

THE TREVITHICK SOCIETY



The Society had a much larger presence at the West of England Steam Engine Society rally in August with a marquee full of exhibits to celebrate its 70th anniversary.

The trio above (Kingsley Rickard, Denys Bryant and Phil Hosken) also had reasons to celebrate. It was the birthday of Kingsley and Denys and both Denys and Phil were born in 1935.

CHAIRMAN'S ADDRESS

The writing on the wall

In the early days of this Society thousands of miners still toiled in the darkness below. Thousands more were employed on the surface, in engineering, foundries, quarries, explosives and shipbuilding. They worked in the factories that dominated our towns. They provided the world with important metals and the heavy machinery to win metals and rocks from the ground.

Millions of tons of metal were shipped out of Cornwall and further millions of tons of rock were brought to the surface. Here, with the finest granite from our quarries, they became the building materials for our houses, shops, community rooms and places of heavenly worship.

Cornwall's resources provided the Industrial Revolution with the power of high-pressure steam and created the first important machinery export industry.

Cornwall was a place of endeavour. It was endeavour that dominated our lives, shaped our characters, developed our culture and produced the distinctive architecture that, where it still stands, enhances Cornwall today.

70 years ago our forefathers could see the writing on the wall. All this was to end. No longer would men work underground or build ships and engines made of iron. The founders of this Society started to gather and publish the evidence of one of the earliest great industries of history.

Today we still gather that evidence. Pete Joseph, our curator, has completed a fine survey of the Redruth Brewery before the details are lost forever. Soon there will be few of these precious buildings left. In their place it is intended that some 4,000 houses will be built in the Camborne - Redruth area alone. Who will live in them and where will they work is another matter. It is likely that they will be economically designed without reference to traditional buildings and so dilute the character of Cornish architecture forever.

However, as the last vestige of the mining industry slips away the Cornish endeavour still exists. It is trying to maintain important distinctiveness, an essential component of Cornwall's regeneration and so necessary if it is to take advantage of its anticipated World Heritage Site status.

The 'writing on the wall'? It's arrived on the hoardings that surround the former Holman Bros, a major company that shaped Camborne, gave sustenance to its people and stayed in business for over two hundred years. It is a concession to government-controlled funding and political correctness; it chooses not to tell the grandchildren of Camborne anything of their town or what their ancestors did.

P.M.H.

We Wish all our Readers a Merry Christmas and a Happy New Year

Copy date for next issue is January 12th, 2006

LETTERS TO THE EDITOR

Dear Editor,

With reference to the report of the Chairman's speech at Levant may I make a few observations.

In para. 2 of Newsletter 129 the Chairman mentions a small group who followed the mining industry. They were almost entirely composed of professional people who were intimately involved with mining and its ancillary industries.

In para. 5 it is conjectured that "we will probably never know how the Levant winding engine became the first to be preserved". I can shed light on that, as one of the group, the late Jack Trounson, spent a great deal of time and effort to save the whole mine, which included a trip to London. This was, of course, prior to the negotiations with the scrap merchants. All this information is contained in my archive which is available to all who wish to access it.

In para. 6 it is asserted that the Cornish mining industry had been in trouble since the mid 1800s. Copper production was failing but tin reached its peak in the 1870s.

The comment in para. 14 again uses the term "we may never know". However, there is an answer. The men who have already been referred to, and others, saved the engines for future generations. When during World War 2 railings, gates, etc. were being stripped from public and private property throughout the nation this small group prevailed to save the engines which were then at considerable risk.

With regard to the comment "It is unlikely that we shall know whether Mr Hooper was aware that he had secured Cornwall's most photogenic mine" - my late father was amongst the late Tregonning Hooper's friends and having known the gentleman myself very well, I am sure that the photogenic aspect did not arise. He and his compatriots wished to save an engine - they succeeded!

Para. 16 states "that it took a while to recover after the war". Unlike many organisations which perforce had to become somewhat moribund during those

six war years the C.E.P.S. had property to manage i.e. Levant, Mitchell's and the Trevithick Cottage and had to stay active. From a small subscription income these had to be maintained as well as finances permitted. I well remember, in the dark days of the World War 2, with severe restrictions on all commodities, that on occasions Jack Trounson, and my father Humphrey Bullen, took the train to Penzance, a bus to Pendeen and thence on foot to Levant. The whim house suffered roof "riffles" quite frequently in winter due to its exposed position and repairs had to be arranged. The late W.E. Sevier and late J.H. Bennetts, of Geevor Mine passed on damage reports.

During the post-war period the Taylor's engine was acquired by deed of gift from a generous gentleman from the U.S.A. However, until the late 1960s the maintenance costs for all the sites had to be borne by the income generated by the members of the C.E.P.S.

I trust that the foregoing will be of help in putting on record some facts in the history of the Society.

L.J. Bullen

Former Vice-Chairman &
Trevithick Medallist.

Dear Editor,

I read of the death of Jan Verbruggan with great sadness

From time to time, I have filmed lectures that are relevant to the history of mining in Cornwall. You may recall that I filmed Jack Trounson, Ross Polkinhorne and several others.

I did film at the NAMHO in Truro a few years back and this included Jan Verbruggan's presentation of the preservation of the Crucuis engine.

If anyone wants a copy, I am sure that I could get this copied.

Roger Moss

roger@mossengineering.co.uk

The Mineral Tramways Project area (covering Camborne, Redruth, Gwennap and St. Day) provides one of the world's greatest concentrations of historic mine

WANTED FOR THE MINERAL TRAMWAYS PROJECT

buildings and is a key part of the "Cornish Mining" bid for World Heritage Site status. By 2008 the county's largest heritage project will have conserved many important mine sites in this area, enhanced historic villages and created a total of 60km (37 miles) of integrated multi use trails, following as closely as possible the original tramways used to transport ore and coal from ports to mine sites. The aim is to provide an accessible heritage experience by providing a network of trails to link the mine sites, mining heritage attractions, mining settlements, public transport and visitor facilities.

Lucia Crothall has recently joined the project team to co-ordinate the development and implementation of interpretation, education and training programmes to promote wider public appreciation, understanding and involvement in the Mineral Tramways sites and trails. "I want to involve local people and community groups in as many aspects of the work as possible," says Lucia. "But to do this effectively I'll need the help of creative people who know about mining, about families connected with the mining and related industries and about mining history in general."

Please contact Lucia if you live in or near Cornwall's central mining district and are, or would like to be, a graduate, teacher, writer or guide in local/mining history, geology or biology. She would also be grateful to hear from anyone interested in gaining a teaching qualification in or with a passion for the subjects and who would like to help increase local interest in and awareness of the area's mining heritage.

Lucia Crothall, Mineral Tramways Project Education Officer

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WHEAL PEEVOR

In September, it was reported that Kerrier District Council had secured £810,000 for a regeneration package on the Wheal Peevor site at Radnor, near Redruth and that work will start in October on a network of trails and twelve shafts will be made secure. ¹

Mining for tin and copper is known to have been going on around this area in the 18th century. It was also worked from 1871 until 1896, when all the plant and machinery was sold, including a 60" pumping engine on Sir Frederick's Engine Shaft. ²

Around 1910 the property was acquired by Edgar Allen & Co., the Sheffield steel makers, who were seeking supplies of wolfram.

Peevor United Mines Ltd.

This company was registered in August 1911, the first directors being J.A. Temby, who was also the Agent, and P. Temby. The shareholders were drawn from the Sheffield and Redruth areas. ³

They made two agreements, the first being with Edgar Allen & Co. to acquire the Wheal Peevor property, together with all the plant and machinery at Poldice and Wheal Gorland. The second, with the Temby brothers, to buy the agreement that they had made with the mineral lords for the mineral rights.

A 70" Cornish pumping engine was installed in the empty enginehouse on Sir Frederick's Engine Shaft (SW70804420), with 14" & 12" pitwork. ⁴ This shaft was vertical to 25 fm from surface, one the underlie to 70 fm, and vertical again to 110 fm, being connected by the New Adit at 47 fm to the County Adit.

A two-cylinder horizontal steam winding engine, probably 18" x 36" was erected on a loading in front of the Winding Engine House (SW70844420), together with a steam capstan, and a wooden headgear was erected over Engine Shaft (SW70744422). ⁵ Air came from a Hilbert compressor.

A wooden gantry was built from the headgear to the Mill on the lower side of the Stamps Engine House (SW70744422), in

which was installed a 150 HP suction-gas engine on a plinth beside the north wall. Part of the bob wall between the door and the south wall was replaced by two cast-iron pipes. Through the gap a belt, on a pulley on an extension of the crankshaft to an outrigger bearing beside the south wall, drove the countershaft. This was on masonry pillars above the 20" x 10" Mason Crusher & twenty heads of Californian Stamps by Chester & Co. It seems that this countershaft also drove all the Dressing Plant and 22kW 220 volt dynamo, which supplied several motors. Between the engine plinth and the bob wall was a small plinth on which could have been the 13kW 110 volt lighting dynamo.

The Dressing Plant included Willey Tables, a Record Vanner, Barrel & Pan Pulversisers, Buddles, Round Frames and two Brunton Calciners.

The mine was un-watered and prospected for wolfram. Between 1912 & 1917 only 5 tons of mixed tin & wolfram concentrate were produced, and in 1918, 9 tons of black tin and only 31/2 cwt of wolfram. The poor yield, coupled with the fall in the demand for wolfram at the end of the war, led to operations being closed down at the end of 1918.

All the plant and machinery, including the 70" engine, the 150HP suction gas engine, dynamos and switchboards, but not the 50HP engine, were listed for sale at auction in August 1920. ⁶ The company was finally wound up in March 1921.

Wheal Peevor Mine

This is on the south-west side of Wheal Peevor. Mitchell's Shaft (SW70634403), vertical to 80 fm below adit (13 fm), was partly unwatered in 1967 by the Barcus Mining Corporation, using electric power from SWEB. ⁷ Nothing came of this investigation.

Wheal Peevor today

In October 2005 there does not appear to be any major deterioration to the walls of the three enginehouses since a visit in 1983, when part of the arsenic flues stack was still standing. However, the two cast-

iron pipes supporting the bob wall of the Stamps Enginehouse are in a very poor state and the outside one could collapse at any moment. Gorse and bramble now cover a large part of the site. Clearance of these would improve the view from the footpath to West Peevor. ⁸ It should also be possible to locate the loading near Engine Shaft on which stood the Hilbert Compressor and the engine which drove it, perhaps the 8" x 12" horizontal.

Contractors are on site, so it is subject to Health and Safety Regulations. They have started to rebuild the collar on Engine Shaft and the cap will allow bats to leave and enter.

Eric Edmonds.

References

1. WMN 19/9/2005. P.5.
2. RCG 1896 1 & 10 October. *Cornish Beam Engines*—D.B. Barton, p. 129—60" from North Downs 1872 and p. 225 48 heads of stamps & 32" engine from Basset & Grylls 1876.
3. PRO Kew—Register of Dissolved Companies, BT.31 20183/11790.
4. *Cornish Beam Engines*—D.B. Barton p. 80, 70", 10' & 9' beam, built by Copperhouse 1864 for Crenver & Wheal Abraham, to Violet Seton 1875 and Peevor 1913. MJ 1913 23 Aug. p. 815, pumping commenced after clearing adit, and battery using dump material. *History of Tin Mining & Smelting*—D.B. Barton, p. 272, picture. *Mining in Cornwall*—J.H. Trounson (Trewithick Society) Vol. 11, picture no 81. Dines 1956 Vol. 1, p. 374.
5. WB 2/11/1911, page 2. All plant from Wheal Gorland and Poldice including 150 HP SG and possibly the 50 HP SG at Poldice, presumably if in working order, as it had been wanting damaged and that man got 6 months—RCG 19/04/1906 p. 8. T.S. Newsletter No. 75 Nov. 1991 p. 16—Poldice. CRO, Truro—MRO 5029 Box 1, map.
6. MJ 31/07/1920, p. 598, & RCG 04/08/1920—sale notices. List also included 2 cyl. Horizontal winding engine, 10" x 18", single cylinder

horizontal 8" x 12", Hilbert Compressor & a small Gardner petrol engine. Capstan left on plinth.

7. *Mining in Cornwall*—L.J. Bullen, vol. 4 pages 77-80, pictures.
8. Exploring Cornish Mines—Ken Brown and Bob Acton, vol. 5 2001, pages 75-100. Includes details of plant at various workings & pictures up to year 2000.

The 2005 annual A.I.A. conference used Nottingham University as its base, though the county covered was Derbyshire. 118 booked in, and on Friday 2nd September proceedings started with the seminar day. This was devoted to the National Parks, whose representatives gave an overview of

A.I.A. CONFERENCE

current I.A. activities in the Peak District; Dartmoor and Exmoor; the Yorkshire Dales; Pembrokeshire, and, to end the day, the Lake District.

In the evening the conference "proper" commenced, and Ian Mitchell gave an introduction to the I.A. of Derbyshire, mentioning the main sites to be visited during the following week.

Saturday dawned fine and sunny (which continued throughout); the morning's lectures took in the Derwent Valley World Heritage Site (with an explanation of how this was achieved); architectural innovation in Derby's textile mills, and the extractive industries of Derbyshire - Britain's premier county for this activity - for example, it has been estimated that, so far, one thousand million tons of carboniferous limestone has been removed from the Peak District - it has left some hole - think of Delabole, and then some. This material is principally used in cement manufacture.

Field trips started on Saturday afternoon. The alternatives were a visit to Swadlincote to see Sharpe's pottery, active 1821-1967, an innovator in the field of bathroom pottery - amongst others it supplied Thomas Crapper & Co. (still going); to Belper to see Jedidiah Strutt's mill complex and the industrial housing he built (1792/3); to the early 19th century blast furnaces at Morley Park, then on to Heage (a corruption of High Edge) windmill, restored to full

working order by the County Council 1966-2002.

In the evening, at the annual conference dinner, A.I.A. awards were presented, followed, next morning, by the presentation of the Fieldwork and Recording Awards. Norfolk I.A. Society then took us on a comprehensive illustrated tour of the Thermos factory at Thetford (soon to close), followed by the G.L.I.A.S. chairman on the outbuildings at Wrotham Park near Potters Bar, where a turn-of-the-century (20th century) Grasshopper engine, long disused, and virtually bricked in, can be found. Next up Keith Falconer gave a resumé of current English Heritage activities - these include acquisition of the naval block mills at Portsmouth; Ditherington flax mill and Chatterley Whitfield colliery. They have also created a conservation area in Birmingham's jewellery quarter.

After the association A.G.M., Dr. Mike Nevell gave the Rolt memorial lecture on "Industrial Archaeology or the Archaeology of the Industrial Period? Recent trends in I.A. research".

Sunday's outings took in Railway sites in Derby, including the 1837 roundhouse and the listed 1840s workshop buildings; or the Long Eaton lace factories beside the Erewash canal (still let out for small industrial usage); the Midland Railway sheet stores at Trent lock and Shardlow canal port (now a heritage centre); whilst those who chose the third alternative went to Darley Abbey (the only remaining building of which is now a pub) to see the mill buildings there, going on to see Derby mills, which are now adaptively re-used as student accommodation.

Sunday evening's lecture was on lead mining in the Peak district, in anticipation of Monday's all-day field trip to the major sites, including, of course, the society's Matlock Bath museum. The alternative trip went to Caudwell's mill at Rowsley - leased by this family from the Duke of Rutland in 1874 (there had been water mills on this site since at least 1300), and kept going ever since - the family quit in 1978, and a charitable trust took over in 1980 - and in the afternoon to the cement works at hope, where the aforementioned "ginormous

hole" is located. In the evening both field trips converged on Crich Tramway Museum, for an excellent three-course dinner in a restored pub, a tour of the workshops and car sheds, a conducted visit in the library and archives, and, of course, a ride on one of their 50 trams. A great day out.

Tuesday offered the choice of a day with the Arkwright Society who conducted us around Cromford Mill, followed by visits to Masson Mill and a walk down the Lumsdale valley to view extensive remains of water-powered sites along Bentley Brook; or the National Stone museum and the Cromford & High Peak Railway. Middleton Top winding engine was turned over by compressed air for the delectation of our contingent, then on to the interpretative centre at High Peak junction, finishing at Lea Wood pumphouse on the Cromford canal, whose 50 inch Cornish cycle beam engine has been restored to steam.

The evening lecture was on Industrial housing in the Derbyshire coalfield, of which there are extensive examples at places like Staveley and Bolsover.

On Wednesday delegates were offered a day with North-East Derby I.A. society, or the Erewash valley. The first of these started at Pleasley pit, to view the 2-cylinder horizontal winding engine, now operated by an electric motor, on to Bolsover, then to Clayton's tannery in Chesterfield, still using the 1875 tanning pits to cure Thai water-buffalo skins, from which, amongst other things (saddlery etc.), are made every cricket ball used in U.K. test matches. The day's delights on trip A concluded with a wade through waist high nettles to see a bank of 48 back-to-back coke ovens, relics of Summerley colliery, which closed in 1884. The Erewash valley visit opened with a walkabout in Ilkeston, then to the Midland Railway centre at Butterley (starring Kirtley's 1866 double-framed 2-4-0), plus the Golden valley to see the Butterley company's housing (1790s and 1830s), finishing at Ironville.

On our last evening we were once more captivated by that perennial star lecturer Janet Spavold on the pottery industry and the evolution of sanitation in the 19th century.

The very last field trips, next day, started in the grounds of Calke Abbey, inspecting the limeyards, then walking part of the Ticknall tramway, including the cut-and-cover tunnel, which the Harpur-Crewes had built so that visitors to the Abbey wouldn't have to see common workmen. All then adjourned to the Rolls-Royce aero engine factory, where 250 jet engines a week are turned out, to see the (very extensive) heritage exhibits - an amazingly comprehensive collection, not only of aero engines of every date and type, but also of Armstrong-Siddeley cars, and the usual home of Silver Ghost AX201. Finally R.R.'s memorial stained glass window was admired in "Marble Hall" (a posh bit to impress foreign visitors).

It had been a really outstanding conference with glorious weather throughout, top class food and accommodation, together with memorable field trips. The organisers deserve the highest commendation. We now look forward to 2006s conference on the Isle of Man, not forgetting the Brunel bicentenary week in Bristol from 3rd to 9th July, which A.I.A. will be one of the sponsors.

Roger Ford.

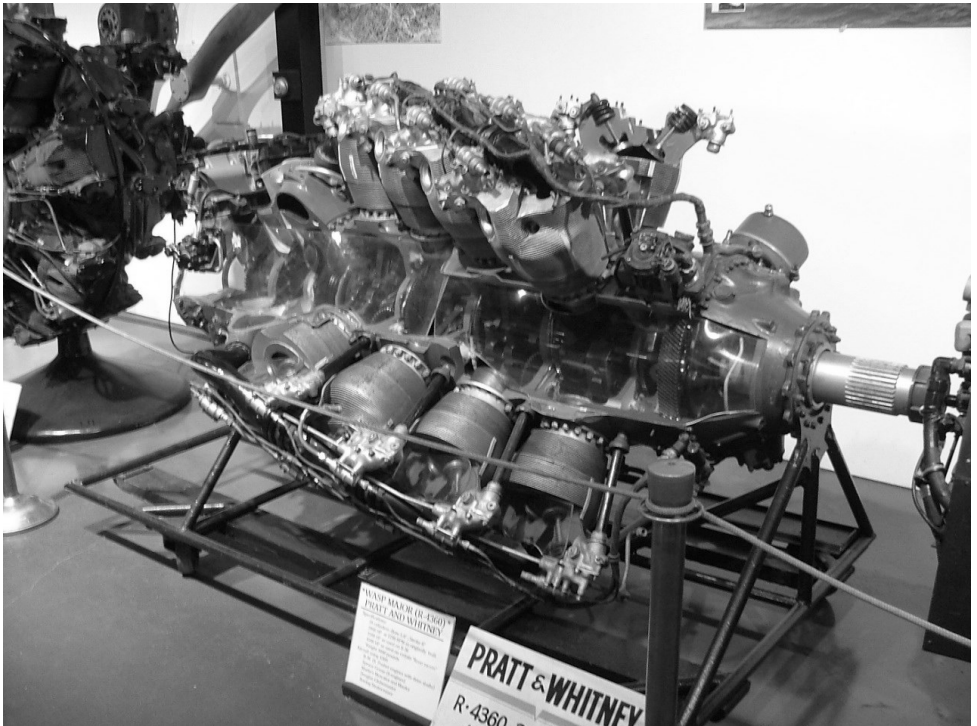
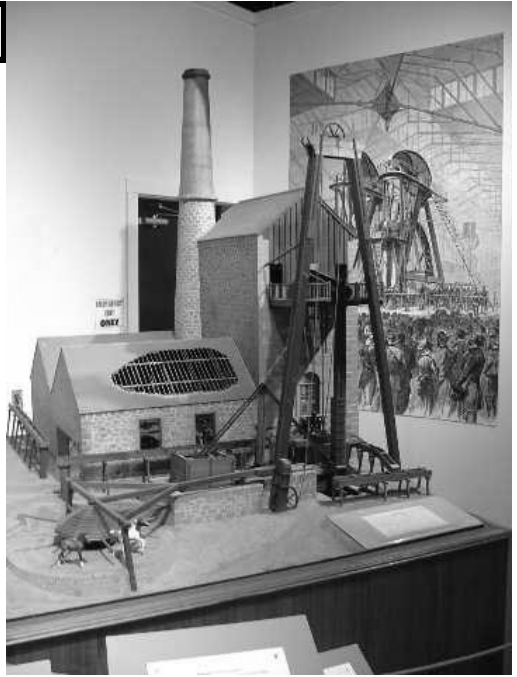
MODEL CORNISH ENGINE IN USA

The Owls Head Transportation Museum in the State of Maine is a transport enthusiast's playground. Here one can watch many old time aircraft like a replica of the Red Baron's Fokker Triplane in action and ride on some of the oldest vehicles in America.

It starts with a display of engines from the Newcomen to the latest jets. An incredible engine to excite any engineer is the 3,800 hp air-cooled 28 cylinder Pratt & Whitney R4360 in-line radial that was fitted to the Convair B-36 inter-continental bomber. Another exhibit is the fine, patiently restored $\frac{3}{4}$ " to the foot model of a Cornish Pumping beam engine. It is described as being designed by John Hocking on the principle established by Richard Trevithick and built by Perran Foundry in 1862.

See www.owlshead.org for more details.

P.M.H.



SPECIAL EVENT AT LEVANT

During more than 20 years as a volunteer at Levant I have witnessed and participated in numerous celebrations, birthdays, presentations and other events.

However, Friday, 9th September will be remembered as a rather unique and special day.

During the afternoon, without any prior notice, we were suddenly hosts to a bride and groom! Miss Vanessa Earley and Alistair Curtis, just married in Pendeen Church, had come to the mine site to be photographed.

Needless to say the volunteers and numerous visitors present were delighted, giving the couple a spontaneous round of applause.

I persuaded Vanessa to pose for a photo in front of the engine controls for what must be a 'first' for Levant; a bride in wedding gown complete with bouquet!

Tom Barr,
Levant Engine.

Many members will remember the

QUERN HOUSE MODELS

exquisite working engine models made by David Hulse and displayed at the talks he gave at the School of Mines. David now has a small museum at his home in Stone, Staffordshire where the models are on display and can be viewed by appointment. The engines are: A Newcomen engine of 1712, Watt's Smethwick engine of 1779, Pickard & Wasborough rotary of 1780, Watt's Lap engine of 1788, Thompson's Arnold Mill engine of 1797, Trevithick's Lambeth engine of 1814 and a typical beam engine of 1860.

David can be contacted on 01785 818773 or e-mail: david.hulse1@btinternet.com or they can be viewed on website www.btinternet.com/~historical.engines

K.J.T.R.



The Camborne Pool Redruth Urban

PUBLIC ART IN CAMBORNE

Regeneration Company presently occupies a set of offices on the former Holman Bros site in Camborne. As a part of the redevelopment of the site it is proposed that the offices shall be demolished and the URC will move to the former buildings of the Camborne School of Mines at Pool.

The URC has proposed that some form of public art be placed prominently on the Holman site to commemorate the people and the work they did there. The Society has been asked to organise this and is working with Public Art South West to ensure that the best use is made of this opportunity.

This is early days but proposals from members who may have ideas for consideration will be appreciated. First contact is the chairman.

A FLY ON THE WALL

The members of your council meet every two months and they thought at the November meeting that they would like to share some of their discussions with you. In addition to their ribald banter they discussed a number of subjects including the following. (Please tell the editor if you like to be privy to this gossip and we will endeavour to bring you more.)

King Edward Mine

A recent meeting between the mine's governing body and English Heritage to discuss possible developments within the Grade 2 listed buildings has gone well. It now remains for the final details of the sub-lease from Kerrier District Council to King Edward Mine Ltd to be resolved.

Redruth Brewery

The sale and removal of the machinery from the site of the second oldest brewery in the country is now almost complete. The pre-planning proposal to demolish all the existing buildings and erect a Chinatown complex surmounted with something similar to a Tibetan monastery was greeted with surprise. Following advice from the Historic Environment Service of the county council the Chinese owners are re-thinking their plans.

The Society has been concerned that nothing of archaeological importance should find its way into the skips. Its curator has undertaken a comprehensive survey of the brewery and that is dealt with elsewhere in this newsletter.

Holman's

The CompAir Holman main works at Foundry Road, Camborne is now owned by English Partnerships. There are plans to erect some 400 assorted residential units on the site with some industrial incubator units. Demolition and removal of everything on site is planned to start soon. The Camborne Pool Redruth Urban Regeneration Company presently occupies some offices on site and is moving to the former Camborne School of Mines buildings in Trevenson Road, Pool, before

Christmas.

R.F. Quaife Ltd, designers and manufacturers of sophisticated transmissions for road and racing vehicles currently occupy the engineering workshop and No 5 workshop where they kindly accommodate the Society's replica of Trevithick's 1801 road carriage. They will be leaving in 2006 with the loss of several jobs and, pending a reply to our enquiry to the URC, the future accommodation of the replica is unclear.

The demolition work will be undertaken behind a line of hoardings. These have been designed by Gendall Design of Falmouth in conjunction with various community groups in Camborne. A draft of the proposed design is depicted on page 2.

Mineral Tramways Project

In accordance with the 'heritage led regeneration' theme and hoped for award of World Heritage Site status for Cornwall, the Mineral Tramways Trails are being revived and re-instated at a cost of some £5.5m. The project is now a complex one covering a large area of Cornwall's mining past and linking Portreath and Devoran harbours. The Society has been involved in the discussions and Clive Carter has offered a series of paintings to be erected along the trails. He suggests that they will create a theme to be found throughout the project by depicting scenes from its active heyday.

Sense of Place

The Society has also been involved in the education authority's promotion of local knowledge throughout Cornwall. Under the enthusiastic direction of Will Coleman a meeting of educators and six members of this Society as experts was held at the Cornwall Centre in Redruth. The influences of mining and the work of people like Richard Trevithick on the landscape, buildings and culture of Cornwall were stressed as an important and long overdue part of local education.

Fred Dibnah

Fred was a frequent visitor to Cornwall where he made programmes about the mines and rode on the replica of

Trevithick's Camborne Carriage. Following his discovery of the birthplace of his beloved high-pressure steam he passionately included the achievements of Trevithick wherever and whenever he could.

The Society is involved in a new series of twelve half-hour programmes commissioned by the BBC to be broadcast next year. The programmes will be composed of features from Fred's various series over the years.

Calder Hall

Modern industrial buildings are becoming the industrial archaeology of the future. The first commercial atomic power station at Windscale is now out of service and is being decommissioned. This Society is supporting the call for the buildings to be listed by English Heritage because the use of high-pressure steam (so often overlooked) was essential to the production of electricity.

NAMHO

The Society is supporting the plan to invite two mining historians from Zloty Stok, Poland to attend the National Association of Mining History Organisations 2006 Conference at Llangollen, North Wales, next year by donating £100 towards their expenses.

Heritage Kernow

Two members of the council represented the Society at a Heritage Kernow meeting held at the Wheal Martyn Clay Museum in October. The objective of the meeting was to clarify the position of HK, plan its organisation, appoint its council and so on. The quoted shared vision of HK will be, '... an inclusive partnership which provides a voice for all organisations concerned with Cornwall's Heritage, working towards common goals while valuing the diversity of interest'. Says it all, doesn't it.

Cornwall Heritage Trust

The Society recently held a meeting with Sir Richard Trant, the retiring chairman of the Cornwall Heritage Trust. The objective was to develop a link between the two bodies in which the Society would serve as

advisor to the trust in matters of industrial archaeology. In return the trust would assist the Society with matters of funding. The present chairman of the trust is Mr Jonathan Treffry of Fowey and Sir Richard is now its president.

Cyfarthfa Museum

The Society has very gratefully received five interactive displays that had been donated and delivered by the Cyfarthfa Museum at Merthyr Tydfil. Various electrical and manual, these fine educational aids were prepared as a part of Merthyr's bicentennial celebration of Richard Trevithick's nine and a half mile railway journey there in 1804. The instructions are currently bi-lingual and the council has agreed to replace the Welsh with Cornish. The modules are presently housed at King Edward Mine.

The Society's council also discussed a number of other items at length and received reports from its various officers. You may think this was a full morning's work and it was. It reflected the latest position in the relationships, both at meetings and by correspondence, between the Society and numerous individuals and authorities. All were in connection with the preservation, development and dissemination of Cornwall's industrial archaeology.

Would you like to join the council? Enthusiasm to get a job well done is more important than technical knowledge. Meetings are held on Saturday mornings every two months and are very convivial. Please contact Kingsley Rickard on 01209 716811.

P.M.H.

It was Thursday morning and the speaker for the following night's Trevithick Society lecture in the Opie Building was unable to attend. Kingsley Rickard, who can usually be relied upon to fill a gap like that, was unwell and we didn't have an alternative. Telephone calls were made all



CAMDEN TO THE RESCUE

over the country and it was the ladies at Camden Miniatures, Wendy and Hilary, who came to the rescue. A VHS tape of the 2001 Christmas Eve Trevithick 200th Anniversary Hill Climb made by enthusiastic cinematographer Roger Newberry was rushed into the post and it arrived a few hours before the lecture time.

The video was shown to a delighted audience who wallowed for an hour in the happenings on that momentous day. It's great to see yourself and your friends enjoying yourselves on a tape with such a great atmosphere.

Hints for Christmas presents connected to the history of engineering, ships or virtually anything can be made by obtaining the excellent catalogue, with a fine picture of the Society's 2001 replica on the cover, from Camden Miniature Steam Services, Barrow Farm, Rode, Nr Frome, Somerset BA11 6PS or www.camdenmin.co.uk. Leave the catalogue open with a circle around your required book, video or DVD.

The day also produced a catalogue on just about every film made about transport and railway anywhere in the world. That's a mighty 208 A4 pages. Contact the Signal Box on 0116 236 2901 or e-mail signal_box@talk21.com with details of your pet transport passion. Their address is The Signal Box Ltd, 1 Albion Street, Anstey, Leicester, LE7 7DD



P.M.H.

The two Holman publications mentioned in the last newsletter will be "on the streets" by the time you read this. The first to come out is the illustrated record of the work by Holman during the First World War. Besides illustrations of the wide range of engineering products produced by Holman's, from 'engines for submarine chasers' to 'ventilation pumps for military

PUBLICATIONS

tunnelling', there are photographs of many members of the staff. Entitled "Our Work during the Great War – Holman Bros." (ISBN 0 904040 64 X) it can be obtained from your local bookshop. Out shortly after will be the photographic record of a visit to Holman's by Edward, Prince of Wales on the 20th of May, 1926. This is a representation of a Souvenir issued on a limited basis by Holman to specifically record the event. Again, many members of staff are in the photographs. With the ISBN 0 904040 65 8 this is also available from your local bookshop. These two representations are an excellent record showing the work and high standing of this foremost Cornish Engineering Company. Both of these Holman books are £7.99.

Out in mid-November is the sixth impression of the "Williams Perran Foundry Catalogue" (ISBN 0 904040 02 X). This volume has been out of print for some time with continuing steady demand. It is also available from your local bookshop at £12.99.

Another publication in the Society reproduction range is the "Harvey Catalogue". For those of you who missed the hard cover limited edition of this volume this soft cover version contains the same historical material. ISBN 0 904040 60 7 is £12.99.

Moving from the reproductions series and still in an engineering vein is Clive Carter's brilliant history of the Holman Company. Entitled "Holman – Cornish Engineering 1801 – 2001" ISBN 0 904040 59 3 it is priced at £9.99

Should your bookseller not have these publications in stock they can be obtained by them from Tor Mark of United Downs, St Day, Cornwall, TR16 5HY. Phone 01209 822101. Fax 01209 822035.

Email <office@tormark.co.uk>

Vernon Baldry
Publications Secretary

The Society's curator, Pete Joseph, has just completed a full, in-depth physical survey of the buildings standing on the four and a half acre site that was for hundreds of years, Redruth Brewery.

It is fortunate that the brewery stands on such a large site as little has been demolished over the years to make way for new buildings. This means that there are traces of all sorts of construction dating



Old stone buildings with new steel structures.

SURVEY OF REDRUTH BREWERY

from different times. Other items were also left in situ, such as a steam engine and winch on the second floor.

Most of the big items of plant at the brewery have been exported. Some of the smaller pieces of kit have been disposed of locally and as far as is known the rest will be cut up for scrap. A three stage pump and the steam engine that operated it, both by Geo. Adlam of Fishponds, Bristol are to be moved to Germany to the offices of B.T.B., Brau Technologie GmbH, the contractors who are removing the

equipment at the site.

One unusual 1939 building is the rare aircraft hanger of Lamella steel-lattice construction created by Hugo Junkers, the aircraft designer, before WW II, see http://www.geocities.com/hjunkers/ju_who_hj.htm It was built as a drill hall and after the war local furnisher Preston Johns used it as a sales warehouse. Latterly it became a retail shop for the brewery.

During the course of the survey a number of very old indentured leases, inventories and other items have been recovered from the rubbish. These will be carefully examined and documented.



The water supply to the property is of particular interest as clean water was difficult to obtain in the 18th and 19th centuries. The brewery had its own supply piped all the way from a spring on Carn Brea and a 'secret' well. Those of us who have sampled the beer say it was very good.

The final draft has been compiled from a detailed site survey and many hundreds of pictures. The history has been carefully researched and includes the results of several interviews with individuals including John

Junkers Lamella building at Redruth Brewery Baughan, a former chief engineer at the

brewery. It has been possible to note the former use of many of the buildings. The survey is now bound in two large folders but the Society has agreed to print and publish a very limited hardback edition for donation to research centres in Cornwall.

Buildings and industries like this brewery are being demolished throughout Cornwall to make way for housing. In this case the brewery is not listed, although the Society has made approaches to English Heritage, and it is not within the Conservation Area of Redruth. It is likely that the site will be cleared and the Chinese owners will develop it for other purposes. Our latest information is that a modern micro brewery is to be installed at the site so it is nice to think that brewing will continue at this venue, thought to be the second oldest continuously used brewery site in the country.

The Society is very grateful to Pete for his work and sees it as an important document for researchers and the community, enabling them to have a greater understanding of Cornwall's past industries.

Pete has his eye on a couple of other Cornish industrial properties that will shortly be demolished.

The costs involved in this survey were jointly funded by the Society and the Cornwall Heritage Trust.

P.M.H.

It is particularly sad to report the death of member Justin Brooke on 6/11/2005. He was a long-standing stalwart of the Society

and through his writings made an immense contribution to our understanding of Cornish mining. An obituary should appear in the next newsletter.

Member John Mudge has asked whether anyone could furnish him with information and/or photographs of the following:

1. Trelyon Consolidated Mine
2. North Crofty Branch Line

His address is:

Touchdown,

JUSTIN BROOKE

Steeple Lane,
St. Ives.
TR26 2AY

INFORMATION WANTED



Redruth Brewery had a large capacity (21,000 gallon tanks)

SNCF 141R IN SWITZERLAND

Built at Darlington, the first full-size passenger locomotive to be built in this country since 1954, an A1 Pacific, numbered 60163 and named Tornado, will run on the Great Central Railway (GCR) based at Loughborough using the eight mile run between Loughborough and Leicester. The GCR began in 1969 when enthusiasts decided to recreate a bygone age and now boasts over twenty locomotives as well as a considerable amount of rolling stock

William Cook Cast Products Limited, the major corporate sponsor of the A1 Pacific new build steam locomotive project, has now acquired a former SNCF 141R steam locomotive, shown below. The locomotive, which is of the coal fired type (1,340 of the class were built in both coal and oil fired versions) is in full working order and will shortly move under its own steam from its present base at Capdenac, in the north Midi-Pyrenees region of France, to its new home at Embrach in Switzerland. The locomotive will be employed mainly in hauling a train of refurbished former SBB carriages, to be used for corporate promotions, rail industry specials and tourist and enthusiast charters.

Roger Waller, President of Swiss-based steam engineering experts DLM, who is managing the project, commented: "Running steam specials on the very busy Swiss railway network requires powerful and reliable locomotives so that regular traffic is not delayed. Good acceleration, even with a heavy train, is essential to avoid being put in sidings for hours by the operating authorities. Among the most modern steam locomotives ever built, the 141Rs have the power to cope with today's rail traffic. It is certainly one of the best choices for steam specials in continental Europe".

It is expected that the Swiss leg of the locomotive's delivery journey will be marketed as a charter special.

For further information please contact:

Alexa Stott, William Cook Cast Products
Tel: +44 (0) 114 228 9306

3-4 July
Institute of Civil Engineers Triennial
Conference, London



**BRUNEL BICENTENARY WEEK
3-9 JULY 2006**

5 July

Brunel Bicentenary Steam Train Trip

6-7 July

Brunel Bicentenary Conference, Bristol

7 July

Brunel Tours of Bristol

8-9 July

Newcomen Society Events, Bristol

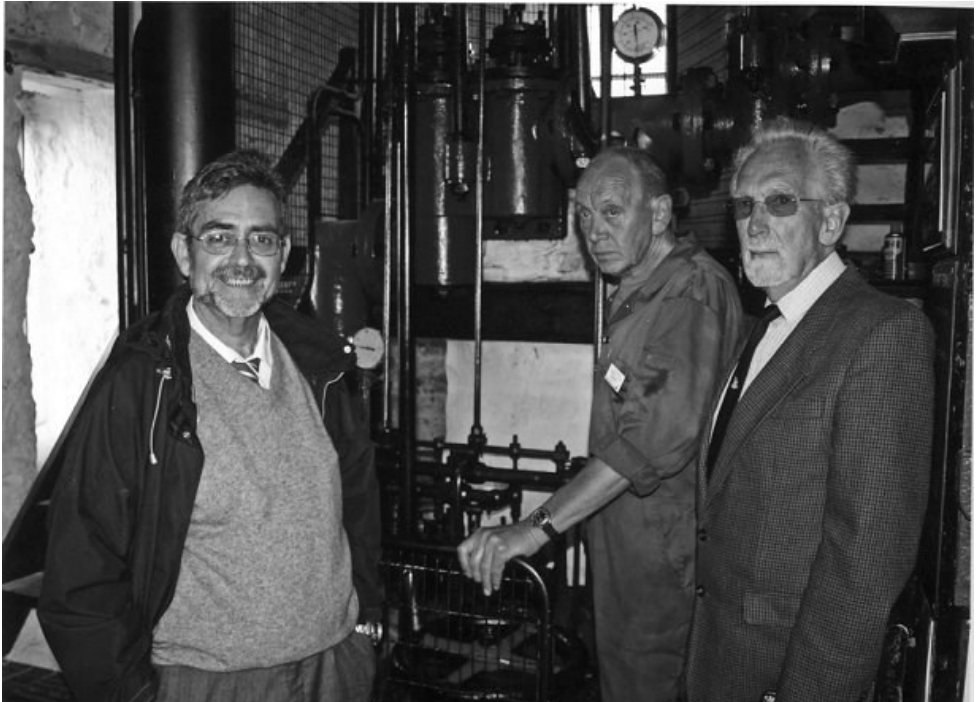
Visit www.ice.org.uk/conferences for more information.

**WORLD HERITAGE
ASSESSOR'S VISIT**

'hands-on' feel for Cornwall's industrial heritage. Other parts of his itinerary were, Geevor Mine, Trewavas Mine, Cornish Engines at Pool and King Edward Mine where he was shown around by Society members Kevin Baker and Kingsley Rickard. Being a "rocks" man he was particularly interested in the mineral specimens but he was also impressed by the fact that it was run by volunteers and by the amount of work put in there over the years. The party also overflowed the whole of the WHS bid area by helicopter to give them a good idea of the landscape

We now have to wait until July 2006 for the results of his assessment.

The stop at Levant was an important part of Sr. Garcia de Miguel's visit to Cornwall in his role as World Heritage Assessor, as it helped to provide him with a tangible



Sr. Garcia de Miguel at Levant with Tom Barr and Bill Newby, two members of the original greasy gang. Photo. Barry Gamble

W.E.S.E.S. RALLY REPORT

The West of England Steam Engine Society rally held on the 19th. - 21st. August was blessed with good weather and an excellent attendance by the public. There were in the order of 120 steam engines with good support for the other various classes, commercial vehicles, vintage cars, tractors, stationary engines etc., and with the increased size of the showground and the new layout, there was a wonderful atmosphere at the event, an event which the Society's stalwarts look forward to and always enjoy.

We have recently been goading members for more volunteer support and this year were delighted at the response. In the days running up the show spirits were running high, it was our 70th birthday and we were putting on a much bigger display than usual to celebrate, even hiring a marquee to house it all. Within the marquee we had displays featuring Holman's, Redruth Brewery, Levant, a display of miscellaneous artefacts and illustrations showing the Society activities and projects. Also there was a show of the remarkable shipping and other models by member Bryan Watkins of Penzance with our usual retail counter selling books, coins and brewery memorabilia.

Thanks to all the volunteers who turned up, and, for the first time ever, too many to list individually. Special thanks must go to Colin French and Pete Joseph for their sterling efforts in helping to get the equipment and artefacts together in the days before and after the show and on the day prior to opening thanks also go to David Mann, Maureen and Trevor Thompson and George Wilson for assisting with transport and setting up. George even took home the beer bottle display to wash and polish them. Secretly, I think he thought they were full!

This time, because of the amount of kit required we had to hire a self drive truck. Thanks also go to Jaime Allen Transport, our regular haulier, who kindly sponsored the moving of our heavy items, the Trevithick Locomotive, the 1998 cutaway demonstration Holman compressor and the

old Holman compressor, circa 1940. The latter we would love to restore to original condition. Is there anyone out there?

Sadly, our site on the showground was in a very dead area with a poor pedestrian circulation, and speaking to other occupants it seems we were not the only people to find this. We got so little public support we shut up shop early and our well meaning volunteers complained of boredom. Overall a very disappointing result. Never mind! We'll be back next year so don't be despondent all you willing volunteers.

K.J.T.R.

PROGRAMME

19th January 2006

CORNISH INSTITUTE OF ENGINEERS

Early History of the Development of Resistivity Geophysics used in finding caves and mineworkings. By Colin Bristow.

16th February 2006

Renewable energy. Implications for Cornwall. By Gil Patrick.

16th March 2006

The Foden steam wagon restoration. By John Sawle.

20th April 2006

The Be-tec engine. By Phil Hosken.

Lectures are held in the Opie Building, Camborne Tech. 7pm to 9pm. All are most welcome.

D.C.S. Dixon

Secretary

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RIVER TAMAR BOAT TRIP

The East Cornwall Branch 70th. Birthday Celebration River Tamar trip on the 4th. September was well supported, and although the longer views were masked by mist this did not detract from the wonderful scenery of the Tamar Valley. The prize for the longest distance travelled to attend must go to Brenda and David Sandy from Milford Haven closely followed by John Dickenson from Leicestershire.

Many passenger vessels travel up the river to Calstock these days but the journey up as far as Morwellham can only be attempted on a full tide to give the vessel sufficient depth of water and also width of river in which to turn. So it was

on board the "Silver Crest" we set out from Plymouth Barbican, the old historic part of the city to discover the delights of the Sound, the Hamoaze and the Tamar. Having left the pier we circled Sutton Pool while over the speaker system Janet Cambridge set the scene with the historical background of the port and then gave an excellent commentary on the outward journey covering the social, transport and industrial points of interest as we went. On leaving Sutton Pool there is so much to see for the industrial historian it is almost impossible to take it all in. Immediately on the starboard side, (right hand for landlubbers), is the Citadel, still used by the military, followed in quick succession by Smeaton's Tower, the third Eddystone Lighthouse now transplanted onto the Hoe, the landward remains of Plymouth's promenade pier, the rest having been removed by Mr.Hitler and then Millbay Docks built by the Great Western Railway attached to which was Plymouth's original

station. The docks are now used as the terminal for the continental ferries. The port side gives views of Mount Batten, the one time RAF station which during the war was a base for seaplanes then further in the distance that remarkable civil engineering feat by the famous engineer John Rennie, Plymouth Breakwater, one and a half miles long, begun in 1812 and finished in 1848. Trevithick had an involvement here as he built a boring machine to help split the large lumps of limestone used to build the Breakwater. Passing through the narrows at Devil's Point means we leave the Sound and enter the Hamoaze and on our left is the Mount Edgcumbe Country Park whilst on our right is the Royal William Victualling Yard, also built by Rennie, and a most

Photo: Steve Barber



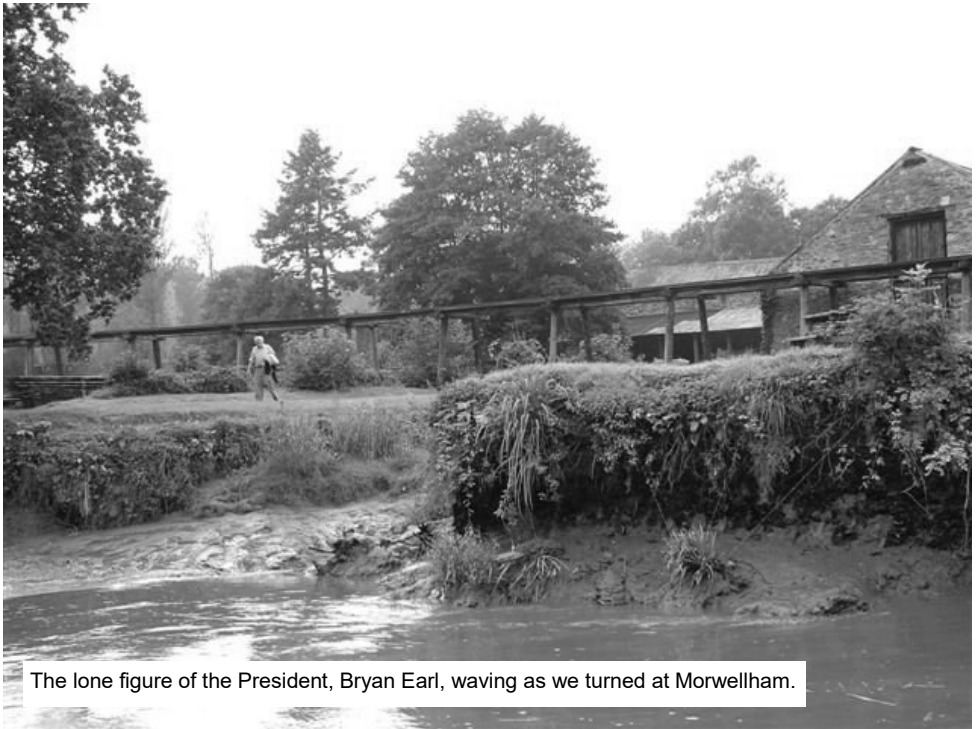
splendid complex. The yard faces out over Stonehouse Pool, through which plies the Cremyll Ferry, one of the ancient crossing points between Cornwall and Devon. Also on the side of Stonehouse Pool is the site, now built on, of the London & South Western Railway ocean terminus. The L&SWR and the GWR were in fierce competition from their closely sited terminus as to who could provide the faster service to London. Proceeding up the Hamoase we see on the left the town of Torpoint, well known as a ferry crossing, and as HMS Raleigh to all Royal Navy recruits who receive their indoctrination there. At the time of writing one of the new larger ferry vessels has been inaugurated into service with two more to enter service when the necessary alterations have been completed to the slipways. Opposite Torpoint we see Devonport Dockyard and HMS Drake the fleet maintenance and repair depot. A number of Royal Fleet Auxiliaries, frigates and nuclear submarines

were in evidence as we passed. We are now rapidly approaching the "frontier" town of Saltash, home of yet another ferry until the modern suspension road bridge was opened in 1961 and in stark comparison with Brunel's Royal Albert railway bridge of 1859. Saltash is intending to celebrate Brunel's bicentenary in 2006, although, sadly Brunel died shortly after the completion of his masterpiece and Cornwall cannot boast very much in the way of Brunellian remains. Just beyond Saltash the Tamar is joined by the Tavy and above that the waterway becomes much more "riverlike" becoming narrower and the traveller begins to get the impression it was the M1 of its day as the various quays come into view, almost like bus stops, Cargreen, Moditonham, Weir Quay, Pentillie, Halton, Cotehele and so they continue along both banks. The remains of the mining, lime burning and the soft fruit industries become more evident as the river gets more narrow and has some

tortuous meanders. Mining evidence can be seen as a smelter at Weir Quay, and buildings at Hooe and then at Cotehele Quay is a mill, lime kiln, and, just out of sight in the trees, Cotehele House itself now in the care of the National Trust. As Calstock looms into view the attractive Danescombe Hotel faces downstream, built to cater for the not inconsiderable river traffic created by the afore mentioned industries and also the many brickworks in the Calstock Gunnislake area, all having need to get their products out, and fuel and supplies in. On the Cornish bank the remains of the incline of the East Cornwall Minerals Railway, and the quays of Calstock are seen, overseen by the impressive concrete viaduct built by the L&SWR to connect their system to the ECOMR in 1908. An interesting aspect of this viaduct is that it had a wagon lift of fifteen tons capacity attached to the downstream side for raising and lowering railway wagons between



Photo: Steve Barber



The lone figure of the President, Bryan Earl, waving as we turned at Morwellham.

the quay and the high level track. On the Devon bank of the river opposite Calstock is now a large reed bed. This was the site of Goss's shipbuilding yard of which there is now no evidence. As we leave Calstock the large level area on our left, now a car park and sports field was an ore quay where the ores from the various mines were deposited awaiting shipment. Passing Tuckermarsh Quay on our right we then see the remains of Rumleigh Brickworks with its prominent stack, damaged by lightning and its attendant Hoffman kiln. This works also did duty as an arsenic calciner. As we round the next meander we see the enginehouses of Okel Tor Mine an old copper and arsenic producer. A considerable effort has been put into the conservation of this site by Society members Greg. Smith and Nick Cole and I certainly recommend a visit. Almost opposite Okel Tor on the Devon bank is the extensive remains of Gawton Mine, another copper and arsenic producer. There are interesting remains here although somewhat overgrown. The main feature to

catch the travellers eye is the calciner stack on the skyline, and, no, your eyesight is not defective, the stack is really bent! Both Gawton and Okel Tor mines had their own shipping quays and shortly, as we round the last river bend of our journey, we see the disused hamlet of New Quay with its disused quay and large lime kiln. We now have Morwellham in sight and we see on our right the railway and entrance to Wheal Charlotte, operated as part of the Morwellham Quay complex. Because of the tide constraints we could not land at Morwellham but it is certainly worth a visit. Members who attended the A.G.M. Weekend in 2004 will be familiar with its delights. The port came into its own with the opening of the huge Devon Great Consols mine in 1844 to which it was connected by a railway and inclined plane. A second inclined plane connected with the Tavistock Canal basin high above with the quays. Engineered by John Taylor the canal provided a transport connection with the mines in the Gulworthy district, Tavistock itself and the mines around Mary

Tavy and was opened in 1817 after a construction period of fourteen years. A major civil engineering feat of the canal is the one and a half mile tunnel under Morwell Down. Activity ceased on the canal in the mid 1870s but it had a new lease of life, when, in 1933, the West Devon Electric Power Co. used it to provide power to turn the turbines of its hydro-electric plant on the downstream side of Morwellham Quay and this was seen from our vessel. The return journey was uneventful but equally pleasant and as we passed Devonport Dockyard the ship's crew named the various Royal Navy and service vessels moored there and gave brief details if their uses. It was a most enjoyable trip and a memorable birthday celebration.

The Society records its thanks to Janet Cambridge for her work on the commentary and to Steve Barber for filming the outing and donating a CD of the result to go to the archive.

K.J.T.R.

King Edward has had a successful season and huge thanks are due to the staff and volunteers who have put in many hours over the summer. We are delighted with the results. Shop income and visitor numbers both showed a 95% increase over projected figures. Well done to you all. But no slacking folks! We still need volunteers. You do not have to be a mining or mechanical anorak to volunteer. There is

KING EDWARD MINE

scope for all tastes and skills. If you would like to help you can always ring the Society chatline 01209 716811 or Tony Brooks on 01209 713506 or during the winter just turn up between 9am. and 1pm. on a Sunday morning and see what goes on.

We have been given a quarter size working sand table by the School of Mines so Tony Brooks and the writer brought it from there on 27th. October. Our very own milling expert, Willie Uren, gave it the once over and then pronounced it a "proper job". We have also been given five interactive modules and some large display boards, aimed at young people, and illustrating the

work of Richard Trevithick. These were surplus to requirements at Merthyr Tydfil Museum and were donated to the Society. Initially these will be set up in the Survey Office at KEM and where they will be useful during the winter as we have a number of school parties booked. We are currently working with the County's "Sense of Place" scheme to advise on industrial history for schools.

We are still having discussions about taking over of whole site when CSM finally leave, however, these things take time especially when you have little money! With this in mind maintenance work continues on site. The weather has been kind recently and we have been concentrating on outside weeding, drain clearance and gorse clearance, especially in the section used by CSM. We need to keep the area looking "lived in" to deter unwanted guests.

A float operated electric pump has been installed in the sump in the mill floor so we can now pump used water back up to the top tank. We do catch some roof water but being near the top of the hill water can be at a premium.

Pete Benbow is working away on the Holman winder and has been busy puzzling out how the reversing mechanism worked as it is missing and it is thought it was never replaced after the engine left Castle an Dinas. As reported elsewhere we have a steel framed building given to us by the Redruth brewery contractors which we hope to erect as a temporary cover for the winder.

King Edward Mine has now joined "Europamines", the European Mining Heritage Network. This organisation was set up with financial support from the European Union to promote understanding and appreciation of the huge extractive and mining industries and their history and legacy to which the modern cultures owe a great deal and to share experiences and knowledge between similar organisations across Europe. With members in Great Britain and Ireland, down to Spain and east to Poland, and with the hope that in Cornwall we shall become a World Heritage Site the combined promotional effect of the two organisations should

enhance King Edward's standing and hence its visitor numbers.

K.J.T.R.

Around Perranporth, St. Agnes & Portreath. Landfall Walks Books No. 16 by Bob Acton. Softback. 160 pages, 92 illustrations. ISBN 1 873443 50 1. Price £5.99.

Subtitled 16 round walks from Holywell to Hell's Mouth this book continues with the very familiar and successful style of Landfall Publications. The 16 circular walks range in length from 1 to 9 miles and some include alternative routes to see additional features or to reduce the mileage. Each walk is marked on a map and described with clear, emboldened directions

BOOK REVIEWS

interspersed with informative photographs, evocative sketches and a descriptive narrative. Throughout the text, the emphasis is on interpreting the industrial archaeological, particularly the mining, features that can be seen along the walk.

The majority of the walks hug the coastline, where the coastal scenery forms a magnificent backdrop to the points of interest described en route. In fact very little of the coastline between Holywell Bay and Hell's Mouth is not included in a walk.

Inland there is a perambulation around Ventongimps and West Chiverton Mine, a visit to East Wheal Rose at St. Newlyn East and a circular tour around various mine sites in Perranwell.

The book ends with a section on some mining terms and two pages of appropriate further reading. Perhaps it would be nice to also have a section on other suitable places to visit like Cornish Engines, Levant, Geevor, King Edward Mine, the Local Studies Library, Royal Cornwall Museum, etc. as well as Societies to join like the Carn Brea Mining Society and, of course, the Trevithick Society.

Overall, Bob Acton has succeeded in maintaining the standard set by his previous Landfall Walks Books. In so doing, he is continuing to do the cause of Industrial Archaeology a tremendous service, by introducing his readership to the

Cornish industrial landscape, and by arousing interest and enthusiasm for that potential World Heritage Site.

CNF

James Watt. Volume 2: The years of toil, 1775-1785. Landmark Collectors Library. By Rev. Dr. Richard L. Hills. Hardback. 256 pages, 50 illustrations. ISBN 1 84306 046-9. Price £26.99.

This, the second volume, in the biographical trilogy of James Watt's life, deals with Watt's first decade in Birmingham and the development of his symbiotic partnership with Matthew Boulton, following the successful petition to Parliament for the infamous 25 year extension of his 1769 patent.

This volume is an improvement on the first because it is better crafted and more readable. Throughout the author has managed a rare feat amongst historians; namely to bring the whole subject alive. It is certainly deftly written and the story is told by the skilful weaving of carefully chosen quotes from Watt's papers into a descriptive and explanatory text that adds clarity.

The first chapter summarises the first volume so successfully that there is little need to read volume one. This leads on to a chapter discussing the procurement of the 1775 Act of Parliament, which gave Watt the degree of economic certainty he craved to warrant getting his separate condenser prototype engines to the market place and to justify further enhancements such as the rotative beam engine.

Just as the unique economic and technical difficulties faced by the Cornish mining industry, were a catalyst for invention during the nineteenth century, by Cornish engineers, they were pivotal to the success, or otherwise, of Boulton & Watt. during the last quarter of the eighteenth century. B. & W. provided the Cornish mines with a much needed boost, at a time when the economically accessible reserves of copper were running out, by supplying more efficient, cheaper running, and more powerful steam engines. In turn the Cornish provided B. & W. with its largest source of revenue, so helping to consolidate their grip

as the principal engine supplier to Britain (and abroad), outside the coalfields. The author devotes a substantial portion of this book to B. & W.'s uneasy relationship with Cornwall explaining how that evolved through the determined marketing and provision of engines. He also helps to explain how the system of premiums was both a facilitator and a hindrance, that was to become much resented. It is perhaps ironic to consider that Watt introduced his 'perfect' engine after 60 years of relatively few improvements in steam engine design and yet it was the resentment to his premiums that accelerated the rate of innovation, primarily searching for ways to overcome B. & W.'s monopoly.

The nature of B. & W.'s partnership and the way Watt administered the steam engine business, which became more of an engine design consultancy than a manufacturing concern, is another important theme of the book. Throughout the complex dealings with sub contractors, engine erectors and clients are illuminated as is Watt's need for greater financial control of B & W's partnership.

The final chapter in this book amply demonstrates that Watt's inventive mind extended well beyond theories of steam and he applied his scientific and practical engineering skills to such devices as a copying machine, a mechanical calculator and experiments into the efficacy of hot-air and hydrogen balloons and the manufacture of sodium carbonate (an unsuccessful venture).

Does James Watt deserve the bad press he has always had in Cornwall? Read this tirade and judge for yourself!

CNF

There is a comic line frequently heard in Society circles, "You will soon be old enough to serve on the Council". Sadly this is close to the truth. The average age of the Council is 60 years, all, of course, youthful in outlook and appearance! We desperately need more help and input in managing your Society and we would certainly welcome younger blood. There must be members out there with the time

and aptitude and possibly ideas to lend a hand to help keep the Society vibrant and ongoing, qualifications required are simple, just common sense and a desire to help. You will not be pushed into doing something that is not your scene. The Society has an illustrious past so let us

COUNCIL MEMBERS NEEDED

make sure this continues. It is **YOUR** Society, so it is up to **YOU**. Contact any member of the Council if you have thoughts. None of the Council are shy, they will talk to anybody!

Janet Cambridge has decided to retire from the Council having been the Programme Secretary and general help for the East Cornwall Branch for several years. The Council expresses its thanks to Janet for her help and advice over this time and wishes her well for the future. She wears a number of hats including that of being a J.P. and is Chairman of the Friends of Morwellham, and is a member of a number of other organisations. She has represented the Society at many meetings and seminars over the years. She will continue to be a member of the Society. Many thanks Janet.

RETIREMENT FROM COUNCIL

TREVITHICK SOCIETY EVENTS AND CONTACTS

Jan. 20th 2006 - C.C.

The Boulton & Watt Papers. By Paul Brough.

Feb. 17th . C.C.

Ekranoplans—is it a boat, is it a plane?. By Bryan Watkins.

Feb. 24th . East Cornwall

The Industrial Archaeology of the Tamar Valley.
By Graeme Spink.

Mar. 17th - C.C.

The Cornish Motor Industry.
By Peter Tutthill.

*Meetings are held in the Lecture Theatre,
Opie Building, Cornwall College at 7pm.*

*East Cornwall Branch meetings will be held
at the Public Hall Complex, Liskeard at 7.30pm.*

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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.

Subscriptions 2006:-

Single members	£15
Family (husband & wife)	£18
Overseas members	£18
Corporate members	£18
Student members	£5

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