



THE TREVITHICK SOCIETY

KOWETHAS TREVITHICK

NEWSLETTER 178 WINTER 2017



Dartford is truly proud of its Trevithick connection. Spot the *Catch Me Who Can* locomotive in this mural of Dartford's industrial achievements.

Reg. Charity
No. 1,159,639



Field trip taken in front of Seccombe's Whim at Phoenix in 1986.

AGM PROVISIONAL PROGRAMME

Friday, May 11th

Afternoon Field trip to Wheal Trewavas.

Evening Presentation by Pete Joseph "The SS Cornubia".

Saturday, May 12th

Morning Field trip. For those that are afraid the daylight will fade their boiler suit there will be an underground visit to Rosevale Mine. If frightened of the dark there will be a field trip to Bosigran.

Afternoon Field trip to Wheal Edward.

Late afternoon Annual General Meeting at Geevor Mine.

Evening Annual Dinner at Geevor Mine.
Followed by presentation:
"The Story of the Trevithick Society"

Sunday, May 13th

Morning Field trip to Botallack Mine.

Copy date for next newsletter:

March 15th 2018

LETTER TO THE EDITOR

Hospital Fields

I am researching 'hospital fields' which are small uncultivated meadows where sick animals were put to graze and to heal by chance or by self selection of native medicinal plants. So far I have only found one still in use - in Wales.

Most of such fields have now been absorbed into larger farming projects, but some evidence [in farmers' diaries or oral history memories] can still be found.

Could I ask you to circulate this item to find out whether such hospital fields existed elsewhere.

[Mrs] **Mattie Pochee**

CNF's initial response was as follows:

"Not a hospital field as such, but I have heard that a local farmer used to take his cattle from his farm to fields in the Red River valley a few weeks prior to taking them to market. The reason for this is that the Red River fields are highly polluted with heavy metals and arsenic from the former tin and copper mining and that by grazing the cattle in the Red River fields they ended up with a sheen on their coat, and looked healthier, which commanded a better price at market."

Mattie replied:

"Is there any way I can get more specific information about dates and exact location of the fields - polluted and otherwise?"

Being Cornish myself - my father was a miner at Geevor - currently living in St Ives - I am particularly interested in this area where toxic soils may have raised awareness of the quality of pasture."

CNF then spoke to Allen Buckley and asked whether he had heard of any hospital fields in Cornwall and about the

use of contaminated fields in animal husbandry. He said he had not heard about hospital fields in Cornwall but did believe in the concept. He also said that he too had heard, on a number of occasions, about contaminated land giving animals a sheen and that horses that were brought up on such land did not do so well when they were sold on to people with uncontaminated fields. Like me, Allen could not think of a written source for this belief or any specific fields involved.

Allen Buckley then spoke to Joe Thomas and Michael Tangye (both local historians). Joe has not heard of hospital fields in Cornwall but Michael said there was one he knew of on the Lizard (it is mentioned in Lestowder paper and can be downloaded from the link below). However, he thought the field name was more to do with religion than animal welfare.

Both Joe and Michael confirmed that they too had heard of taking horses to contaminated fields to get a shiny coat, but knew of no published source to quote.

Can any member help with further information regarding hospital fields or the use of heavy metal contaminated fields to boost the condition of livestock?

CNF

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Michael Tangye, 1995. *Lestowder, St Keverne: a previously unidentified stronghold*. CORNISH ARCHAEOLOGY No. 34.

<https://cornisharchaeology.org.uk/volume-34-1995/>



Established 1935

DARTFORD'S PRIDE

Richard Trevithick died and is buried in Dartford in Kent and despite having only lived in the town for less than two years the towns folk are certainly proud of their part in Trevithick's extraordinary life. Dartford has a number of plaques dotted about the town, a street named Trevithick Drive, and holds an annual Trevithick's Industrial Dartford Celebration - the tenth one took place in May 2017.

Trevithick arrived in Dartford circa 1832 after he was invited by John Hall, the founder of manufacturing company Messrs J & E Hall Ltd, to carry out experiments associated with "the engine of a vessel lately built". It is generally believed he was working on the development of a reaction turbine, experimental work which cost Mr Hall £1,200 - the equivalent of £1.2m today. John Hall and Trevithick were also believed to be developing river dredging machines, compressors and mechanical refrigerators.

During his stay in the town, Trevithick lived at the Bull Hotel, now the Royal Victoria and Bull Hotel in Dartford High Street, where a blue plaque, unveiled by former Society Chairman, Philip Hosken, is displayed on the wall recording his residence (top right).

Trevithick died on 22nd April 1833, after a short illness. The Vicar of Dartford, the Rev Francis Bazett Grant, conducted



the service at the chapel of St Edmund, King and Martyr, on 26th April followed by burial in the chapel's upper graveyard. Local mourners and bearers included James Osbourne, John Ashworth, James Snowden, Underwood, Lawrence, Paull and Aldous. Trevithick was 62 when he died. None of Trevithick's family attended his funeral.

It is often said that he had a pauper's funeral, but this is probably one of many myths associated with Trevithick. After all a pauper does not live in a hotel and does not conduct very expensive experimental work.

A commemorative plaque was unveiled in the 11th century Holy Trinity church (TQ544740), also on High Street, on 9th March 1902. It reads — "To the glory

of God and in memory of Richard Trevithick one of the pioneers of the great mechanical developments of the XXIX century, and amongst the first inventors of the locomotive engine, of screw and paddle wheel propulsion for steamships, of the agricultural engine and of many other appliances whereby the forces of nature have been utilised in the service of mankind. He died in



poverty and was carried to his grave in the churchyard of St Edmund, king and martyr, by the mechanics of Hall's Engineering Works where he was then employed. This tablet was erected to perpetuate the memory of one whose splendid gifts shed lustre on this town, although he was not permitted to enjoy the fruits of his labour here. Born 1771 - Died 1833".

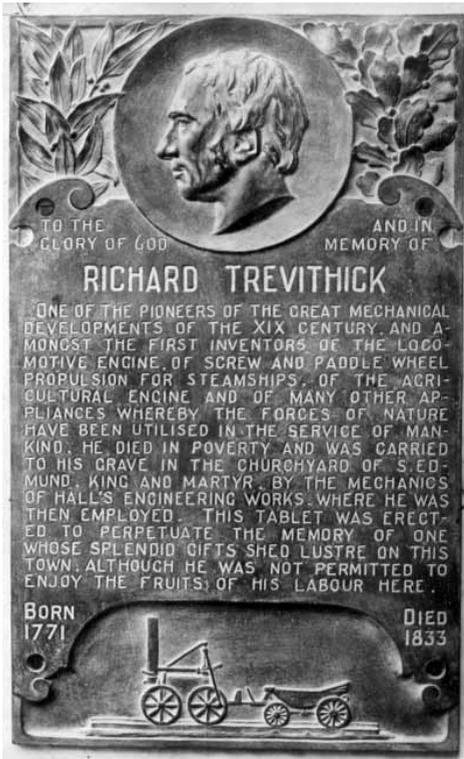
Around the same date a wall plaque (see front cover) was erected at the burial ground, which reads — "Approximately 25ft from this wall lie the remains of Richard Trevithick the great engineer and pioneer of high pressure steam he died at the Bull Inn Dartford and was carried here by his fellow workers of Halls Engineering Works to a paupers grave, born Illogan Cornwall April 13th 1771, died Dartford Kent April 22nd 1833".

The exact location of his grave is unknown, but it is believed to have been originally marked by an engraved headstone, though by 1898 this had disappeared. Burials in the graveyard stopped around 1857, however, the gravestones were not moved until the area became a parkland called St Edmund's Pleasance in the 1960s. Some of the larger tombs remain in place surrounded by railings, but the space has been planted and landscaped and is open to the public year round. John Hall (1764-1836) is also buried here.

A centenary memorial service was held for Trevithick at Holy Trinity church on Sunday 23rd April 1933, with the sermon being delivered by the Bishop of Rochester.

The railway station has two sets of memorial plaques depicting famous railway locomotives starting with the "Catch Me Who Can".

There is also a large mural in the main street (see front cover) which depicts many of Dartford's industrial achievements, with Trevithick's part marked by the 1808 "Catch Me Who Can" locomotive.



Whilst researching this article, much of which is cut and pasted from several websites, I came across a website selling a "Vintage 1970's linen London bus blind 499 Trevithick DR" pictured below.

As Trevithick arguably built the first London bus, it is interesting to think there was a London bus driving around which had the name of Trevithick emblazoned on its front. This particular London bus blind has now been purchased for the Society's archive.



CNF

LEVANT REPORT

The engine has now shut down for the winter maintenance period and visitor numbers have exceeded 33,000 for 2017.

Three new engine drivers have been trained and passed as competent with another in the pipeline. This has taken some time as we have to be certain that they can drive the Whim and operate the steam boiler in a safe and sympathetic manner.

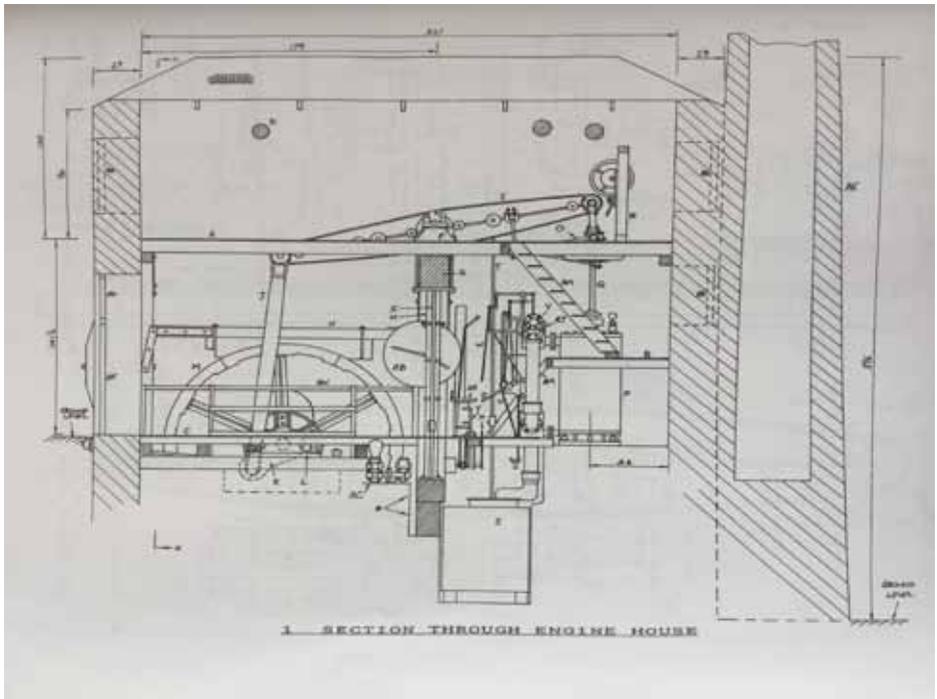
A training course has been completed with CFB our boiler manufacturer. Most of our auxiliary boiler parts are made by a company called Spirax-Sarco and they have made an enthralling 20 minute video. A camera shows the internal working of the boiler whilst in steam under varying loads and water levels. I am sure that anyone interested in steam would be amazed to view this video and it is available on line.

Sorry this is a protracted web address, but it is worth the trouble of downloading!

https://www.youtube.com/watch?v=azDyYDGWxb0&list=PL1Sm2_eIYojwAOaqYNRHfJO610PTsbAA-&index=1

It has proved difficult to get an even balance of TDS, pH and sulphide levels by treating the feed water with BB 43. A water softener has been fitted to try and achieve a softness even greater than South West Water can provide!

Our winter maintenance programme has been delayed since October due to unnecessary interference from the Historic Environmental Officer from Cornwall Council. This had prevented us from repainting the engine, and even replacing memorial plaques previously removed for interior lime-washing of the walls. It is now cleared so the maintenance programme we have drawn up can



proceed, and John Woodward will be offering his services to inspect the work that was done last year to the air pump for the Whim. His work this autumn to machine the loosening bob wedges has proved to be very successful. We are eternally grateful to Courtney Rowe for his painstaking scale drawings of the Whim whilst the refurbishment work was carried out between 1984 and 1993.

My application to The Institute of Mechanical Engineers for a Heritage Award for the Levant Whim has gone forward. On behalf of The Trevithick Society I have attended several meetings and discussions with their Devon and Cornwall representative, and it is hoped to get international recognition for the Whim which could lead to funding for future projects, and increase our number of volunteers. The National Trust is also willing to take part with The Trevithick Society to engage with the IMechE STEM programme. STEM stands for 'Science, Technology, Engineering and Mathematics' and this is to encourage the younger generation to get involved with engineering. This is vital to ensure that the skills attained with old machinery are not lost.



Ron Flaxman



PUFFING DEVIL

The Puffing Devil passed its annual boiler test on a crisp December day. This test is a two stage process and takes the best part of a day. Part one is a cold test and involves a close examination of the boiler and this is followed by the steaming of the engine to check such things as the operation of the safety valve, the water pump and the boiler fittings.

In readiness, John Sawle removed the two inspection covers, one above the firebox and the other on the chimney elbow joint, plus the firebox cover and the internal grate fittings. These covers etc., and the gaping holes in the boiler can be seen in the photograph opposite. Dave Wothers, the boiler inspector, was then able to examine the internal parts of the boiler using an endoscope as can be seen in the two photographs on the opposite page. The lower one shows a weld on the firebox exhaust tube. He also crawled inside the firebox to test the thickness of the metal ultrasonically (see page 10).



The steam test necessitated refitting the firebox grate and the various covers, filling the boiler with water, setting the fire and then gradually increasing the steam pressure until the safety valve blew. There was also some nut-tightening minor adjustments shown in the photograph below with one of the steam apprentices looking on.

CNF







WHERRY MINE

Having just borrowed a copy of *A Guide to Penzance and its Neighbourhood* which was published in 1845 by J.S. Courtney, I thought I would share the passage about the Wherry Mine, especially as it makes a number of assertions I was unaware of.

About fifty years since, the rocks which appear at low water about 100 paces from the end of the esplanade, (westward) were discovered to contain tin ore and preparations were made to open a mine on the spot. As long as the operations were near the surface, the miners worked only during the ebb of the tide, but when the shaft began to deepen, it was found necessary to build a sort of chimney above the action of the waves to prevent their entrance. At this stage of the proceedings it was visited by Dr. Maton [during the years 1794 & 1796] who thus describes it:

“Imagine the descent into a mine through the sea; the miners working at the depth of seventeen fathoms only, below the waves; the rod of a steam engine extending from the shore to the shaft, a distance of nearly one hundred and twenty fathoms; and a great number of men momentarily menaced with an inundation of the sea, which continually drains in no small quantity through the roof of the mine, and roars loud enough to be distinctly heard in it; the descent is by means of a rope tied around the thighs, and you are let down in a manner exactly the same as a bucket is into a well; a well indeed it is, for the water is more than knee-deep in many parts of the mine. The upper part of the shaft resembles an immense iron chimney, elevated about twelve feet above the level of the sea, and a narrow platform leads to it from the beach: close to this is the engine shaft, through which the water is brought up from below.”

Tin was the principal, but not the only produce, of the Wherry Mine, for many beautiful specimens of rare metallic minerals were discovered during the time

it was at work. At last from a diminution in the richness of the lode, and the dangerous situation of the shaft, in consequence of injuries sustained during some severe storms, this mine was abandoned in the year 1798, and remained idle for nearly forty years.

During the rage for mining in the year 1836, the working of the Wherry was again resumed: it was supposed that the application of modern machinery and the many improvements in the art of mining, would have rendered it a profitable speculation, but experience proved the contrary, and after a loss of some thousands of pounds it was finally abandoned. The platform leading from the shore to the shaft and the other erections were an interesting group of objects, and an ornament to that part of the bay. Mr. James Tonkin, a very meritorious self taught artist introduced them into his “View of Penzance,” published about the year 1838.

Since the operations in this mine have been discontinued, the Counting House and workshops have been converted into dwelling houses; these and a number of very comfortable cottages erected by J. J. A. Boase Esq. of Lariggan, form the “Wherry Town”.

Incidentally, if the Wherry Mine site is visited at low water spring tide the rising main is still visible sitting proud of the rock.

CNF

SOCIETY EVENING MEETINGS

There has been some confusion as to the start times of evening meetings.

Would members please note:

- Liskead meetings start at 7.00 pm
- King Edward Mine meetings start at 7.30 pm.

NEW BOOK

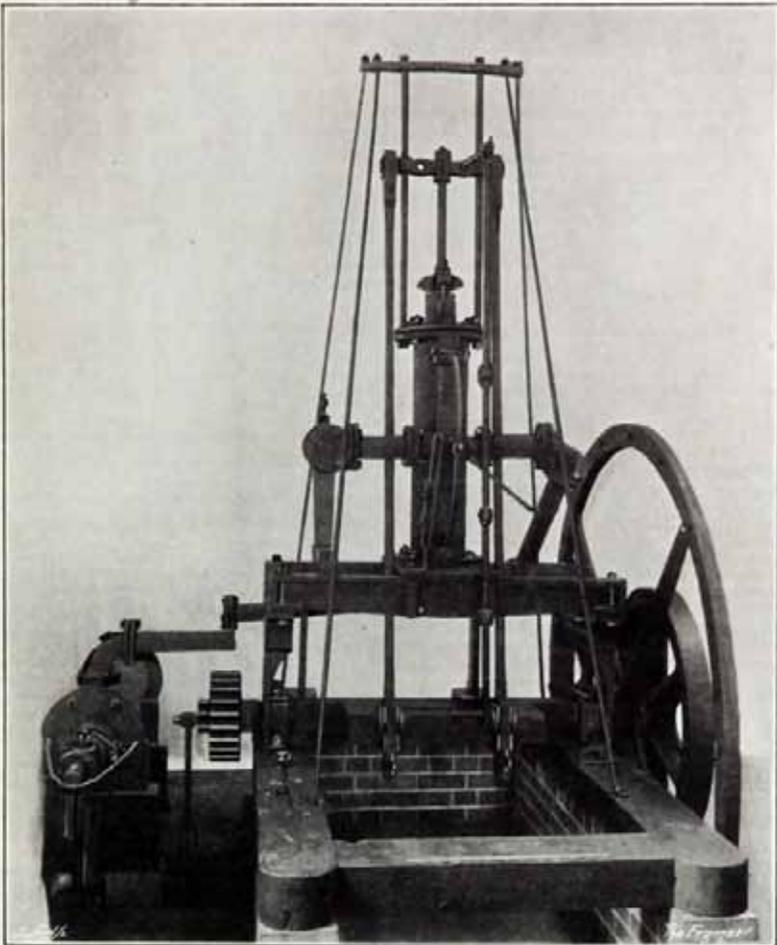
Whilst rummaging around the internet I came across this photograph which I have never seen before. As the title indicates it shows what is reputed to be a Trevithick engine. The bottom right hand corner has the words "The Engineer" inscribed in white italicised lettering, which presumably means it appeared in a copy of The Engineer magazine. There is also some lettering in the bottom left hand

corner but that is indecipherable. The engine certainly looks to be early nineteenth century with square nuts and bolts and the quality of the photograph is reminiscent of photographs taken of engines in the Science Museum collection.

Can anyone help track down this particular engine?

CNF
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REPUTED TREVITHICK HIGH-PRESSURE ENGINE





As mentioned in the last newsletter the Man Engine is going on tour in 2018. For up country members here are the venues in England and Wales to see this amazing spectacle.

Tues 3rd April – Tavistock [PL19 8BB]

1. Afternoon – Ceremony @ 2pm [Gates open 12pm; Ceremony ends 2:45pm; site close 4pm]
2. Afterdarker – Ceremony @ 8:30pm [Gates open 6:30pm; Ceremony ends 9:15pm; site close 10pm]

Fri 6th April – Radstock [BA3 3RW]

1. Afternoon – Ceremony @ 2pm [Gates open 12pm; Ceremony ends 2:45pm; site close 4pm]
2. Afterdarker – Ceremony @ 8:30pm [Gates open 6:30pm; Ceremony ends 9:15pm; site close 10pm]

Sun 8th April – Blaenavon

1. Big Pit – Ceremony @ approx. 12pm
2. Procession to Ironworks [approx. 1 mile] @ approx. 1pm
3. Ironworks – Ceremony @ approx. 3pm

Mon 9th April – Ebbw Vale, Gwent

1. Ebbw Fawr Learning Community – Ceremony @ approx. 2pm [Gates open 12pm; Ceremony ends 2:45pm; site close 4pm]

Tues 10th April – Merthyr Tydfil

1. Cyfartha Park and Castle – Procession and Ceremony @ approx. 2pm

Wed 11th April – Pontypridd

1. Ynysangharad War Memorial Park [CF37 4PF] – Ceremony @ approx. 2pm [Gates open 12pm; Ceremony ends 2:45pm; site close 4pm]

Thur 12th April – Swansea

1. Swansea Waterfront Museum – Short Ceremony @ approx. 12pm
2. Swansea Procession [approx. 1.5 miles] @ approx. 2pm
3. Hafod-Morfa Copperworks – After Dark Ceremony @ approx. 8:30pm [Gates open 6:30pm; Ceremony ends 9:15pm; site close 10pm]

Sat 14th April – Ironbridge

1. Afternoon – Ceremony @ 2pm [Gates open 12pm; Ceremony ends 2:45pm; site close 4pm]
2. Afterdarker – Ceremony @ 8:30pm [Gates open 6:30pm; Ceremony ends 9:15pm; site close 10pm]

Fri 22nd June – Elsecar

1. Afterdarker – Ceremony @ TBC

Sat 23rd June – Wentworth Woodhouse

1. Afternoon – Ceremony @ TBC

Tues 26th, 27th and 28th June – Hillhead, Derbyshire

1. Various ‘fixed’ performances per day – times TBC

For ticket information see:

www.themanengine.co.uk/tour-2018

PUBLICATIONS

Our volume, *The Tavistock Canal*, was launched at Tavistock Museum on 11th November. Despite poor weather we had a constant stream of visitors and a healthy level of sales. Thanks are due to the museum and local bookseller Book Stop for their support. Comments on the book's content and appearance have been uniformly favourable and initial sales have been most encouraging, particularly the limited hardback edition of 100 copies. Specialist retailer, Camden Miniature Steam, said: "If there was ever a better book describing and illustrating the industrial past of a small area of Britain, I have never seen it."

For mining enthusiasts suffering withdrawal symptoms – though there is significant mining content in the canal book – we are at an advanced stage with a history of Wheal Trewavas. This relatively small mine is notable for its engine houses, which rival the far better pair at The Crowns, Botallack, for the drama of their setting. The book is a tribute to Alasdair Neill. Alasdair was an investigative mining researcher, above and below ground; he published little but contributed hugely to the work of others. *Wheal Trewavas* is being sponsored by NAMHO, for which support we are grateful, and will be published in the spring.

Members will by now have received the 2017 Journal. We are already working on the 2018 issue. It is not too late to send in suggestions for this, or indeed subsequent issues.

Our friends at Twelveheads Press continue to be busy, with the accent on railway history, albeit with strong mining and industrial connections. Following their two books on the complex network of railways serving the Isle of Purbeck clay industry comes, *The Snailbeach District Railways*, serving the mines of a remote part of rural Shropshire. The hardback edition has already sold out but a paperback reprint is in hand. Nearer to home *Plymouth's Hidden Railways* is a

fascinating and very detailed tour of the city's lesser and obscure railways. As one who spent much of childhood and adolescence in the city, and took a keen interest in its transport, I was astonished at the amount of fresh information in this book. This is terrific value at £16 for a large format paperback.

Graham Thorne

TAVISTOCK CANAL CD

Due to a copyright infringement it has been necessary to remove the CD which was included in our book, *The Tavistock Canal*.

Please note that books supplied from now will not include the CD. We are also required by the copyright holder to make every effort to recover discs from books already sold.

If you have a disc please return it to The Trevithick Society, PO Box 62 Camborne TR14 7ZN or in any convenient way. We will refund any costs.

Please accept my apologies and that of the Society for the error and any inconvenience. There is very little on the disc which is not in the book itself.

Graham Thorne

PUFFING DEVIL DATES

The Royal Cornwall Museum is celebrating its bicentenary in 2018. On February 10th they would like the Puffing Devil to be in steam in front of the museum to help mark this event, subject to securing the necessary parking space for the day.

Trevithick Day, on Saturday 28th April, will be the best place to see the engine in steam as it will be seen driving through the streets.

The engine will also appear at East Pool Mine for the National Trust's Trevithick Tuesday on 29th May.

SOCIETY MEETINGS PROGRAMME

KEM: 7.30 pm start at King Edward Mine, Troon, Camborne TR14 9DP.

Liskeard: 7.00 pm start at The Long Room, Liskeard Public Hall PL14 6BW.

Contact:

Friday 9th February (KEM)

John Edyvean. He developed an inclined plane system, to reduce the necessity for locks on the UK canal network.
By Bill Glanville.

Monday 12th February (LISKEARD)

Bal Maidens - the female workers in the mining industry, of which at least 55,000 were employed..
By Lyne Mayers (narrated by Tracy Elliott)

Tuesday 13th March (LISKEARD)

Uranium mining. In 1889, it was announced that the "only known continuous lode of uranium ore in the world" had been found at the South Terras mine.
By Dave Naylor.

Friday 23rd March (KEM)

Tellurium tomorrow: Solar Power, Supply, Demand and Waste of a Rare Material.
By Dr Daniel Smith (University of Leicester).

Friday 30th March – Saturday 31 March

The 40th International Mining Games (IMG) will be hosted at King Edward Mine, the former home to Camborne School of Mines (CSM). The Man Engine will be there and teams from 38 countries.

Monday 9th April (LISKEARD)

Railways and tramways on Dartmoor. Several tramways were built on Dartmoor and one of the earliest was Plymouth to Princetown, built 1806-1809.
By Dartmoor Paul.

Tracy Elliott

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For up-to-date news check:

<http://www.trevithick-society.org.uk>

<https://www.facebook.com/trevithick.society/>

**Non members are welcome to attend.
Non-members £2.00 please.**

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
- Poldark – free entry to site and reduced fee for underground mine tour

Also:

- 10% off book purchases at Tormark.
- 20% off purchases at KEM shop.

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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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Corporate members	£35.00

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The Chatline: 01209 716811

<http://www.trevithick-society.org.uk>