



THE TREVITHICK SOCIETY

KOWETHAS TREVITHICK
NEWSLETTER 170 WINTER 2015



A computer model of the Puffing Devil created by Mike de Greasley.

CHAIRMAN'S ADDRESS



The Trevithick Society has a new Chairman.

With Phil Hosken standing down at the November Council Meeting and after some discussion, the meeting agreed that he should be succeeded by Brian Jones.

Brian is a local boy directly descended from two prominent Penzance families. He grew up and was schooled in west Cornwall, firstly at Sennen then Penzance and finally at (what was then) Camborne Technical College.

Pursuing a career at sea he spent most of the next 14 years away from the Duchy. On returning home he established an Electrical Contracting business which he has run for the last 25 years in partnership with his wife Jane.

He is a licentiate of the City and Guilds of London Institute and a member of the Institute of Engineering Technology.

Brian has a keen interest in Industrial Archaeology and Industrial Heritage in general and a large static steam plant in particular. He lives in Penzance with his wife and two children.

EDITORIAL

There has been a change in the way the Society prepares the general programme of monthly lectures. There is now a single programme, prepared by Tracy Elliott and Dave Warne, with meetings taking place either in Liskeard or at King Edward Mine, as well as a variety of field trips to historic mine sites.

Colin French
Copy date for next newsletter: March 5th 2015



Established 1935

LEVANT REPORT

The Levant Whim was kept in steam on Fridays until just before Christmas as many people were still visiting the site. This year has seen a record number of approximately 30,000 visitors which seems to be a result of 'the Poldark effect'. Filming for the next TV series has started near to Botallack, Wheal Edward and Wheal Owles, and this has resulted in lots of interest around our part of the coastline.

The Whim, engine house and surrounding buildings are now undergoing the winter maintenance and repair programme. The CFB boiler has had its annual service including the replacement of all flue gaskets. The boiler and air compressor receiver have also been inspected and a certificate issued for the next 12 months.

Much work has been carried out to weatherproof Skip Shaft building, and scaffolding will soon be erected around the head frame so that maintenance can be carried out to the diverter sheaves and the painting of the tower completed.

A plan over the winter period is to divert various surface water launders and reseal the upper reservoir pond. With the huge amount of rain over the last couple of months we have had a problem with surface flooding so roof launders are being added or replaced.

During the summer season it has been noticed that the vacuum generated by the engine condenser has not been as good as it usually is. A few pinholes have been found within the exhaust pipe, and this resulted in the vacuum being depleted. These holes have been

repaired with the help of the local Belzona representative (see photos of before and after). Now that the engine is shut down for the winter period the remainder of the pipework will be inspected for corrosion. It is also proposed to lime-wash the interior of the engine house.

Entry to the various adits in Boscregan Zawn have been opened up, and access gained underground to the Man Engine shaft. The adit through to Boscregan and Tresize shafts and then to Higher Bal has various blockages and it is hoped to clear these levels during the 2016 season.

Work is almost complete on the reconstruction of a dressing floor adjacent to the newly finished working jig.

Ron Flaxman



THE FIRE ENGINE

This Society receives a number of enquiries through its web site and one concerned the possible age of a public house in Marazion. The first thing we established was that 'fire engine' was a term used to describe the atmospheric Newcomen and Watt pumping engines before the words 'steam engine' became common usage.

That put the possible age of the building back into the C18th and Pete Joseph came up with a number of local engines from which the term could be derived. They were Ludgvan Leaze (1720), (West) Wheel Fortune (1760s), Wheel Prosper (1768), Penberthy Crofts (before 1780), Bog Mine (not later than 1794). We described the differences between inn, tavern and kiddliwinks and Pete also suggested some sources for research. He mentioned that there had been another Fire Engine at the Greenmarket in Penzance.

STEAM POWER AND PHOTOSHOP

Mike de Greasley is a very clever fellow from 'up North where Fred Dibnah came from'. Using Photoshop he has produced an animation depicting the rise of steam power. It contains an excellent portrayal of Trevithick's 1804 locomotive. Either go to the Society's website and look up Educational or type in <http://www.trevithick-society.org.uk/educational> where a licensed copy can be seen.

Mike is working over Christmas on a similar animated interpretation of the Puffing Devil (see front cover). We are exceedingly grateful to him.

P.M.H.



The Fire Engine in the 1920s. Photo provided by Jo Astley-Sparke

THE CULTURAL LEGACY OF EUROPEAN MINING C.L.E.M.

The title of this organisation is likely to leave some members mystified, if not reeling. It is an organisation with increasing membership that caters for people, young and old, who wish to associate with European mining through the media they best understand.

To quote its mission statement, the purpose of CLEM is to provide a permanent resource which conserves and communicates the intangible heritage of European underground mining such as art, music and poetry.

CLEM has a Facebook page and, as I write, the front page of this European organisation is headed with a picture of Botallack. Its immediate coverage is of Lowender Peran, an inter-Celtic festival held recently at Newquay in Cornwall.

In addition to the CLEM Facebook page I suggest that you put Cultural Heritage of European Mining into Google and see how contemporary culture is replacing the pick and shovel of yesteryear.

MANGA FOR THE YOUNGSTERS

Keith Sparrow is an illustrator and teacher in Truro who specialises in manga depiction of people and events. If you don't know what manga is, go to <http://keefsparrow61.tumblr.com>. He's currently planning the story of Richard Trevithick as a strip cartoon. We have helped with details of Trevithick's life and expect this to be an excellent aid for the promotion of Trevithick's achievements to youngsters of all ages. While there are several books about Trevithick they sit on shelves whilst youngsters click away on their smart phones. Making the story accessible on line puts it in the hands of those we must teach.

P.M.H.



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By Lawrence Piper, M.A., M.Ed.,
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HALF A WHEEL

My attention was recently drawn to the Grade II Listed Manor Farm at Cusgarne, near Redruth. It was coming up for auction by Lodge & Thomas of Truro with a guide price of £400,000. That, plus commission, would be the starting cost as it is in a delightful location called Sunny Corner, but sadly, much of it is derelict.

The purpose of my visit to the property was to examine what I had been informed was 'half a wheel' in one of the outhouses. I found it in a small two storey structure with a loft door overlooking the yard. Its roof and possible winch had been replaced with corrugated iron sheeting. The 8'0" diameter half wheel had five

spokes, was fixed to an axle and still had many wooden teeth. Close examination of the hub revealed the stumps of three further spokes that would have been on the upper part of the wheel. The section of the cast iron spokes was similar to those shown in drawings of the large idler on Trevithick's 1804 locomotives.

The upper part of the wheel had been replaced long ago by a fine beam over 17'0" in length and the building had been converted into a cow shed. Nature had taken over on the other side of the wall a long time ago and there are no signs of a water wheel, pit, leats or launders. A fine granite grindstone has lain in the front garden longer than anyone can remember and it's clear that the building had once housed a water driven mill.

P.M.H.



ASDA AND HAYLE

There has been considerable discussion about the development of a quayside supermarket partly on the hallowed site of Harvey's foundry. Comments have been made about its suitability for the area, its architectural integrity, the construction materials and its effect on the local traders.

There have been several proposals for developments on the site but they have come to nothing; none of them would have contributed anything to the memory of its original purpose. Buildings have disappeared in the past century and the quay has crumbled. The land was serving no purpose and many who did not hold it with reverence thought that it was an eyesore.

As they say, beauty is in the eye of the beholder, and the design is certainly not one of the out of town sheds that blight the countryside elsewhere. The substantial, costly civil engineering works have repaired the disintegrating quay and provided a vast surfaced area in addition to the supermarket's car park. There is a possibility that, if seaward access is improved, Hayle might welcome some visiting marine craft.

Signs throughout the store are bilingual with Cornish in evidence everywhere. Within the store there are reminders of the site's previous purpose. These displays are in addition to anything else found in the town. It is suggested that members visit the site and draw their own conclusions.

P.M.H.



INTERESTING STEAM IN THE EAST MIDLANDS. PLEASLEY COLLIERY REVISITED

One item in my article in the Spring 2013 number 159 newsletter - re *Interesting Steam in the East Midlands* provided details of the restoration of the two steam winding engines at Pleasley Colliery in Derbyshire.

I recently visited Pleasley to see what progress had been made since and can report the following:

- North Engine - Lilleshall Horizontal Twin Cylinder - as detailed in my previous article had been fully restored and is equipped with an electric motor which enables the engine to be "worked" at about 5 R.P.M. drum speed.
- South Engine - Markham Horizontal Twin Cylinder. When I last saw this engine the winding house resembled a "bomb site" with large pieces of the engine scattered around on all floors of the building. The Friends of Pleasley Pit, who are restoring the engine, have worked miracles since my last visit. What a transformation in the engine with both sets of pistons, con rods, big ends, valve gear and a thousand and one minor engineering jobs completed allowing the engine to at last look like a winder. There is still a long way to go before the engine is completed when it is hoped that an electric motor can be used to rotate the engine in a similar fashion to the Lilleshall engine.

The Friends of Pleasley Pit have also collected items of coal mining memorabilia, mainly from ex miners, and have many interesting displays around the engine houses and other surface buildings. For up-to-date information regarding Pleasley Pit check on the new website www.pleasleypittrust.org.uk.

Norman Tarry

KING EDWARD MINE

During the winter the work continues to keep the volunteers busy. The grounds crew have been clearing and burning in the Fortescue's shaft area and uncovering masonry that had been lost to view for years. We now have to interpret what we have found. Graham Sowell is digging out the calciner flue and gradually making his way towards the stack where the flue enters the stack on the western side. Alan Bingley is back after a lengthy time off sick and is now continuing his Cornish hedging. He is currently working on a length bordering the Mineral Tramway path adjacent to the stamps enginehouse. David Blight is building the support blocks on the eastern side of the approach drive in readiness for mounting the large winding drum currently stored out of sight in the pit. This will make a spectacular sight when mounted and hopefully encourage visitors. The shop service counter area has been changed to make it more user friendly for staff creating much more room and better visibility. This has occupied many hours for Phil Porter, Roger Kellow and the writer. Shortly David Birkitt will be constructing a new internal porch by the shop boilerhouse door to protect staff and stock from the easterly quarter winds.

The builders who were working on the couthouse block have at last left the site. We now have to clear up much of the rubbish (some of it useful!) which they have left.

K.J.T.R.



BOOK NEWS

Cornubia. The Life and Times of a Hayle Steamship. By Peter Joseph

Launched in February 1858 at Harvey's shipyard in Hayle, the Cornubia was cutting-edge technology. A 230-hp side wheel steamer destined for the Hayle-Bristol packet service, she was capable of speeds of up to 17 knots and was able to sail between the two ports in ten hours. However, this was to be the heyday of the packet ships. With the encroachment of the Great Western Railway into Cornwall, the packet services struggled to compete with this mode of mass transport and the Cornubia was sold in November 1881.

By a very circuitous route, the Cornubia appeared in St George's harbour, Bermuda, on 8th December 1862. Her new owner, T. S. Begbie, was engaged in blockade running activities and the Cornubia commenced her career as a blockade runner just five days after

her arrival, under an English Captain, John Burroughs. In May 1863 the ship was bought by the Confederate government and acquired a Confederate Navy captain. By the time of her capture by Federal ships, in November 1863, she had successfully run the blockade into and out of Wilmington, North Carolina, 22 times; she would become the fifth most successful runner of the Civil War. After capture she was bought by the Federal Navy and she served as the USS Cornubia until the end of hostilities.

In 1865 the Cornubia was sold at public auction by the Navy. Out of service for six years, she reappeared as the barquentine New England in 1871, following the removal of her engines. As a sailing ship she crossed the Atlantic eight times. The Cornubia disappeared from history in 1878, probably scrapped but possibly lost at sea.

Soft back book with numerous illustrations, 231pp, £14.99, available from the author, post-free to Society members. curator@trevithick-society.org.uk

BATTLE OF BRITAIN FLY PAST

Pete Joseph sent this photograph as a reminder not only was 2015 the 80th anniversary of this Society, but also marked 75 years since the Battle of Britain.



THE MARCONI STATION REMAINS AT POLDHU ON THE LIZARD

BRIEF HISTORY

In the summer of 1900 Guglielmo Marconi along with his chief engineer Richard Vyvyan visited the cliff tops next to the Poldhu hotel and decided that this was the perfect spot to establish their largest wireless station. The Poldhu hotel would be able to provide comfortable accommodation and food for them and their staff. The area of ground next to the hotel that interested them is known as Angrouse Cliff. With this in mind the fifty acre plot was bought in 1900 and building work began in October 1900 and continued through to January 1901. A single story building was constructed to house the

transmitter. This large area was then enclosed by a security fence, a lockable gate which led to the Poldhu Hotel grounds was set in the fence. Guglielmo Marconi's transmitter sent the first transatlantic radio message on 12 December 1901 to his temporary receiving station on Signal Hill, St. John's, Newfoundland. The Poldhu station was built partly on cliff top pastures that had been enclosed in 1871 and partly on medieval fields belonging to the nearby settlement of Angrouse.

The original twenty mast circular aerial was destroyed in a storm on 17 September 1901.

For Marconi's transatlantic transmissions a pair of temporary masts 200 foot (61 m) high were used. The transmitter had a power of 13 kW and a wavelength of approx. 170 meters. The original mast layout was not rebuilt, but was replaced with a four mast design each 215



feet (66 m) high and forming a 200-foot (61 m) square. Much has been written of the historic transatlantic messages sent from and received at Poldhu. The site's place in history as the birthplace of transatlantic wireless telegraphy is assured.

WHAT REMAINS TODAY

The station closed in 1934, most of the structures were made of wood and were finally demolished in 1937. Of the site itself six acres were donated to the care of the National Trust in 1937 with the rest of the site in 1960. The Marconi Company erected a monument on the cliffs in 1937 to commemorate the historic events that took place there. This is still very much the focal point on a visit to the cliff site today and is easily accessed from the coastal path. What is there to see? John Harvey and Graham Hill who are both studying

BSc Degrees in Archaeology thought they would take a brief look at the site over Christmas, armed with cameras and tape measures they set out, unfortunately they were met with extremely unpleasant and very wet weather but were still able to see some of the sites archaeology. There are remains of the concrete mast anchor blocks still in place and a lot of the foundations and some flooring of the main buildings near the centre of the site. Sadly nothing remains of the four huge 215 ft. high towers. By carrying out field walking and visual examination of the ground there appears to be no evidence of where they once stood. There is however a raised circular banked area nearer to the hotel (now a care home) that is visible as the location of a later mast.

We took to looking at period maps of the location, and were delighted to find one that showed the original layout of the

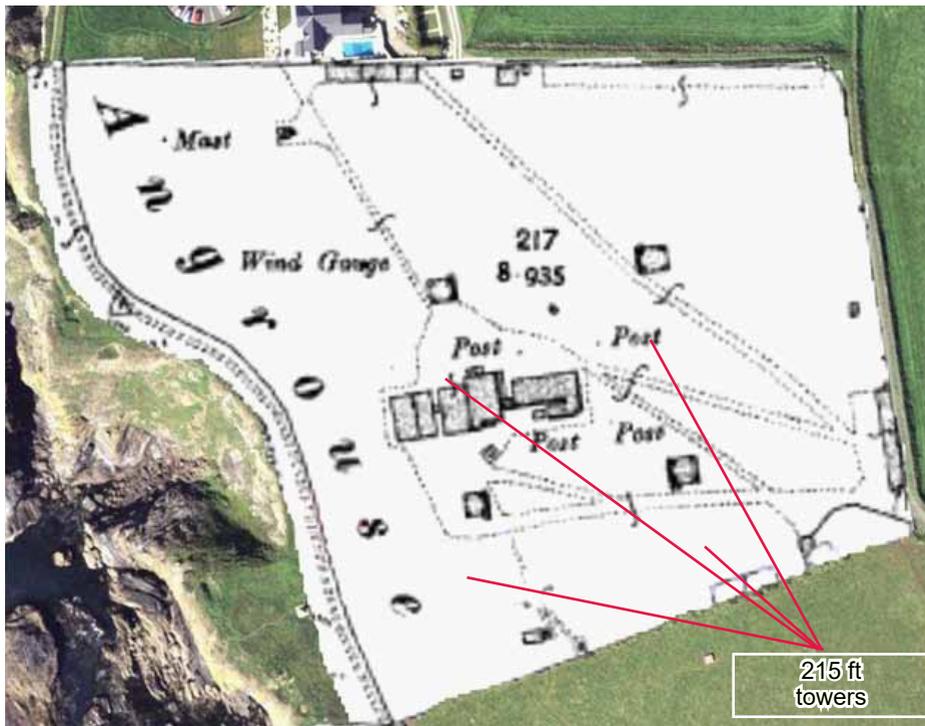
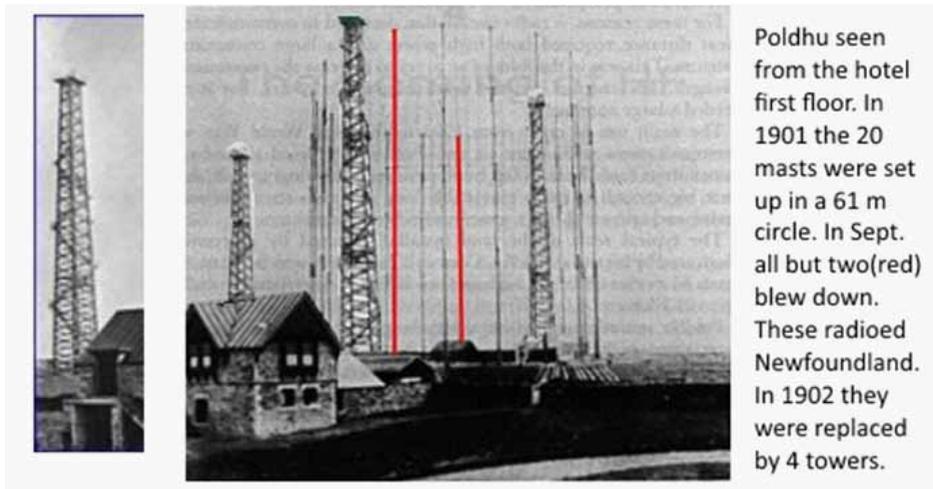


Figure 2. Shows how we have overlaid a modern satellite map with a period map of the site. From this we are able to see the exact locations of the transmitter and ancillary buildings and the four transmitter towers.

site and with careful manipulation using a computer were able to show the exact position of the long vanished structures.

Figure 3. gives the position of the two transmission masts used for the transatlantic messages as seen from the Hotel - now a care home.



John Harvey and Graham Hill.



The Puffing Devil and the Society tent at Camborne Show.
The greenery was provided by Duchy College.

PUFFING DEVIL

After the Puffing Devil had successfully passed its annual boiler inspection last summer, I had an in depth discussion on two matters with the inspector.

The first was the latest opinions about boiler water treatment. With the water being so soft in this part of Cornwall, up until now we have not bothered with any additives. However, the current view is that although we don't require treatment to stop lime scale damage if we add Soda Crystals to the feed water it will lift rust blisters on the inside of the boiler and will stop water being trapped beneath the rust and consequently causing deeper pitting when the boiler is drained. I have spoken to Ralph Ingham who has experience of this matter and together we will sort out an appropriate treatment for next year.

We then went on to discuss long term planning regarding the engines second 10 year pressure test which is

due in 2020. The inspector is of the view that the welded joints on the 'U' shaped bend, located between the fire box and the chimney, will have to be crack tested which will consist of a complete strip down of the engine to allow the removal of the boiler end cover, fire box and internal flue assembly.

The inspector has suggested that at the same time as the engine is stripped we should consider having the inside of the outer water jacket shot blast and painted with appropriate paint which will increase the service life of this item.

It would appear that in 5 years time we will have an awful lot of work on our hands.

The photograph below shows the engine on Trevithick Day in front of Camborne church, manned by Sean Oliver and Colin French.

John Woodward
Custodian of the Puffing Devil



BOOK REVIEWS

Members with an interest in the maritime history of Cornwall and Devon will be familiar with the work of Alan Kittridge whose books have covered many aspects of local ports and shipping. His new book *Sail and Steam in the Plymouth district* is a splendid addition to his list of titles.

The new volume covers an area from the Kingsbridge Estuary to Mevagissey in 145 photographs, most of which were new to this reviewer; but this is not just another pictorial album, the captions are comprehensive and bear witness to the level of research involved. The scope is remarkable ranging from the Aveton Gifford Sunday School outing to Atlantic liners in Plymouth Sound. As well as the port of Plymouth we visit tiny quays and creeks. Pleasure steamers, fishing boats, warships and ferries all jostle for attention in its pages.

Sail and Steam in the Plymouth district is published by Twelveheads Press as a large format paperback in the company's familiar layout and is excellent value at £16.50. ISBN 9780906294819. It can confidently be recommended to previous and new readers of Alan's work.

Graham Thorne

In our field of industrial history and archaeology there are specialists who stand out as the expert in their own field and are the recognised 'go to' person for knowledge and information. Peter Stanier, a long term member of the Society is one such; he has been researching and publishing on the subject of stone quarrying in the West of England for around 40 years.

Peter's latest book, *South West Stone Quarries: Building Stone Quarries in the West of England*, published by Twelveheads Press, is a distillation of his previous work. Covering all the major sites of the West Country from Box, Portland and Purbeck to Delabole and De Lank, he covers the history of the industry, where

the stone is found and how it is quarried. The book is well illustrated, much of it in colour and is laid out in the familiar and successful house style of Twelveheads. Anyone with an interest in geology, quarrying, architecture or landscape will find this book of immense interest. The changes in extraction, processing and transport of stone over the last 120 years receive full coverage. It is a most readable treatment of a key West Country industry and will remain a standard text.

South West Stone Quarries is a 216 page large format paperback and costs £18. ISBN 978 0 906294 83 3.

Graham Thorne

AGM WEEKEND 2016

Members are reminded that the Annual General Weekend 2016 will be held in the St Austell area on May 13th/14th/15th.

SHOW PROGRAMME 2016

To date we do not have dates in the diary other than Camborne Trevithick Day is on April 30th and the WESES Steam & Country Fair will be at Stithians Showground on August 12th/13th/14th.

ANNUAL JOURNAL

To those members who may be interested in peculiar statistics, and, having just received their journal, may like to know the weight of the posting was 181Kg and that was after we distributed some fifty odd locally by hand.

K.J.T.R.

SOCIETY MEETINGS PROGRAMME

KEM: meet at 1900hrs for a 1930hrs start at King Edward Mine, Troon, Camborne TR14 9DP.

Liskeard: Meet 1900hrs for a 1930hrs start at The Long Room, Liskeard Public Hall PL14 6BW.

Saturday 6 February (Field trip).

Visit to Box and Swan stone mines in Corsham, Wiltshire. Timings and meeting place to be confirmed.

Tuesday 16th February (Liskeard).

Miners and Migration. The link between mining and the mass emigration of the Cornish to every corner of the globe. by Barry Gamble.

Friday 26 February (KEM).

Working in the mill at Mount Wellington. by Barry Tiddy.

Saturday 27 February (Field trip).

Guided tour of Devon Great Consols. Timings and meeting place to be confirmed. Weather dependent.

Sunday 6 March (Field trip).

Visit to Tregargus china stone works. Timings and meeting place t.b.c.

Friday 11 March (KEM).

Talk on his life in Cornish mines. by Allen Buckley.

Monday 14th March (Liskeard).

A talk and slideshow on remarkable old Cornish Mine Images. by Simon Jones. Meet at New Liskeard Room.

Friday 25 March – Sunday 3 April.

Visit to Nenthead mines, Cumbria. Timings and meeting place t.b.c.

Friday 8 April (KEM).

Nenthead lead mining valley. Film and talk. There is a weekend only option as well.

Non members are welcome to attend.

Monday 11 April (Liskeard).

Talk about John Taylor, mining engineer of fantastic achievements
John Manley
New Liskeard Room

Contact

Tracy Elliott

Little Innisvath,
Lockengate,
Bugle, St Austell
PL26 8SA
tracyclimber@hotmail.com (07785 741287)

Dave Warne

dave.warne@blueyonder.co.uk
Tel: 07831 562791

For up-to-date news check:
<http://www.trevithick-society.org.uk>

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

Also:

- Members are invited to visit Poldark Mine free of charge on production of a valid membership card.
- 10% off book purchases at Tormark.
- 20% off purchases at KEM shop.

TREVITHICK SOCIETY OFFICERS AND OTHER REPRESENTATIVES



President: Bryan Earl



Chairman: Brian Jones
10 North Parade,
Penzance,
TR18 4SH
bjoneselectrical@btconnect.com



**Vice-chairman/Promotions Officer:
Kingsley Rickard**
k.rickard@talktalk.net
Tel: 01209 716811



**Publications Secretary &
Journal Editor:
Graham Thorne**
11 Heriot Way, Great Totham,
Maldon, Essex CM9 8BW
Tel: 01621 892896
thornes@totham22.freerve.co.uk



Newsletter Editor: Dr. Colin French
12 Seton Gardens, Weeth Road,
Camborne, Kernow. TR14 7JS.
Tel: 01209 613942
cnfrench@talktalk.net



**Membership & Subscriptions:
Sheila Saunders**
PO BOX 62, Camborne. TR14 7ZN
membership@trevithick-society.org.uk

Hon. Secretary:

John Harvey,
PO BOX 62,
Camborne.
TR14 7ZN

Curator:

Pete Joseph
curator@trevithick-society.org.uk

Programme:

Tracy Elliott
Little Innisvath,
Lockengate,
Bugle,
St Austell
PL26 8SA
tracyclimber@hotmail.com Tel: 07785 741287



Dave Warne

dave.warne@blueyonder.co.uk
Tel: 07831 562791



Treasurer: Jerry Rogers

17 Chiltern Road, Sandhurst,
Berkshire. GU47 8NB
jerryrogers@sgrconsultancy.co.uk
Tel: 01344 775946

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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PO BOX 62, Camborne. TR14 7ZN

The Chatline: 01209 716811

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