

Newsletter

No 178 Nov 2010



The Replica of Cody's
British Army Aircraft No 1
see page 10



Holsworthy Church,
Devon -
Gillett & Johnston
of Croydon made the
bells & carillon
see page 6



Porthurno Auto Transmitter,
see page 8

SIHG is a group of the Surrey Archaeological Society, Registered Charity No 272098
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Reports & Notices

Details of meetings are reported in good faith, but information may become out of date. Please check details before attending.

SIHG Visits, Details & Updates at www.sihg.org.uk

Members' Talks

If you would like to give a short talk on a holiday experience or your research on an Industrial Archaeology topic, please sign up for
7 December 2010.

Please contact Bob Bryson, meetings@sihg.org.uk.

Surrey Archaeological Society Autumn Conference 2010 - *The Research Framework* ***Building Materials from Timber to Tiles***

Saturday 20 November 2010 0930 - 1630

Presentations on a Range of Materials by eminent Specialists from English Heritage and the Commercial World
Dixon Hall, The Institute, 67 High Street, Leatherhead, KT22 8AH
Tickets from the Society, Castle Arch, Guildford, GU1 3SX £8 in advance, £10 on the day
Programme & booking form - www.surreyarchaeology.org.uk

Advance Notice 1 - SIHG Visit Thurs 17 February 2011

Kempton Steam Museum

Details in the January Newsletter.

Advance Notice 2 - SIHG Visit Weds 23 March 2011

British Museum Watch Collection

David Thompson will show the actual watches mentioned in his talk.

The demonstration, in the afternoon, will last about 2½ hours. We shall meet at the museum. Numbers are strictly limited, so please sign up as soon as possible with Margaret Levett or Jan Spencer (contact details on page 6).

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DIARY

The 35th series of SIHG Industrial Archaeology Lectures

alternate Tuesdays, 1930 - 2130, University of Surrey (Lecture Theatre F).

Enquiries to programme co-ordinator, Bob Bryson, meetings@sihg.org.uk.

Maps at www.sihg.org.uk. Free parking is available in the evening on the main campus car park.

Single lectures at £5, payable on the night, are open to all.

The Spring 2011 Thursday Morning Lecture Series at Leatherhead

starts on 13 January 2011.

Enquiries to Leatherhead programme co-ordinator Ken Tythacott, Ken.tythacott@btinternet.com.

As seating is strictly limited, enrolment is for the whole course only; casual attendance is not possible.

Diary November 2010

- 20 Sat Surrey Archaeological Society: Conference— Building Materials from Timber to Tiles.
- 23 Tue Surrey Industrial History Group Lecture Series: Building the Oxted Line (Croydon to Oxted) in 1865-67 & 1880-84 by Paul Sowen, Croydon Natural History & Scientific Society.

Diary December 2010

- 07 Tue Surrey Industrial History Group Lecture Series: Members' Talks

Diary January 2011

- 11 Tue Surrey Industrial History Group Lecture Series:
Clan Line - a Merchant Navy Class Locomotive 60 Years On by Bob Gillett, MNLPS member.
- 25 Tue Surrey Industrial History Group Lecture Series:
The Life and Times of the Miller at Mapledurham Mildred Cookson, Miller.

Surrey Archaeological Research Framework (2006) Ideas for Investigations in Industrial History (part 1) *extracted by Jan Spencer*

The Surrey Industrial History Group has been involved in many research or restoration projects in the past, but we have not been very active recently.

This is a summary of the above document from 2006 in the hope of inspiring future work. If you have ideas, however vague or ambitious, please put them forward to excite and inspire us, (which means all of us!) to future action. (SIHG is organising the SARF conference in 2011.)

The Surrey Dendrochronology Project.

Dendrochronology (tree-ring dating) is a quite new technology enabling the dating of timber-framed buildings with astonishing precision, often to within a year. The intention is to date a representative sample of Surrey's old buildings and to tie styles to dates. Regional and national trends in building activity and methods should become apparent. The study hopes to reveal the historical and social context of old buildings and their owners. One hundred buildings had been dated by 2006.

Researching Historic Parks and Gardens in Surrey: the Bramah waterwheel at Painshill Park, for example. After 1500, not just the 19th and 20th Centuries. Location of missing watermill sites? Study of water control features; can we find Saxon examples?

Windmill sites?

Archaeological study of the cloth industry?

More work (+ publication) on medieval and post-medieval pottery industry sites, including structures round the kilns, fuel supplies, etc - and location of some known from documentary evidence only.

How do we widen interest to establish an archaeology of industrialization about 1750 to mid/late 20th Century?

Reference collections of ceramics, glass bottles, metal objects for post 1750; how much is really known about material culture?

Glass industry (and medieval): need for the use of modern scientific techniques; location of further sites; study of the relationship between furnaces and coppice woodland.

Quarries (including DB Limpsfield!) and products.

Importance of Fullers' Earth?

Should be possible to identify brick- and terracotta-making areas related to houses like Sutton Place.

Country house technology.

Brick industry as a whole.

Continuing economic role of woodland (and effect of management). ☐

To be continued >

Other IA Organisations

- Amberley Museum & Heritage Centre:** next to Amberley railway station, West Sussex, www.amberleymuseum.co.uk.
- Association for Industrial Archaeology:** www.industrial-archaeology.org.
- Basingstoke Canal Authority:** 01252 370073.
- Brighton Circle (London, Brighton & South Coast Railway):** www.lbscr.demon.co.uk.
- Chatham Historic Dockyard:** Kent ME4 4TZ; www.chdt.org.uk.
- Cobham Bus Museum:** London Bus Preservation Trust, Redhill Road, Cobham, Surrey KT11 1EF; www.lbpt.org.
- Croydon Airport Visitor Centre:** Airport House, Purley Way Croydon CR0 0XZ; www.croydon-airport.org.uk.
- Croydon Natural History & Scientific Society:** meetings: Small Hall, United Reformed Church Hall, Addiscombe Grove, E Croydon.
- Cuffley Industrial Heritage Society:** Northaw Village Hall, 5 Northaw Road West, Northaw EN6 4NW; www.cihs.org.uk.
- Didcot Railway Centre:** Access via Didcot Parkway Station; www.didcotrailwaycentre.org.uk.
- Docklands History Group:** Museum in Docklands, No 1 Warehouse, West India Quay, Hertsmere Road, London, E14 4AL; www.docklandshistorygroup.org.uk.
- East London History Society:** Latimer Church Hall, Ernest Street, E1; www.eastlondonhistory.org.uk.
- Enfield Society:** Jubilee Hall, 2 Parsonage Lane, Enfield, EN2 0AJ; www.enfieldsociety.org.uk.
- Fetcham U3A:** <http://fetchamu3a.org.uk/home.htm>.
- Greenwich Industrial History Society:** Old Bakehouse, Age Exchange Centre, 11 Blackheath Village, SE3 (opposite Blackheath Station).
- Great Dorset Steam Fair:** South Down, Tarrant Hinton, nr Blandford, Dorset DT11 8HX; www.gdfs.co.uk.
- Guildford Museum:** Castle Arch, Guildford, Surrey GU1 3SX; museum@guildford.gov.uk.
- Guildhall Art Gallery,** Guildhall Yard (off Gresham Street), London EC2V 5AE.
- Hampshire Archaeology Society (HIAS):** Underhill Centre, St. John's Road, Hedge End, SO30 4AF.
- Hampshire Mills Group:** www.hampshiremills.org.
- Heritage Open Days:** 1 Waterehouse Square, 138-142 Holborn, London EC1N 2ST; www.heritageopendays.org.uk.
- Honeywood Museum:** by Carshalton Ponds, Honeywood Walk, Carshalton, Surrey SM5 3NX; www.friendsofhoneywood.co.uk.
- Kempton Great Engines:** Feltham Hill Road, Hanworth, Middx TW13 6XH (off elevated section of A316); www.kemptonsteam.org.
- Kew Bridge Steam Museum:** Green Dragon Lane, Brentford, Middlesex TW8 0EN; www.kbsm.org.
- Lewisham Local History Society:** Lewisham Methodist Church SE13 6BT.
- London Canal Museum:** 12/13 New Wharf Road, N1 9RT; www.canalmuseum.org.uk.
- London Transport Museum, Acton Depot:** 2 Museum Way, 118 - 120 Gunnersbury Lane, London, W3 9BQ; 020 7565 7298.
- London Underground Railway Society:** Upper Room, All Souls Clubhouse, 141 Cleveland Street, London W1T 6QG; www.lurs.org.uk
- Lowfield Heath Windmill:** near Charlwood.
- Mid-Hants Railway (Watercress Line):** Alresford Station, Alresford, Hants SO24 9JG or Alton Station, Alton, Hants GU34 2PZ; www.watercressline.co.uk.
- Newcomen Society London:** Fellows' Room, Science Museum, Exhibition Road, London SW7 2DD.
- Newcomen Society Portsmouth:** Room 0.27, Portland Building, University of Portsmouth, St James Street off Queen Street, Portsea.
- Open City London (Open House London):** www.open-city.org.uk.
- Portsmouth Historic Dockyard:** www.historicdockyard.co.uk.
- Railway & Canal Historical Society:** The Rugby Tavern, Rugby Street, London WC1; www.rchs.org.uk
- Rotherhithe & Bermondsey Local History Group:** Time & Talents Centre, Old Mortuary, St Mary Church Street, Rotherhithe Village, SE16; www.kingstairs.com/rotherhithe.
- Royal Gunpowder Mills:** Waltham Abbey; www.royalgunpowdermills.com.
- Rural Life Centre,** Old Kiln Museum, Reeds Road, Tilford, Farnham, Surrey GU10 2DL.
- Shalford Mill** (National Trust), Shalford Guildford Surrey GU4 8BX.
- Shere, Gomshall & Peaslake Local History Society:** Shere Village Hall, Gomshall Lane, Shere GU5 9HE; www.sherehistorysociety.co.uk.
- Southwark and Lambeth Archaeological Society:** Housing Co-op Hall, 106 The Cut SE1 8LN (almost opposite the Old Vic).
- Shirley Windmill:** Postmill Close, Shirley, Croydon CR0 5DY; visitor@croydowntowncentre.com.
- STEAM - Museum of the Great Western Railway:** Kemble Drive, Swindon, SN2 2TA; www.steam-museum.org.uk
- Surrey & Hampshire Canal Society (The Basingstoke Canal):** Parish Pavilion, Station Road, Chobham; ww.basingstoke-canal.org.uk.
- Sussex Industrial Archaeology Society (SIAS):** www.sussexias.co.uk.
- Sussex Mills Group:** www.sussexmillsgroup.org.uk.
- Twyford Waterworks:** Hazeley Road, Twyford, Hampshire SO21 1QA; www.twyfordwaterworks.co.uk/.
- Wealden Iron Research Group:** Nutley Memorial Hall, Sussex, (North end of village, West side of A22).
- Westcott Local History Group:** Westcott Reading Room, Westcott near Dorking, Surrey RH4 3NP; info@westcotthistory.org.uk.
- Wey & Arun Canal Trust:** The Granary, Fritchfold Farm, Loxwood Billingshurst, West Sussex RH14 ORH; www.weyandarun.co.uk.
- Wings & Wheels at Dunsfold Park:** near Cranleigh, Surrey GU6 8TB; www.wingsandwheels.net.

Editorial Note

Many thanks to all who have sent in contributions.

Copy is needed urgently for the January 2011 issue of SIHG Newsletter!

*Do, please send in reports / photos of holiday visits or thoughts on
local, national or international Industrial Archaeology.*

SIHG Lecture - 28 September 2010
Watches in England - the First Hundred Years 1580-1680

*by David Thompson,
 Curator of Horology, British Museum
 report by Margaret Levett*

David Thompson explained that although watches were the most complicated pieces of small machinery manufactured during this period they were not precision instruments but rather were used as status symbols by their owners. Accuracy came after the application of the spring to the balance of a watch in 1676.

The first record of a possible watchmaker in England was the appointment of Nicholas Kratzer as 'devisor of the Kings horloges' to Henry VIII but he was probably employed to provide scientific instruments to the royal household, rather than watches.

In the early sixteenth century any watches to be found in England were probably imported from the established centres in Germany at Augsburg, Nuremberg and Munich and were derived from small horizontal spring-driven table clocks by reducing the size and adding a cover to protect the dial and hand and a loop for hanging them round the owners neck. To compensate for the uneven power produced by the mainspring they were fitted with a stackfreed mechanism. Not until about 1560 is there evidence to suggest there were any watch makers in working in England but by the 1580s inventories from Queen Elizabeth I's court give details of many highly decorated and jewel encrusted watches. These were high fashion objects but are now known only from portraits and descriptions as they were probably broken down and the jewels sold or reused in more fashionable settings.

David Thompson showed us illustrations of many beautiful watches including one watch set in a single piece of Columbian emerald found as part of a hoard of over 300 pieces of jewellery during excavations in London in 1912 and thought to be part of the stock-in-trade of an Elizabethan or Jacobean jeweller. The movement has corroded so much that it is now trapped inside the emerald.

We saw a large and very complicated watch signed by H. Roberts and dating from about 1600, its case engraved with cherubs and rabbits. The astronomical dial showed 24 hours, the date, the months, degrees of the zodiac with an aspectarium showing the relative position in the planets, and the sun's position in the Zodiac and even high tide at London Bridge. Nothing is known about H. Roberts but the quality of the engraving of the dial suggests it was by a leading London Instrument maker, Elias Allen.

Studying London parish records gives details of immigrant watchmakers such as Ghyllis van Geele from Geele near Antwerp in Flanders who came to London as early as 1565 and was married in 1582; the British Museum has one of his watches. During the last quarter of the 16th century persecution of Huguenots in France and protestants in the Low Countries brought many craftsmen to London such as Nicholas Vallin whose watch from 1600 has an alarm and a one-at-the-hour striking mechanism.

Records of the Goldsmiths Company give clues to many rising English watchmakers such as Roger Symes whose alarm watch shows strong Flemish influence.

By 1610 the appearance of English watches had begun to change, they became smaller partly because they were no longer worn round the neck but on short chains and partly because they became more influenced by French rather than Flemish style. In 1613 James I appointed David Ramsey as Keeper of His Majesties Clock; Ramsey, a Scot, had worked in France.

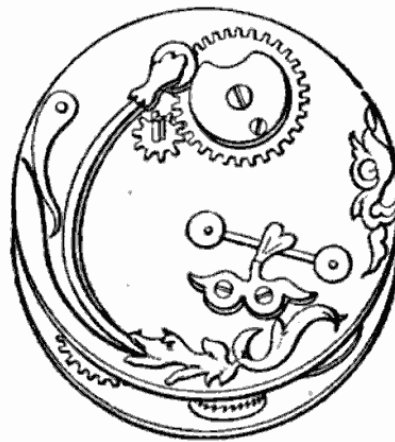
By 1622 there was conflict between the businesses within the city and the foreigners outside the city who could undercut them as rents there were lower and they did not have to be livery company members. However the Clockmakers Company Charter was not granted until 1631 under Charles I.

The trend to finer and more decorative watches led to a style called the form watch where the case was made in the shape of another object such as a cross, a flower or a shell but at the same time plain 'Puritan' watches were also being made.

The final watch shown in this pre-balance spring period was made by Charles Gretton and had a seconds hand carried round anticlockwise on the extended contrate wheel arbor and the rest of the movement was very different from the earlier watches.

After the vote of thanks David Thompson offered to show a group of members of SIHG the actual watches at the British Museum. The room David uses can seat a maximum of 12 people and his talk lasts about two and a half hours. He is prepared to give two talks if 24 people are interested.

We have arranged a visit on Wednesday 23 March 2011 (see page 2). □



The stackfreed is the eccentric cam near the top, engaged by the long spring loaded roller arm.

(by Harry Leonard Nelthropp [Public domain], via Wikimedia Commons)

Gillett and Johnston and the Holsworthy Church Bells

by Norma Cox

This summer while in Holsworthy, Devon I was able to enjoy the parish-church bells of St Peter and St Paul (photo page 1), with its wonderful carillon and majestic clock chime.

Here in rural Devon is an example of Surrey's Industrial Heritage. The bells and carillon were made in Croydon by Gillett and Johnston¹. The company were famous throughout the world² and the company still exists today³.

William Gillett was the founder. He was a clock-maker from Hadlow, Kent. He made mantle clocks under the patronage of Lord Sackville-West⁴. Mr Gillett moved from Clerkenwell to Croydon in 1844 and established his business in Union Road, Croydon⁵.

Charles Bland became a partner. He was a salesman and introduced turret clocks and tower clocks. The company was then known as Gillett and Bland. The factory expanded and was the first steam-powered clock factory in the world. In 1868 a clock tower was added to the factory as a working advertisement⁶. The present church tower clock in Holsworthy is by Gillett and Bland, Steam Clock Factory. It was erected in 1869 and the part to chime the Westminster quarter added in 1873¹.

The company was known as Gillett and Bland and Co until Mr Bland's death in 1884. Mr Gillett is reported to have emigrated to the USA⁴. The company expanded with a Bell Foundry as there was a need for bells for the clocks. Prior to this the company bought in bells from other foundries⁴.

Over one hundred hands worked in the foundry in 1868. They obtained the raw iron, copper and tin and the whole process was completed in Croydon⁶.

Arthur Johnston joined in 1877 and was in full control of the company when his son Cyril joined in 1902. Cyril became a partner in 1907 and it was he who perfected the art of tuning, which made famous the name of Gillett

and Johnson for their bells and carillons.

The present carillon at Holsworthy church was installed by Gillett and Johnston, together with a new ring of bells, in 1949. The carillon was dedicated by the Bishop of Exeter, Dr Robert Mortimer, as one of his first engagements as Diocesan Bishop. The carillon tune 'Holsworthy Church' was composed by Samuel Wesley, a descendant of John and Charles Wesley¹.

During the First World War the factory made munitions³.

In 1948 Cyril Johnston lost control of the company owing to financial problems. He died in 1950. The Whitehorse Road, Croydon, foundry declined rapidly and closed in 1952⁷. It was demolished in 1997⁶. In the period from 1844 to 1950 over 14,000 tower clocks were made at the foundry, each clock-face was different and unique³.

In 1960 the clock making business was purchased by Cecil H Coombes. He had worked for Gillett and Johnston in the drawing office during World War II and later became Overseas Marketing and Sales Manager. He built up the business. When he died in 1972 his son Stephen and family took over the company³.

The factory later moved to its present site in Selsdon, South Croydon. Today the work encompasses bell and dial repairs, clock manufacture and repair, weather vane work, carillons and coats of arms³. The list of the varied commissions shows a company which keeps up with the times. A most fitting testimonial.



Steam Powered Clock Factory,
Union Road, Croydon

References:

- 1 www.holsworthychurch.org.uk/history-shtml.
- 2 www.clockmuseum.co.uk/english-turret-makers.html.
- 3 www.gillettjohnston.co.uk/
- 4 www.clockswatches.com/foreign/showpage.phpem=857.
- 5 en.wikipedia.org/wiki/Gillett-%26-Johnston.
- 6 www.croydononline.org/History/Heritage.
- 7 Gent, J. Croydon Past. Phillimore 2002.
- 8 en.wikipedia.org/wiki/holsworthy,_devon. □

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The Association for Industrial Archaeology Conference 2010

report by Glenys Crocker



A view of the AIA Conference in the Cornwall landscape
Photo by Glenys Crocker

The AIA Conference in 2010 was held at University College, Falmouth, and hosted by the Trevithick Society. Three of us – Alan, Celia Gregory and myself – attended from SIHG. A few other members, whom we met from time to time around the conference centre and residences at the Tremough campus, were there at the same time, attending a Subterranea Britannica conference. They, naturally, were spending more time underground but mining was also a major theme in the AIA programme. Besides the lectures and visits to mining sites, a reception at County Hall in Truro was followed by a presentation on the World Heritage Site of the Cornwall and West Devon Mining Landscape. This encompasses ten separate mining districts and includes sites related to transport, social life and ancillary industries, as well as the remains of tin and copper working.

The main conference was at the weekend of 3-5 September, with a guided tour of the Port of Falmouth for those who had arrived by Friday afternoon. We arrived in time for dinner and an introductory lecture on the history of the Trevithick Society. Saturday was devoted to lectures, including 'An explanation of Cornish Methodism', (which accounted for the extraordinary profusion of chapels in the landscape), followed by members' contributions, reports on the several awards

made by the AIA, presentations by the winners and in the evening the conference dinner. The AGM was held on Sunday morning. In place of the usual Rolt Memorial Lecture, several speakers then gave short talks on 'Remembering Tom Rolt', for the centenary of his birth. There was a choice of visits in the afternoon. Alan and I went to Rosevale Mine, which is the only mine restoration project of its type in Cornwall, carried out by a small group of volunteer enthusiasts, and involves climbing up 90 feet of ladders underground.

The additional programme, from Monday to Thursday, consisted of evening lectures – on the china clay industry, the work of the National Trust and HM Steam Vessel *Echo* – and a choice of coach trips each day. On Monday we went, between us, to King Edward Mine (formerly used by the School of Mines for teaching), to Hayle and to Poldark Mine. Celia's account of the visit on Tuesday to Porthcurno telegraphy museum is given on page 14. It was followed by a visit to Newlyn harbour, which remains an active fishing port with the largest turnover in England. On Wednesday we went to the St Just tin and copper mining area, including the Botallack and Levant mines and the Geevor Tin Mine Heritage Centre. On Thursday we paid a visit to the remains of the Kennall Vale gunpowder works, which is a scheduled monument and is included in the World Heritage Site, and then drove back to Surrey.

Next year the conference will be in Ireland, at Cork in the first week of September. □



Another picture from the AIA Conference
SIHG members at Botallack

The deadline for **submitting copy** for the next Newsletter is **10 January 2011**.

Submissions are accepted in typescript, on a disc, or by email to news@sihg.org.uk.

Anything related to IA will be considered.

Priority will be given to Surrey-based or topical articles. Contributions will be published as soon as space is available.

Readers are advised that the views of contributors are not necessarily the views of SIHG.

Website: www.sihg.org.uk

Visit to Porthcurno Telegraph Museum, Cornwall at the Association for Industrial Archaeology Conference by Celia Gregory

Such an interesting place! In 1870, Porthcurno was chosen instead of Falmouth as the location from which to lay a new submarine cable to India. Its advantages were an isolated position free from shipping, a steeply sloping seabed and a sandy beach to protect the shore end of a cable from damage.

Here an unofficial training school for telegraphers was set up. In 18 months they learnt to operate the Morse inker, the siphon recorder and the mirror galvanometer. The latter instrument was demonstrated to us during a 40 minute talk.

As more cables were laid, the site at Porthcurno expanded to house the superintendent, unmarried staff and the instrument room of the cable station. A sports field was purchased for recreation. The village grew to service the station and prospered. It was interesting to learn about the social life of this community, illustrated by early photographs.

We learnt that communication traffic had increased from 200,000 words annually in the 1870s to 180 million words by 1918. A new automated relay system was brought into service in 1925, replacing manual transcribing of messages at relay stations. This caused redundancies throughout the system. The training school was no longer viable and much of the village accommodation fell into disrepair.

With the automated system, the message was typed on a querty keyboard and converted into a series of holes in paper tape using cable code. This was based on Morse code. Holes right of centre were dots, left of centre were dashes. An automatic transmitter converted these holes to electric pulses of opposite polarity to be sent through the cable. Relay stations were only required every thousand miles or so.

Examples of many types of equipment were on display in the instrument room. A video presentation explained about each one.

We also learnt during our demonstration talk about Marconi's successful experiments and the threat these

posed to cable communication, being much cheaper to operate and quicker to transmit. The conflict between cable companies and wireless companies all competing for trade in long-distance communications was resolved in 1934 by the formation of Cable & Wireless Ltd, which incorporated the individual companies.

Cable had one advantage over wireless – it sent secure messages which could not be intercepted. This brought even more cables to Porthcurno. By the start of World War II it was the most important cable station in the

world with 14 submarine cables totally 150,000 miles in length connecting the UK to the rest of the world.

The vulnerability of the station to air attack in the war was realised, and a ten-month operation digging a linked series of tunnels through the granite was successfully completed by tin miners from St Just in June 1941. The station moved underground. These tunnels form the major exhibition area of the museum. They include an escape tunnel of 120 steps, leading up to a platform with a magnificent panoramic view of the valley – well worth the effort of climbing up! The radio room, the workshop with original tools, the testing room and the instrument room all had



Cable Room

interesting displays. Also there was a replica of the Great Eastern, the first ship to succeed in laying a continuous cable across the Atlantic.

Concluding the museum visit was a walk to the Cable House, built in 1929 and now a listed building. Here are housed the 14 terminals for the undersea cables. The incoming messages were sent to the main building by landline.

Visiting the museum was a most worthwhile experience, with a good buffet lunch provided at the nearby Cable Station Inn. Do make it a 'must see' if you are in the area.

The illustrations are taken, with permission from the booklet *Porthcurno 'The Story So Far'*. □

Health and safety, or not, at an Epsom chalk pit in 1896

by Paul W Sowan

Clement Le Neve Foster's report, as the relevant Inspector of Mines (which title by 1896 included responsibilities also for open-work quarries under the Quarries Act, 1894) and also of factories functionally and geographically related to mines and quarries under the Factories Acts), reported and commented on the deaths of two men - John Mellon (36) and George Corbett (58) at a chalk pit at Epsom on 25 January 1896.

The report runs as follows:

Register number 23. Two labourers met with their death in a trumpery chalk pit near Epsom, which is a little more than 20 feet deep on one part, and therefore comes under the Quarries Act. However, as it was not worked regularly, its existence was unknown to me until I received a telegram from the coroner giving me notice of the inquest on the bodies of two men who had been found buried under a quantity of chalk, which had fallen from the face of the quarry.

The antique word 'trumpery' implies 'of small value'. The Quarries Act, 1894, came into force on 1 January 1895, and applied to all open pits at least 20 feet deep.

Though no one actually witnessed the accident, it was evident to the most careless observer that the fall of chalk had occurred through the working face being undermined.

On the morning of the accident the employer of the two unfortunate men, who lived 7 miles away from the quarry, told them each to take a horse and cart and dig a load of chalk. He gave them 9d [3.75p] apiece to pay to the landowner's agent, a woman living on the spot, for anyone was allowed to go and dig a load of chalk on payment of that sum; 2d [0.83p] was then returned to each canter as 'beer money'. I was told that sometimes eight or nine loads would be fetched in a day by different people.

On arriving at the pit, the two canters, who were in no way quarrymen, had evidently endeavoured to complete their task with the least amount of trouble, and had hacked out the chalk where it seemed easiest, quite heedless of the risk they were running by dangerous undermining. I found that the face had been undercut considerably and quite enough to account for the accident.

A diagram in the printed report shows the pit face at the site of the accident to have been 16 feet high, with the lower three-quarters of it undermined (and partially collapsed) to leave an overhang of about four feet.

I must confess I do not like this happy-go-lucky style of quarrying, when inexperienced men are sent to dangerous work without any supervision whatever.

Which of the Epsom chalk pits was it?

Swete (1860) noted amongst 'botanical localities' the 'chalk pits around' Epsom, especially noting that 'Near the Church there is a mansion called Pitt Place, so called

from its site having been originally a chalk pit'. Presumably by 1896 this pit was effectively a private garden, and not worked for chalk.

The book includes an advertisement (page A30) for R Henson (late Gray & Henson), Builder, Carpenter, and Joiner, of High Street, Epsom, offering inter alia Staffordshire Goods, Sanitary Pipes, Grey Stone, Chalk & Blue Lias Lime, &c., &c.

The owners of the chalk pit at which the accident occurred in 1896 are stated to have been the executors of the late E Catchpole. Lists of openworks (quarries within the meaning of the Act) on the Reports for 1897 and 1898 note two chalk pits at Epsom:

Epsom Chalk (No 1) pit is stated to be 2½ miles from the station. In 1897 it was in the hands of the executors of the late E Catchpole, at Ravensdeane, Grove Park, Lee, London SE, and managed locally by one T Skinner. In the following year ownership had been transferred to George Sayer of Ashted.

Epsom Chalk (No 2) pit, one mile from the station, was owned by A Daws of East Street, Epsom.

There were in 1896 two stations, about 550 yards apart, at Epsom. The first, Epsom Town (LBSCR), in Upper High Street opened in 1847, and closed in 1929. The second (LSWR) opened on the site of the present station in 1859. Which of these were the points of reference for the Inspector's Report is not stated.

The Ordnance Survey 1:10,560 scale map for the immediate neighbourhood of Epsom, was revised in 1894 - 95.

Five chalk pits are shown, identified as Pitt Place, three simply labelled 'Old Chalk Pit', and the Epsom Lime Works chalk pit. My guess is that the accident occurred at one of the three 'old' chalk pits. That at Pitt Place was presumably long out of use, and that at the Epsom Lime Works presumably a going concern.

Young (1905), working from the Ordnance Survey six-inch (1:10,560) map, recorded the following chalk pits in and around Epsom: the numbers are from his printed list; altitudes above mean sea level are given in brackets:

46 (210 feet) In Epsom recreation ground, small and turf-grown.

47 (200 feet) Near Pit Place, Epsom, overgrown, full of trees.

48 (230 feet) Near Pit Place, Epsom, overgrown with turf.

49 (280 - 330 feet) Medical College Pit. A large pit. [The Royal Medical Benevolent College, subsequently re-named Epsom College, had been established in 1855. Its grounds, as depicted in a map (Thomson) in 1955, apparently contained no pit.]

50 (210 feet) At S. end of Tertiary [rock] tongue at Howell Hill. A small, very old pit, much overgrown and full of elder trees.

51 (210 feet) Priest Hill, quarter mile S. of no. 50. A small pit, but fairly clean.

(Continued on page 10)

(Continued from page 9)

Where was the chalk to have gone, and what might it have been wanted for?

The owner 'seven miles from Epsom' may have been at some such place as Esher, Long Ditton, or New Malden. Central Epsom is built astride the Chalk / Lower London Tertiary strata, and it seems unlikely that anybody would send for chalk to be carted southwards over seven miles of the Chalk outcrop, where other small pits abound. What the chalk was wanted for is not stated. Agricultural use or road-making are the likeliest applications.

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SIHG Lecture - 26 October 2010

Replicating British Army Aircraft No 1

by David Wilson,

Farnborough Air Sciences Trust (FAST)

report by Gordon Knowles

David gave a sparkling and very informative talk and competently answered many questions. He has been in aviation all his life, including service in the R.A.F. His last full-time post was as Project Director for the Eurofighter, now the 'Typhoon'. He was thus admirably fitted to take on the role of Project Manager in 2006 for the building by FAST of a non-flying replica of Cody's Flyer in time for the centenary anniversary in October 2008. Any idea of it being a flying replica was soon discounted, both on time and cost grounds. In the end the completion date was brought forward to July 2008 so that the aircraft (photo on page 1) could be the centrepiece of a historic display at that year's Farnborough Air Show. The target was met – just.

There was a little commercial sponsorship but a lot of voluntary effort by members of FAST, many of whom were ex Farnborough employees. The essential line and working drawings had been prepared by John Roberts, whose wife Jean had collected a vast amount of information on Cody and his machines, which she readily made available to the team. Much of the replica was a true copy; however the French Antoinette engine could not be replicated. The engine now fitted is a clever and realistic construction of MDF, rubber and odd metal parts. The engine sound is simulated by a lawn mower engine and the propeller turns via an electric motor.

The Cody Pavilion has been erected next to the FAST museum, funded by a lady who donated the money in



British Army Aircraft No 1

memory of her late husband. It is reminiscent of the original balloon sheds at Farnborough in construction. A simulator has also been built, but even current pilots find it extremely difficult to fly the machine on it. David also told us a lot about Cody the man and his other aircraft. Suffice here to say that his real name was Cowderey and he is not to be confused with Buffalo Bill Cody. Our man adopted the name when he brought his Wild West circus act over from the USA. He took up kites for the Army and then worked on Nulli Secundus, the first successful British military airship, which flew over London in 1907.

Cody's flight on 16 October 2008 was the first controlled and powered flight in Britain. He went on to fly around Britain and France but was unfortunately killed on 7 August 1913 when he crashed his VI design over Farnborough Common due, it is thought, to structural failure. Cody was buried with full military honours in Aldershot Churchyard. □