memorial Fund

2nd. Octr. '83

To the Editor of the 'Engineer'.

Sir,

A friend sends me a cutting from your paper, bearing the above heading in wh occurs this passage:-

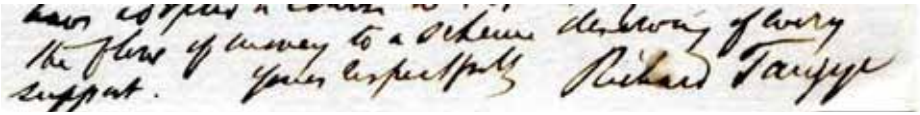
"A list of subscribers has been published at one end of which we find Mr R.G. Tangye with 100 guineas, & at the other 10/- subscribed in pence by the workmen of Mr. P Brotherhood; we imagine that this latter contribution wd be more pleasing to Trevithick than the former." – my friend not unnaturally asks me if the "Engineer people have any spite against my firm, if not, why the sneer?" I reply that I know no reason why you shd. sneer at us, as we have paid you some thousands of pounds for the privilege of

advertising in your paper, and are not conscious of ever having given you occasion for entertaining adverse (sp) feelings towards us.

Editors of papers of course know a very great deal about every subject, but you may well be excused if you are unaware of the reason operating with my firm (R. & G. Tangye) in giving a somewhat liberal sum towards the proposed memorial to Trevithick. In the first place then I may inform you that Trevithick was a neighbour of my father's, they having worked, I believe, in the same mine, and further that Trevithick's inventions of the high pressure steam engine & of improved steam boilers have furnished us with a large amount of profitable work, in the profits of which you, amongst others have participated through our advertisements. We too, were workmen, and if we have given according to our means why shd our contribution be less acceptable to Trevithick than the contribution of other workmen who, I presume have not given in excess of their means? It appears to me, that unintentionally I have no doubt, you have adopted a course wh is likely to check the flow of money to a scheme deserving of every support.

Yours respectfully

Richard Tangye



ARTIST WANTED

Are you an artist?

The Society is seeking an artist, or artists, who can paint in a similar manner to the famous railway posters of pre-war days. The subjects will be early mine sites as they might have looked in their working lives. The purpose is to illustrate and educate in an appealing manner. The style will be attractive and similar to the posters that appear to be 'paint by numbers'. The society is working with a number of people and organisations to seek suitable artists and we would like to find one among our membership.

This is an interesting pastime that could be very rewarding in several ways.

P.M.H.

KING EDWARD MINE

The Society is sad to report the passing of our member and King Edward stalwart, Gerald Bodilly at the age of 73. Gerald was an electrical apprentice at South Crofty Mine and, having qualified, stayed there for the rest of his career. His recall of the history of the mine, its engineering and its peculiarities was most remarkable. After retirement he became a volunteer at KEM. A quiet private man with a dry sense of humour, he got on with his work at what must be considered a steady pace but his reliability was second to none. His two main passions were total opposites as in younger days he was a keen sailor but he was also a keen supporter of Formula One motor racing. Thanks for what you did for us Gerald. No doubt you are now checking the wiring of the heavenly circuit.

Much effort has been put in by the volunteers to clear out the carpenter's shop block, the dry, the counthouse and the mining lab. Two containers have been bought, one by the society and one by KEM for storage. These are now in place and already being used. Contractors have moved in to remove asbestos from the now empty buildings. In mid March builders move in to construct a replacement storage facility in the Home Field. This will then allow the old winder boilerhouse to be cleared where it is intended to house educational displays for our younger visitors.

The ground crew have been trying to get the nature walk clear but the current weather conditions have made work difficult. On the north side of the tramway from Plantation Shaft at the stamps end, clearance has been done on the bank and an underground launder has been discovered close to where a shall tunnel pierces the embankment. This could possibly be the water supply for the Brunton calciner which was sited adjacent to the Mineral Tramways by the Home Field/Carpark Field gates. This calciner would have required a low power mechanical drive, no doubt a water wheel, requiring the above mentioned water supply. The launder appears to be a good condition so the next question is where is the other end? A set of rods will be the answer I think. Member Phil Porter has set himself the task of excavating the calciner site during the summer. It is hoped that the foundations are still extant, however, the building was removed some years ago.

On June 21st and 22nd. 2014 King Edward is hosting "Museums on the Air". These two days will see us hosts to local amateur radio enthusiasts who will be speaking to the world under the call sign G1KEM. This is a repeat of last year but it is hoped that atmospherics will be less of a problem this time. Come and have a listen and marvel at the distances covered.

Continued effort is being put in by Keith Rundle and his team of helpers at the stamps boiler house archaeological dig. Slowly the footings of the boiler house walls are being exposed and more of the coalyard cobbled surface is coming to light.

The shop is currently having a facelift with volunteers Roger Kellow and Dave Allen manning the paintbrushes.

In mid-March contractors are moving in to construct a much needed storage building in the Home Field.

K.J.T.R.

SOCIETY JOURNALS

All surplus stocks of the Society Journal are now held in house by the Society. Tormark no longer hold any copies of the Journal. Please address all enquiries for copies of the Journal initially to Graham Thorne, Publications Secretary and Journal Editor, who will arrange for them to be sent to you.

We are able to supply copies of all editions except for Numbers 9, 12, 13, 14 & 17. The price for copies of the Journal, including postage is £6.00 for issues up to and including Number 33 (2006), and £11.00 for subsequent issues. There will

be a reduction for copies collected from Camborne. The 2014 Journal will be Number 41. For copies of the 'missing' years it is worth looking at websites such as www.abebooks.co.uk The Society is always interested in receiving Journals surplus to owners' requirements.

The last Index to the Journal, covering Numbers 1 (1973) to 27 (2000) was issued in 2000. It is our intention to issue an updated version during 2014. This will be available as a download from the Society website with a printed version supplied on demand at a nominal cost.

Graham Thorne

BOOK REVIEW

Cornish Milestones

The publication of books on Cornish railways seems often to be an ever-rolling stream. In contrast books on the development of roads and road transport are a much rarer commodity. For this reason the publication of Ian Thompson's Cornish Milestones by Twelveheads Press is most welcome.

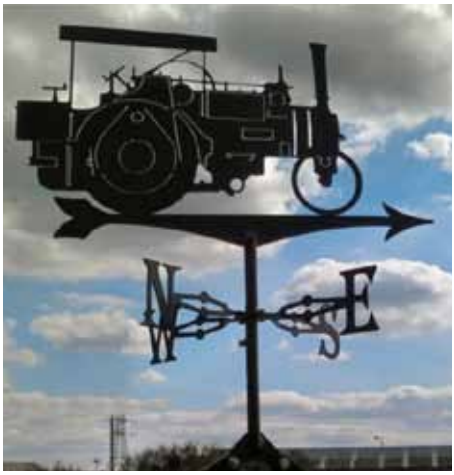
This substantial volume not only catalogues Cornwall's unique collection of granite milestones, with a comprehensive gazetteer, but also traces the growth and development of its road system. It contains too the fullest account to date of the county's Turnpike Trusts. The pattern of milestones and their various designs are shown in a collection of high quality and detailed photographs with accompanying maps. One can confidently predict that it will remain the standard work on the subject for the foreseeable future

Cornish Milestones is published by Twelveheads in a large paperback format of 184 pages and is excellent value at £18.50. ISBN 978 0 906294 78 9 It is available from local bookshops and via www.twelveheads.com

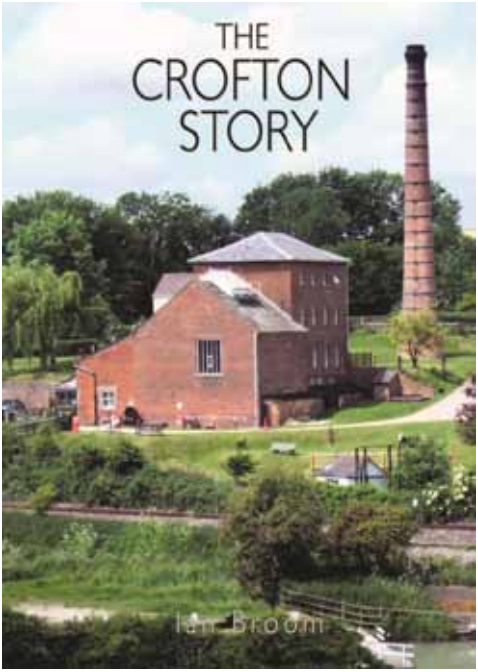
Graham Thorne

You may wonder where all those nine million 2004 Trevithick £2.00 coins went. While many are stored away in the bedroom drawers of railway enthusiasts, we have come across Martin & Shirley, an enterprising couple who have trimmed pairs down to produce cuff links. They can be found on EBay. Would this constitute the defacement of a coin of the Realm?

P.M.H.



Also on EBay is this fine McLaren wind vane.



THE CROFTON STORY

The History of Crofton Pumping Station

By Ian Broom

Crofton Pumping Station near Great Bedwyn on the Kennet and Avon Canal is an important piece of the industrial archaeology of the canal age. It houses the oldest working steam engine in the world still in its original engine house and still doing its original job of pumping water into the summit level of the canal. Pumping started in 1809 and continued until 1959, when following deterioration of the top of the chimney the engines were retired. The engines and boilers remained in place and have now been restored to full working order by an enthusiastic band of volunteers.

Quoting extensively from original records this new book charts the history of the building of the pumping station, its Boulton & Watt engines, the engineers and enginemen who kept them working for 150 years and the painstaking work needed to restore them to working order.

Ian Broom was an original member of the group who restored the engines and boilers and now acts as one of the volunteers who man the station on the regular steaming days organised by the Kennet & Avon Canal Trust.

TO BE PUBLISHED END MAY 2013
BY THE WILTSHIRE ARCHAEOLOGICAL AND NATURAL HISTORY SOCIETY

Price £14.99 (paperback). **Pre-publication offer £10.00 if collected from either the Wiltshire Heritage Museum in Devizes or from the café at Crofton Pumping Station (otherwise plus £1.50 p&p)**

MEMBERS' BENEFITS

Trevithick Society members are entitled to free entry (on production of the membership card) to the following attractions:

- King Edward Mine
- Cornish Engines at Pool (East Pool Mine and Michell's Whim)
- Levant
- Geevor Museum

Members of this Society and the CSM are entitled to 20% OFF the History of Camborne School of Mines by Lawrie Piper. This remarkable tome of some 440pp records the history of mining education in Cornwall from the 1700s and includes all manner of information about people and activities at CSM.

So far copies have been despatched to locations as far away as Peru, Japan, Colorado, Camborne and Chacewater! To take advantage of this offer go to www.trevithick-society.org.uk for further details.

SOCIETY MEETINGS

Society Programme

Saturday March 29th. Field Trip.
Walk about Pentewan.
led by Robert Evans at Pentewan village (meeting point to be confirmed) at 2.00pm.

Tuesday April 8th. ECB.
Marine Tin Recovery-Recycling Cornwall's lost Tin from the sea.
by Mike Proudfoot of Marine Minerals Ltd.

Friday April 11th. KEM.
Computerising Cornwall.
by Colin French.

Friday June 13th. KEM.
A new talk and speaker is to be arranged.

June ECB. (Date to be confirmed)
Members BBQ at Herodsfoot Mine.

Friday July 11th. KEM.
A new talk and speaker is to be arranged.

Tuesday July 15th. (DTBC)
Devon and Cornwall Mines and Men.
by Roger Burt. This talk is based on his new book and its associated research database for historians.

The West Cornwall Branch meets at King Edward Mine (KEM) at 7.30pm on the 2nd Friday of the month.

The East Cornwall Branch (ECB) meets at the Public Rooms at Liskeard and start at 7.30pm, unless stated otherwise.

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For up-to-date news follow us at:
http://teammanley-ts.blogspot.com

Non members are welcome to all talks.

Rally and Show Programme

The projected show programme could be subject to change but at the time of going to press the following dates are in the diary.

26th. April, Camborne Trevithick Day
27th. April, King Edward Mine Open Day
1st. June, Tavistock Steam Fair
14th./15th. June, Bodmin
19th. July, Camborne Show
15th./16th./17th. August, WESES Steam & Country Fair, Stithians
20th./21st. September, Grand Henham Rally, Suffolk

Annual General Meeting

Details of the weekend are supplied separately with this newsletter.

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Treasurer: Chris Coombes

The Trevithick Society, a registered charity, is a recognised body of the study of industrial archaeology in Cornwall. Membership is open to all who are interested in the region's great industrial past, whether or not they live in Cornwall. The Society takes its name from one of Britain's foremost inventors and pioneers of the Industrial Revolution, Richard Trevithick, a Cornishman whose name is inseparable from the development of steam power. This newsletter is published quarterly and, together with the annual journal, is distributed free to members. Letters and contributions are always welcome and should be sent direct to the editor.

The views expressed in this newsletter are those of the authors and not necessarily those of the Trevithick Society.

ANNUAL SUBSCRIPTIONS:

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Overseas members	£25.00
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The Chatline: 01209 716811
http://www.trevithick-society.org.uk

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