

THE TREVITHICK SOCIETY

NEWSLETTER NO. 18

AUGUST 1977

Edited by J. Hodge at Trannack House, Penzance

1977 A. G. M. WEEKEND

Saturday 24 September Assemble at 10 a. m. at the Science Museum, South Kensington, in the lower lecture theatre. 10.15 a. m. prompt - the 1977 A. G. M.

(The agenda and secretary's report will be circulated at the meeting).

Immediately following the A. G. M. the Chairman of the Society, Mr. R. J. Law, will give a talk on 'The Lancashire Boiler in Cornwall'.

As we have to vacate the lecture theatre by noon there will be no time for significant delays. The number that can be accommodated in the lecture theatre is limited to 90, but this should not present any problems unless we get a larger attendance than usual.

Members will be able to obtain a buffet lunch after the meeting at either the Science Museum or the Victoria and Albert Museum, which is just across the road. In the afternoon there will be a coach (or coaches) to take members to Dartford for the unveiling of a plaque at the Bull Hotel to commemorate the death there, on 22 April 1833, of Richard Trevithick. This has been arranged jointly with the Dartford Society. As the timing of the ceremony has not yet been fixed, the time of leaving from the Science Museum is not definite, but members should be able to spend some time there after lunch. On the way to Dartford it is hoped to call at the approximate site of Trevithick's Thames Driftway entrance on the South bank of the river in Rotherhithe. There is nothing to mark the spot, which is a great pity in view of its historic importance - perhaps the Society might be able to encourage the G. L. C. to rectify this.

After the unveiling ceremony members will be able to have either dinner, or a buffet supper at the Bull Hotel (or elsewhere in Dartford if desired).

Approximate prices are Dinner from £3.35 to £4.65 (+10%) per head. Buffet from £1.95 to £4.30 (+10%) per head.

The coach will leave to return to Central London after dinner, probably between 9 and 10 p. m.

Members wishing to go on the coach from the Science Museum to Dartford must inform Mrs. Ingham at 25 Barrister Road, Camborne to reach her not later than September 12th so that she can make the necessary arrangements.

Sunday 25 September Members proceed by public (or private) transport to the Kew Bridge Pumping Station, Waterloo to Kew Bridge Station (across the road) or Gunnersbury Underground station (20 minutes walk) to entrance in Green Dragon Lane, to arrive at about 10 a. m. The 1820 Boulton and Watt engine will be running at 10.30 a. m. Admission is 40p. Children and O. A. P. 's 20p. Light lunches are available in the restaurant on site.

Unfortunately it has not been possible to arrange a visit to the brewery engines, because of other work going on there.

The Society's Accounts for 1976

Balance Sheet as at 31 December 1976

1975	£ ASSETS	£	1975	£ FUNDED BY	£
1471	Investment at cost		1985	General Account	1647.68
	£1510.78 10% Treasury		1336	Publications Fund,	
	Stock 1979	1470.88		Accumulated Income	1727.54
762	Cash at Bank and in Hand	347.76			
246	Sundry Debtors	677.50			
842	Stock of Publications,				
	at cost	879.08			
<u>3321</u>		<u>3375.22</u>	<u>3321</u>		<u>3375.22</u>

Note: The Society's Assets also include Members' Sales Items dealt with in the General Account whose capital value has been depreciated to nil.

No account has been taken of historic items in the possession or ownership of the Society.

M. J. Messenger AIB
Hon Treasurer
27 March 1977

Auditor's Report: I have examined the accounts of the Society and from the books and papers brought before me I confirm that they represent a true statement of the Society's finances for 1976.

R. Keast AIB
29 March 1977

Summarised Income & Expenditure Account for the year ended 31 December 1976

1975			
£			£
846	Subscriptions & Donations 1976		630.17
64	Income Tax recovered under Deeds of Covenant		53.12
20	Surplus from 1976 Outings and AGM		1.22
24	Sales Items		17.25
20	Rostowrack Engine Collection Box		-
28	St. Ives Museum Models	48.63	48.63
132	Interest from Bank and Investment		171.50
<u>1134</u>			<u>921.89</u>
	TOTAL INCOME		
	<u>Membership Expenses</u>		
469	Newsletter Costs	692.00	
311	Journal Costs	373.05	1065.05
	Administrative & Publicity Expenses		
112	Stationery, printing & postage	120.20	
	1978 AIA Conference	34.00	
30	Insurance (Public Liability)	24.00	178.20
	<u>Members Sales Items</u>		
52	Ending Newsletters		6.48
296	Non Recurring Items		
	Tape-recording of Trounson Commentary		9.85
<u>1270</u>			<u>1259.58</u>
	TOTAL EXPENDITURE		
(136)	EXCESS OF EXPENDITURE OVER INCOME		(337.69)
2121	Balance brought forward 31 December 1975		1985.37
<u>1985</u>	BALANCE CARRIED FORWARD 31 December 1976		<u>1647.68</u>
	<u>Represented by the following:</u>		
1471	Government Stock at Cost		1470.88
	(Cash in Hand 31 December 1976		27.69
14	(Cash at Bank 31 December 1976		(350.89)
<u>500</u>	Loan to Publications Fund 31 December 1976		<u>500.00</u>
<u>1985</u>			<u>1647.68</u>

Publications Account for the year ended 31 December 1976

1975			
£			
1644	SALES		763.01
235	Journals distributed to members		287.56
842	*Stock at cost 31 December 1976		879.08
<u>2721</u>			<u>1929.65</u>
(1204)	Less Printing Costs	659.97	
(72)	Stationery	49.43	
(22)	Postage	31.31	
(8)	Insurance	8.00	
(982)	Stock 31 December 1975	841.99	(1590.70)
433	SURPLUS ON SALES		338.95
26	Bank Interest		52.43
459	INCOME FOR THE YEAR		391.38
877	Balance brought forward 31 December 1975		1336.16
<u>1336</u>	BALANCE CARRIED FORWARD 31 December 1976		<u>1727.54</u>
	<u>Represented by the following:</u>		
748	Cash at Bank 31 December 1976		670.96
842	*Stock at cost 31 December 1976		879.08
246	Debtors		677.50
1836			2227.54
500	Less General Fund		500.00
<u>1336</u>	PUBLICATIONS FUND		<u>1727.54</u>

*Note: Stock of publications on hand has been valued at cost by the Hon Treasurer from stock figures provided by Officers holding stock. No allowance has been made for depreciation.

TREASURER'S REPORT 1976

As anticipated last year the Society made a loss in 1976 on the General Account, a little more than expected for a number of reasons.

Direct services to members, the Journal and the Newsletters, have cost us about £1.70 for each member but fortunately our other income has amply covered our administrative and other expenses. On postage alone the Society spent more than £380 in 1976.

To comment on specific items in the accounts: The drop in subscription income is a little misleading as £130 of 1976 subscriptions are included in 1975's figure of £846 as they were received before 31 December 1975. This did not arise in 1976 due to the late despatch of the November Newsletter and no 1977 subscriptions were received until this year. The overdraft at Bank shown at the foot of the General Account was a fact in the Society's books only - by astute juggling the writer failed to overdraw our Bank account!

I do not normally comment on the Publications Account, this being our Secretary's province, but will do so on this occasion. The sharp drop in Sales reflects not only the lack of new publications in 1976 but, I feel, the imposition of the duties of Sales Officer on our hard-working Secretary. I would urgently recommend the Annual General Meeting to consider reducing the load on the Society's executives and spreading it over a wider area. The appointment of a Sales Officer would be a step towards this. The outstanding debtor figure is higher than the Society should be seeing, particularly in relationship to sales, but I understand a re-arrangement of the method of payment by some of our larger outlets has since had an effect on this figure. As in previous years I have made no allowance for depreciation but suggest that this should be considered in future as some of our stocks are now four years old.

I must pay tribute to the sterling work of Ramon Thomas who not only relieves the Treasurer of the day to day chores of handling subscriptions and queries but also addresses, packs and despatches your Journals and Newsletters. Without his very willing help this Society would function a great deal less efficiently.

Finally may I comment on the beginning of 1977. Although this is the prerogative of your new Treasurer I maintained the job until the end of March. The increase in subscription rates, and its late announcement, caused a great deal of work for both Ramon Thomas and myself but the fact that no great disasters occurred is due solely to the helpful co-operation of the membership, for which we are very grateful. The results of the higher income will, I hope, give greater financial strength for the Society to face the future with.

M. J. Messenger AIB
Hon Treasurer
27 March 1977

NEW BOOKS

"The Ship Registers of the Port of Hayle 1864-1882" by Grahame Farr. Obtainable from the Manager, Museums Bookshops, National Maritime Museum Greenwich, London SE10 9NF. Price £2.50 + 10p. postage, or through bookshops.

John Robinson of the Science Museum sends the following notes:-

The National Maritime Museum has published over the past seven years a number of monographs and reports on maritime topics, all of them in a modest format which enables the price to be kept low. Several titles in this series cost as little as 25 pence. Among the more recent additions to the range is "The Ship Registers of the Port of Hayle 1864-1882" by Grahame Farr. Despite Hayle's long period of prominence during the nineteenth century as a ship-building centre, it never achieved prominence as a port of registry, being largely eclipsed by Penzance and St. Ives. It was not until August 1864 that Hayle obtained a warrant for ship registry. Seventy-five ships were registered at the Port of Hayle during the succeeding 17 years; some of them were built there, others were Hayle-owned vessels previously registered in Penzance or St. Ives, or foreign vessels taken as prizes. But the spread of railways in West Cornwall helped to deprive Hayle of its hoped-for prosperity as a local distributive centre for coal and other cargoes. By 1882 it was clear that the trend of ship registration at the Port of Hayle was downwards, and a Treasury decision of that year deprived Hayle of its warrant for ship registry.

The real meat of this publication for the local historian is its inclusion of Grahame Farr's transcripts of the complete ship register entries for all of the vessels registered there. These include details of the transactions in shares of ownership, and many prominent figures from West Cornwall's Victorian business and farming communities are included. A compact introductory chapter outlines the history of Hayle's development as a port, with a brief summary of the attempts of the Cornish Copper Company to thwart Harvey's growth to become the most important industrial concern in the town. This account is illustrated by a sketch map indicating the various stages in the growth and development of the port. As if the author had not already done enough for the local historian in making this little-known material so conveniently accessible, he then proceeds to indulge us further with a series of appendices listing the information from the registers in a series of alphabetical, chronological and statistical lists summarising vessels in various size categories, occupations of the various shareholders etc. Thirteen illustrations, many from the compiler's own collection, range from the Hayle-Bristol packet steamer BRIDE, built by Harvey's and the first ship to be registered at Hayle, to the modern collier KINDRENCE unloading coal for the power station.

It is unfortunate that the publishers did not arrange for proper proof-reading; the table of shareholding in the schooner LIZZY on page ix is incomplete in the captions to its axes, and my copy has one or two pages inexplicably blank. But at the modest price of £2.50 this book of more than 150 pages deserves a wide circulation among those interested in any aspect of Cornwall's business history during the nineteenth century. Commercial, mining and railway interests were so

extensively woven into the fabric of the county's life at that time that Mr. Farr's researches in the Hayle Custom House registers cannot fail to shed light on many other aspects of Cornish industrial history.

"The Steam Engine of Thomas Newcomen" by L. T. C. Rolt and J. S. Allen. 160pp £6. 00. Moorland Publishing Co., Buxton. Paul Stephens sends the following notes:-

The republication of L. T. C. Rolt's 1963 biography of Thomas Newcomen with extensive new research by Mr. J. S. Allen has been undertaken as a memorial to the memory of L. T. C. Rolt who, up to his death in 1974, undertook so much work to bring to the notice of this country the importance of our industrial heritage and the role of industrial archaeology.

The volume commences with a section on the early attempts to harness steam power, dealing with such matters as Hero's aeolipyle and Della Porta's steam pressure apparatus before, at the beginning of the 17th century, experiments led to the discovery and application of atmospheric pressure. The pioneering work of Thomas Savery - as with Newcomen, a Devonian, is explained with details of his work from his patent of 1698 and the application of his engines for such matters as waterworks use.

Having set the scene, Thomas Newcomen (born 1663-died 1729) enters the stage and as well as a family tree details are given of his early life. In discussing his earliest engines (was the first really at Dalcoath near Porkellis or Wheal Vor?) there are illustrations of the Dudley Castle engine erected in 1712 and many others. Unlike Watt, who combined the benefit of his own inventiveness with the manufacturing and commercial skills of Matthew Boulton, the benefit of Newcomen's work passed into the hands of outside proprietors of whom short biographies are given before describing their operations. It is here that the first references occur to the Hornblower family.

As was the case throughout the development of steam power, technical developments were always improving the original principle. To cover the period 1712-1733 a separate chapter deals with such improvements handing over, as it were, to Newcomen's successors. Here again we see the work of the Hornblower family and other Cornish engineers.

Among other Cornish engineers mentioned are John Nancarrow who emigrated to the United States and Sampson Swaine whose patent of 1762 for a Moorstone boiler interested Smeaton who later inspected the first Watt engines. The development of rotative engines is referred to and the volume ends by setting the stage for the developments of Richard Trevithick and other Cornish engineers who successfully harnessed the expansive power of steam under pressure and brought it to bear upon the piston in addition to the weight of the atmosphere. "As great an improvement in economy over the Watt engine was thereby achieved as the latter had earlier shown over the Newcomen."

However, perhaps in a review of this volume the final glory should be Newcomen's - "with little capital, no machine tools and no text books to help him, Newcomen, captaining a team of craftsmen on the site, succeeded in building a machine so masterly in design that, in its broad essentials, it endured for nearly two hundred years. It was a feat without parallel. His was a truly archetypal invention, so sound in principle that, once conceived, it formed an indestructible foundation upon which posterity could confidently build."

"Industrial Locomotives of South Western England" by Roger Hateley. Industrial Railway Society. Paul Stephens sends the following notes:-

This volume known as Handbook H and compiled by Roger Hateley is published by the Industrial Railway Society and covers, as well as Cornwall, the counties of Devon, Somerset, Avon and Dorset. Replacing a previous edition compiled and published in 1958, three types of information are provided. Firstly, industrial locomotive-worked systems, minor public railways and preservation sites; secondly, known details of non-locomotive worked systems of sufficient size to be of interest; and thirdly, known details of locomotive used on civil engineering contracts. The book contains 165 pages of text plus 17 maps, 25 system diagrams and 48 illustrations. Copies can be obtained from I. R. S. Publications, 47 Waverley Gardens, London, N. W. 10. Softback price £2.50, Hardback £3.50. A donation of 10p. in the £ towards postage should accompany all orders.

With a membership spread around the country, this will probably be of more than strictly local interest to our members. The section on Cornwall includes details of mine and quarry tram systems including layout diagrams of such diverse sites as Michaelstow Quarry, Treamble Powder Works, and the St. Austell area. Ordnance Survey references are given and in most cases some details of the history of the concern served by the tramway or railway. This will be one of those reference works which will be invaluable when considering the transportation systems for any industrial concern in Cornwall. It may be that the details of the locomotives actually used on each system are in such detail as to be of real interest to only the dedicated railwaymen in the Society, but the volume is packed with solid information which must be of lasting worth.

"The Mines of Anglesey and Caernarvonshire" by J. R. Foster-Smith. Paul Stephens sends the following notes:-

This volume is published by the Northern Mine Research Society as No. 4 in its "British Mining" series and can be obtained from R. G. Guthrie Esq, Publication Aftersales, Northern Mine Research Society, 186 Station Road, Billingham TS23 2RT. It is of 42 pages (11½" by 8½") and contains a few photographs, a bibliography, and an alphabetical list of the mines referred to.

The volume is indeed basically a list of mines for which the Ordnance Survey grid reference number is given by way of identification of location (although there is a general map showing the approximate relationship between the various sites) and must really be considered a quick reference guide. Little information is given as to the history of the workings, the main factor appearing to be the number and lie of the veins and type of rock strata.

A useful reference for those who might be planning to visit the area but with no existing knowledge of the mining industry. Those wanting detailed information on individual sites will still have to look elsewhere, although that should not reflect adversely on this volume which does not set out to fulfil that requirement.

Advert

Alison Hodge (elder daughter of the Newsletter editor and herself member of the Society) has purchased the bookshop at 5 Chapel Street, Penzance. (tel. 5444) which has been run by Peter Dalwood for the past seven years. She will be opening in early September and will have a particular interest in new and secondhand books relating to Cornwall, including of course industrial archaeology.

From the Western Morning News. 11 January 1977.
"Anniversary that could be overlooked" by Cyril Noall.

This Jubilee year includes, in addition to the Royal celebration, a notable Westcountry anniversary which will probably not go unmarked amidst the general rejoicings.

This is the centenary of the opening of the four-and-a-half mile branch railway which links St. Ives to the main line at St. Erth. The story of this little line is a curious one; for it was built in the face of great difficulties, and has survived into the post-Beeching era against all the odds.

Indeed, in the 1960's the chances of its ever attaining its centenary seemed practically nil, for at that time many longer and more important lines - including even some main ones - were being lopped ruthlessly by the Government's savagely wielded economy axe.

The fact that it was saved may be attributed entirely to the resolute fight put up by locals who were determined to preserve this vital link with the outer world. Had their example been more widely followed the British Rail network would not be in such sorry shape as it is today.

PROPOSAL

The first proposal to build a line to St. Ives came in 1844, when the prospectus of the "St. Ives Junction Railway" was issued. This was conceived as a branch of the projected West Cornwall Railway which, following an initial failure, won Parliamentary sanction in 1846. Its object was to extend the old Hayle Railway, running from Hayle to Redruth, to Truro and Penzance, and it opened throughout its length in 1852.

The St. Ives Junction Railway was to have been managed by an independent company with a capital of £30,000; but, despite strong local support, it failed to survive the general loss of confidence which followed the collapse of the "Railway Mania" speculations of 1845.

Renewed interest was shown in the scheme during 1862 and 1863, when surveyors mapped out a new route, and proposals were made to extend the line from St. Ives to St. Just to pre-empt coal and ore shipments to and from the mines, these were passing through Penzance. But, again, nothing was done, chiefly, it was said, owing to the opposition of the Praed family, of Trevetho, through whose lands a large part of the railway would have to run.

RESOLVED

However, when Mr. Charles Praed succeeded to this property a few years later, he took a very different attitude, and resolved to back the railway as a means of developing new wharves which he proposed building at Lelant.

Accordingly, he joined forces with Mr. Magniac, MP for St. Ives, and Mr. T. S. Bolitho, to achieve this object. Mr. Bolitho had purchased Tregenna Castle from the Stephens family in 1871, and he possessed large commercial interests in the town; Mr. Magniac saw the line as a certain winner for electioneering purposes. They constituted a powerful triumvirate, and succeeded in persuading the decidedly reluctant Associated Companies to undertake the scheme.

Indeed, the last being well aware that St. Ives was suffering a severe recession at that time, owing to the collapse of the mining industry, were not at all keen to get involved, particularly as the engineering works connected with such a line looked like being formidable and expensive.

However, their hand was forced by the trio threatening to build an "independent" line themselves if they refused, and by the promise of Praed and Bolitho to give nearly all the necessary land free of cost.

So, on July 7, 1873 there was passed "An Act to enable the Great Western Railway Company, the Bristol and Exeter Railway Company, and the South Devon Railway Company to make a Branch Railway to St. Ives" (36 & 37 Vict., Ch. cxliii).

The junction with the West Cornwall line was to be made at St. Ives Road Station (Later re-named St. Erth); and the line would terminate at St. Ives "in a garden situate on the edge of the cliff three and a half chains or thereabouts west of Penalver or Pedn-Olver Point."

SANCTION

Sanction was given to construct the line on the narrow gauge of 4ft 8½ in, or the broad gauge of 7ft., or on both.

At the period, Brunel's famous broad gauge, so strongly espoused by the GWR having lost the battle of the gauges some years before, was doomed and dying already; but the decision was nevertheless taken to lay out the new branch to this specification; and the St. Ives railway thus has the remarkable distinction of being the last line ever built on the 7ft gauge.

It was, indeed, a strange choice, for the West Cornwall Railway was already equipped with the third rail, permitting mixed gauge working; one can only suppose that the convenience of the through running of broad gauge goods vehicles - fish trucks, in particular - to Paddington was the determining factor.

The far-sighted Charles Praed, however, wanted the third rail laid as far as his wharves at Lelant, but the Associated Companies raised objections, and it was not put in till 1888. Four years later all remaining broad gauge lines, including the St. Ives branch, were converted to narrow or standard gauge.

The contract for building the line was signed in May 1874, and by the end of that month about 60 men were already at work on it.

The railway, after leaving St. Erth, passed along the western side of the Hayle estuary on an embankment to Lelant station, prettily situated on the river bank with sloping gardens and trees behind. It then commenced a long, slow ascent of the Lelant Towns, at first through cuttings where the railway "navigators" made some interesting archaeological finds, and then on another embankment from which superb views of St. Ives Bay are obtained. After traversing the attractive cliffside hazel wood known as the Nut Grove in which lies hidden the ancient holy well of St. Uny, it entered the deep and gloomy Carrack Gladden cutting, this being one of the principal engineering works on the line.

It has always mystified me why a tunnel was not driven here to save the labour of removing such vast quantities of rock; as it is, this enormous man-made ravine has given an unfortunate broken-backed appearance to the bold and attractive headland which divides Porthkidney sand from Porthrepta beach.

LOST INTEREST

Cornish miners had to be engaged on this section; and it is said that after intersecting some lodes of the old Hawke's Point mine, they lost interest in the railway and went prospecting instead.

Soon after leaving the cutting, Carbis Bay station was reached, and the line then crossed Carbis Valley on an impressive stone viaduct. This was 78 ft. high and had four arches, each of 40 ft. span. From it, one gains a bird's eye view of the valley and beach far below.

The line then wound along the cliffs and around Porthminster Point to St. Ives, approaching the terminus over a second viaduct just behind Porthminster beach.

The railway took almost exactly three years to complete; the opening ceremony being held on May 24, 1877. This was a great event in the history of St. Ives, marking a turning point in its fortunes, and was celebrated with much rejoicing.

That morning, a directors' train, comprising a saloon and six composite carriages, drawn by the engine Elephant, left Penzance to make the inaugural journey. The weather proved ideal, with blue skies, bright sunshine and a cool breeze. Groups gathered along the route waved a cheery greeting to the beflagged and garlanded train as it passed by.

On nearing St. Ives, thousands of spectators could be seen lining every vantage point between Draycot Terrace and the Malakoff and on the slopes beneath. The train drew into the station to the strains of two Volunteer Artillery bands which had headed an official procession from the Guildhall through the gaily decorated streets.

WELCOMED

Among the welcoming party were the Mayor, members of the Corporation, Charles Praed (himself now MP for the constituency), the contractor (Thomas Lang), the engineer (T. H. Gibbons), local clergy, Sunday schoolchildren, Philanthropic Society, Foresters, and many others.

Throughout the day free rides were provided for the inhabitants, who took full advantage of the offer, so that there was a good deal of crowding at times. It is recalled traditionally that the Elephant sadly belied its name by failing to make the gradient out of the station with a loaded train, having to run backwards from Porthminster Point to essay the incline again.

During the afternoon a regatta took place in the Bay, while the directors were entertained to

luncheon in a large marquee erected in a field at Talland from where they were able to enjoy a fine panoramic view of the town.

The intention to celebrate the occasion as a public holiday was somewhat marred by the untimely landing of heavy catches of mackerel, which had to be packed and dispatched - though not yet by the new railway - while the disruption caused to this essential work by the festivities cost the merchants about £1,000 in spoiled fish.

However, the day generally was a happy and successful one, and the people seem to have thoroughly enjoyed themselves. The "Cornish Telegraph" reporter was particularly impressed by the appearance of the children in the procession - "their attire, some neat, most of it smart, their flowers, their banners, and beyond all, their happy faces, were a sight to look upon . . . everywhere there was good temper and good order."

A general holiday was also observed at Lelant, where lines of flags were stretched across the road near the Cross, while in the evening a huge bonfire blazed at the bottom of the new road leading to the quays. It is a rather sobering thought that none of the new motorway extensions or by-passes now being built evoke any comparable demonstrations of enthusiasm. The railways were always welcomed wherever they went; on the other hand our modern roads appear to be accepted only with resignation, as necessary evils.

VALUE PROVED

The line was opened officially for goods traffic on May 28 and for passengers on June 1. Its value was proved quickly. During one day in early June about 200,000 mackerel were landed at St. Ives; to convey them, three trains, comprising 19 trucks, were required, and all were despatched by 4 p. m.; previously, when such consignments had to be sent to the nearest main line station by horse and cart, they would not have been cleared before noon on the following day.

About the time the branch line was opened, the GWR acquired the lease of Tregenna Castle from Mr. Bolitho, and converted this mansion, which occupies a beautiful elevated site near the town, into a first-class hotel. The publicity which they then lavished upon it was a decisive factor in helping to transform St. Ives from an obscure fishing town into a popular seaside resort.

In recent years goods traffic on the branch line has ceased, and all station staff, except at St. Erth, have been withdrawn, while most of the once extensive terminus at St. Ives has been turned into a car park. In addition, Carbis Bay station buildings have been demolished, and the wooden booking hall and waiting room at Lelant converted into a private dwelling.

FUTURE?

What of its future? Many pessimists would say that the line has very little future and may not outlast the present economic depression. But, quite recently, I noticed workmen installing new platform lamps at Carbis Bay, where for some time past only Stygian darkness has reigned during the winter months.

So perhaps there is reason to hope that the axe will not fall just yet. And even if BR do close the branch eventually what a superb opportunity would be presented for creating a steam-operated "Bluebell" line, running along right by the edge of the sea!

Meanwhile, it continues to provide summer visitors with an enchanting ride into St. Ives, giving a far more attractive introduction to the town than the rather dull and uninteresting main road.

Wheal Martyn, the China Clay Museum, whose Director is John Stengelhofen (Editor of the Society's Journal) has been Highly Commended in the Illustrated London News "Museum of the Year" award. Last year it was also Highly Commended in the British Tourist Authority's "Come to Britain" Trophy.

In July, the new Tin Mining Museum at Geevor Mine was opened. It has a most interesting display of matters of mining interest from old tools to mineral specimens, and from the Levant mine disaster of 1919 to models of the present mine. It is well worth a visit by any member who is in West Cornwall.

Following the note in the last newsletter about the restoration of the Prince of Wales Engine House, we are glad to hear that the work has now been completed. Congratulations to all those concerned.

A plaque is to be unveiled at the Castle, Bude by the President of the Federation of Old Cornwall Societies, Mr. Spencer Howlett, in memory of Sir Goldsworthy Gurney (1793-1875) (whose biography was published by the Trevithick Society)

The 28th Annual Report of the Cornish Mining Development Association (for 1976) has recently been published. There is much interesting information on the operations of the various mining companies in Cornwall, but the following summary is of particular interest:-

Cornish Mining Development Association
28th Annual Report of the Executive Committee
for the year 1976

When the last Annual Report of this Association appeared the price of base metals was in the doldrums and the Cornish producers, in common with the mining industry throughout the world, were having a very difficult time. Indeed, some of the Cornish mines were then losing money very heavily and if prices had not since risen substantially a critical position would have arisen.

Whereas the indications a year ago were that Cornish output in 1976 would be greater than in the previous year there was actually a slight reduction due to one of the larger mines experiencing unforeseen difficulties and some of the smaller producers temporarily suspending operations during the slump. Nevertheless, the industry produced 3,323 tonnes of tin in 1976 (compared with about 800 tonnes in 1947) and again supplied a quarter of Britain's tin requirements.

PRODUCTION

(Tonnes of metal in concentrate)

	Tin	Copper	Zinc	Silver
1967	1,422			
1968	1,565			
1969	1,640			
1970	1,722			
1971	1,860			
1972	3,279			
1973	3,573			
1974	3,121	480	2,810	
1975	3,330	562	3,092	2.60
1976	3,323	414	3,020	2.08

Importance of the Industry

There is good reason to think that Cornwall's output of metalliferous minerals could be considerably increased and, indeed, with the Mount Wellington Mine now building up production it is to be hoped that the current year will show an appreciable gain. It should be noted that even the 1976 production, at today's metal prices, represents a saving in essential imports to Britain of about £20 million per annum.

The following figures for 1976 also show the importance of the industry to the economy of Cornwall:-

(a) Wages and salaries	£ 6,303,150
(b) Local Authority charges, rates, water, etc.	182,320
(c) Other charges including royalties, power, contracts, transport and locally supplied stores	<u>3,922,150</u>
TOTAL	<u>£ 10,407,620</u>

As these figures show, the direct payment of wages and salaries amounted to 60% of the costs of the industry in 1976. In addition it can be assumed that a considerable part of (c) consists of the indirect payment of wages. Thus of the total disbursement of £10,407,620, by far the greater part must have been spent in Cornwall itself.

Another important fact at this time of very heavy unemployment in Cornwall which is double that of the national average (11.8% compared with 5.8% on March 10, 1977) is that at the end of 1976 the Cornish mines were employing 1,775 persons and the number continues to grow.

As we have pointed out on earlier occasions, in Canada it has been estimated that for every one person directly employed in mining six others find employment in the ancillary industries. Although the ratio is probably much lower in Britain it is clear that the local industry is now providing employment, both direct and indirect, for a considerable number of people, the great majority of whom are Cornish.

Further information may be obtained from our council member Mr. L. J. Bullen, of 22 Wellington Road, Camborne, who is Hon. General Secretary of the Association.

The Recovery of the Wills Founder Water Pressure Engine

A most interesting article by Lynn Willies was published in the Bulletin of the Peak District Mines Historical Society, Vol 6 No 5 pp 180-190 May 1977. A copy has been very kindly sent to us by the author; unfortunately space does not permit reproduction of the complete article which describes in detail the difficult job of recovering the engine from a depth of 360 feet. The following extracts will be of particular interest to members:-

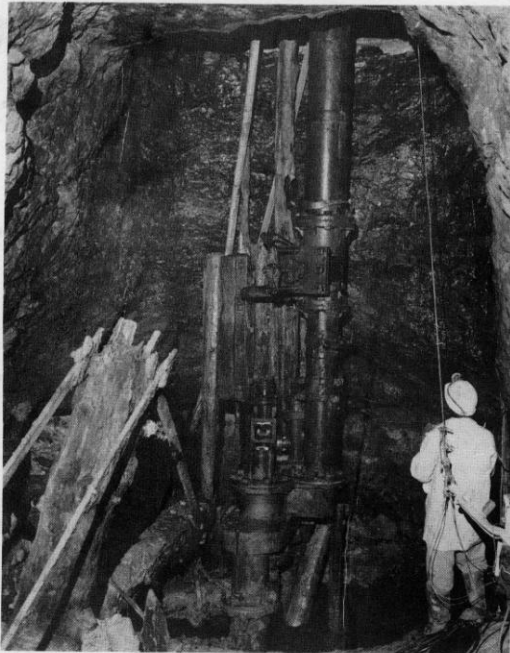
When discovered, the base of the engine, including about three quarters of the main cylinder, was buried in silt, surmounted by a considerable quantity of rubbish that had been thrown down the shaft over the years. The top of the cylinder and valve chest, with the valves, crosshead, and

pressure column, and the top of two pump rods were clear of debris however, as was the 28 feet long timber balance bob. By braving the deluge of water 'Coalbrookdale 1819' could be traced out on either side of the valve chest.

From this it was apparent that the engine was almost certainly the 1819 Broadmeadow Engine from Alport which was replaced by the 1836 Fairburn engine. Since the cylinder of the 1809 Bacon Close engine at Youlgreave which was the only other engine in the area, was functioning as the working barrel of a pump at Wheels Rake, it was reasonable to surmise that this (the Wills Founder) was the engine sold by Alport Mines in 1840 or thereabouts to the Portaway Proprietors at Winstar for £100. Examination of the Barmaster's books reveals that Wills Founder had been taken into the Portaway Title about 1837. The original design of the engine quite clearly followed that of Trevithick's 'Old Engine', and in 1819 would have been installed by Richard Page, who had formerly been his assistant. In 1840 it was installed by Samuel Trethewey, on loan from Alport Mines, and may later have been modified by John Darlington. All these engineers were Cornishmen.

Cylinder	12 feet by 18 inches. Effective stroke about 11 feet.
Valves	This engine was originally double acting, but at Wills Founder had been converted to single. The original balanced twin valves, of the Trevithick type, had been replaced by a servo-type mechanism, similar to that fitted on the 1846 Darlington engine at Alport Mines, using one valve only.
Valve	This is actuated by rods and tappets fitted to the cross-head, and was of the fall ball and canti-arbor type.
Striking Gear	Two rods went down to the pumps, which acted in series, and were a bucket type, with the rod down the centre of the pump pipe. The diameter was about 12 inches on the one pump pipe seen.
Pumps	
Water Supply	Came from two sources, both underground, with a head of 140 feet. The water was controlled by a gate valve on the pressure column, and possibly also by a simple sluice fitted on to the exhaust pipe.

Working parts of the engine on arrival at surface were treated with dewatering fluid to prevent deterioration, and have now been removed to store. It is hoped reassembly will commence in the next few months. Subsequently the site has been landscaped to the owner's satisfaction, and walls rebuilt. The two shafts used have been capped with concrete sleepers, and opportunity was taken during the project to cap further six shafts in the area, the concrete sleepers being provided by the County Council.



The top of the engine and its balance bob just before removal started.
(photo P. R. Deakin)

Query. Mr. W. G. Jones of 6 Gele Avenue, Abergelge, Clwyd, LL22 7BB would like any information on the activities of Henry Mancur, Period 1810-1835. He writes:-

My enquiry is prompted by a letter addressed to me as Recorder for the N. W. Caving Club and received from Herr Ernst Schornig, of Frankfurt who is researching old mining activities in the Taunus Mountain are. Herr Schornig has seen a photocopy of a letter written in 1835, by Henry Mancur, at the time of his becoming Agent for the German Mining Company of London. In it, he writes:- that he had been in the mining business since 25 years, and that he had worked - some-times as managing Director, in Cornwall, Wales, Staffordshire, Lancashire and Cheshire. Mr. Justin Brooke of Marazion has been able to pin point him at the reopening of the Tresavean Mine, Gwenapp, and records that he was interested in the mineral rights in the Carnon Valley area, some twelve months later.

Further to the note in Newsletter No 16, we give details of charges etc., for charter of the narrow boat "Richard Trevithick". Even if too late for this season, members may like to enquire for next year.

THE BOAT

The "Richard Trevithick" is a modern luxury 8 berth Narrow Boat recently built of steel throughout with fully bonded fibreglass lagging and extensively lined out with oak panelling. The extensive inventory includes anthracite fired AGA central heating, full sized fridge and gas cooker, stereo cassette tape-radio, fitted double bunk in forward cabin suite, four single bunks and a diner unit that lets down to another double bunk. The engine is a very reliable 3 cylinder air cooled Lister Diesel. The boat was professionally designed by a Kennet and Avon member as his own floating family home. The hull was built by Shropshire Union Cruisers and fitted out by the owner. Although the majority of the work is done, there remains some detail to be finished, and this is progressed during the winter and between charters.

THE LOCALITY

The base is "Canalware Supplies", Tower Wharf Basin, Chester, (Chester 21519) on the beautiful Shropshire Union Canal, within easy cruising distance of the Peak Forest in Derbyshire, Llangollen in North Wales, the Cheshire Ring and the Weaver via the fabulous Anderton Boat Lift, and the new Museum of Inland Navigation at Ellesmere Port, Cheshire. Transit of the Manchester Ship Canal was undertaken by some members in 1976, but needs prior notice.

THE 1977 TERMS

Available only to Kennet and Avon Trust and Trevithick Society members, who are reasonably experienced boatmen, at a greatly reduced rate, ranging from £51.00 for a three day weekend out of season to £140.00 a week in season. A proportion of these payments goes to the Kennet and Avon Trust funds. In spite of the drought, last season the boat was chartered for 20 weeks by Kennet and Avon members and resulted in £300 profit to the Kennet and Avon funds. Insurance, and other running costs are included in the charter charge. It is hoped to raise £400 this year.

HOW TO CHARTER

For booking form write to:-

Ron Barber, Kennet and Avon Trust, 4 Whitland Avenue, Hartcliffe, Bristol BS13 9QQ.

If possible indicate the dates you are interested in. If not chartered already, Ron Barber will pencil your requirements in, but confirmed bookings with deposits will of course have to take priority. So get your booking form back as soon as possible to avoid disappointment.

A. I. A. Conference 1977 Manchester

This will be held at Hulme Hall, the University of Manchester, from Friday, 9th September to Sunday, 11th September. The sponsoring local organisation is the Manchester Industrial Archaeology Society, and the local organiser is Professor Owen Ashmore.

The provisional programme is:-

Friday, 9th September

Assembly and registration: 1600 - 1900

There will be an opportunity to visit the N.W. Museum of Science and Industry on the Friday afternoon up to 1800.

Evening: L. T. C. Rolt Memorial Lecture
Professor Donald Cardwell, Professor of the
History of Science and Technology, UMIST.
'The History of Technology - Today and
in the Future!'

Saturday, 10th September

Morning:

Session 1 The Industrial Archaeology of the Manchester Region
Professor Owen Ashmore, Director of Extra-Mural
Studies, University of Manchester.

Session 2 Textile Mill Engines
Dr. Richard Hill, Director of the North-Western
Museum of Science and Industry.

Afternoon:

Choice of three excursions:

1. Bridgewater Canal: Castlefield terminus in Manchester,
Barton swing aqueduct, Worsley terminus. It is hoped
to include a journey by boat from Barton to Worsley.
Conducted by Frank Mullineux.
2. Cotton mills and mill engines in the Oldham and Rochdale area.
Conducted by Dr. Richard Hills.
3. Cotton mill and community of 18th century origin of Quarry Bank, Styal, Wilmslow.
Working corn mill with two water wheels at Nether Alderley.
Conducted by Mr. J. H. Norris.

Evening:

Members' contributions.

Sunday, 11th September

Morning:

Session 1 The North-West Museum of Inland Navigation
Dr. David Owen, formerly Director of the Manchester
Museum.

Session 2 AIA Annual General Meeting.

Afternoon:

Conference disperses.

Optional visit to sites in Central Manchester.

The provisional fee is £20 (non-members of AIA £23). The non-resident fee will be announced later.

A letter to the Secretary from the County Planning Officer in February, 1977 gave the following details of the only engine houses and stacks in the county which are at present "listed":-

- | | |
|-------------------|--|
| 1. Penwith | Cape Cornwall - SW350318 |
| 2. Penwith | Botallack - SW363336 |
| 3. Kerrier | East Pool - SW672415 |
| 4. Kerrier | Pennance - SW712405 |
| 5. Carrick | North Treskerby - SW723451 |
| 6. Carrick | Wheal Friendly - SW719511 |
| 7. Carrick | Killifreth - SW734442 |
| 8. Carrick | East Wheal Rose - SW838558 |
| 9. North Cornwall | Holmbush - SX358720 |
| 10. Restormel | Fowey Consuls - SX081860 |
| 11. Kerrier | Pool - Taylor's Shaft Engine House
and Stack - SW674418 |