



Registered Charity No: 272098

ISSN 0585-9980

SURREY ARCHAEOLOGICAL SOCIETY

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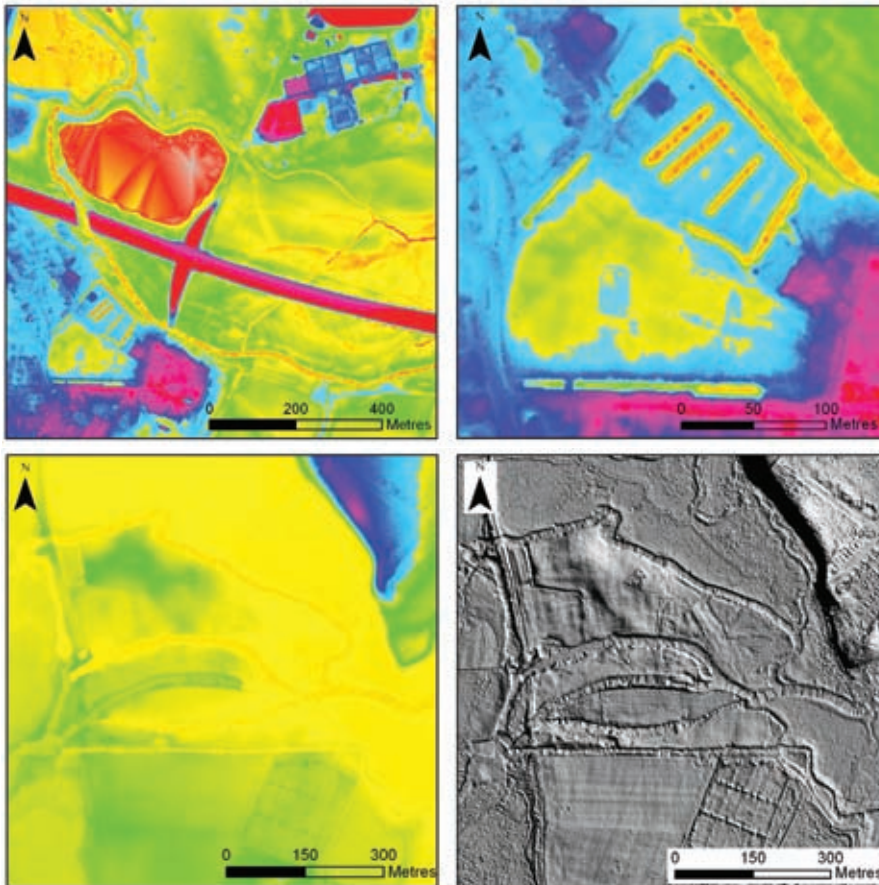
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Bulletin 433

June 2012



LIDAR IN RIVER VALLEYS

THE POTENTIAL OF LiDAR SURVEYS IN RIVER VALLEYS

Kevin Williams

The basis of this article is my Masters dissertation, although for the sake of brevity, I will focus on just a few features of the data and the landscape they represent.

Firstly I would like to summarise what LiDAR is and how it works. Remote sensing data can be used to compile data for large areas that may be difficult to access by foot. LiDAR stands for light detection and ranging and is collected by airborne laser scanning. LiDAR data is collected by firing a laser at the ground and recording the reflected signal. You need to know the exact location of the sensor for this to have any meaning and as the accuracy of Global Positioning Systems has improved, LiDAR has become more useful. With plots ranging from 2m to 25cm grid points individual features in the landscape can now be detected. The Environment Agency first used LiDAR for assessing flood plain risks, the height accuracy now at 5cm or less in many areas, thus demonstrating the practical use of this imaging system.

The data collected is used to create a digital surface model (DSM) or digital terrain model (DTM) based on the reflected data. The beam will reflect off anything in its path but it can be split. The data is sometimes described as being able to see through tree canopies however this is misleading. The last return may be the ground surface but can also be trunks of trees or other solid objects. As trees covered two of the features I was interested in for my study I purchased DTM data, since a DSM is preferable for non-wooded areas.

The map created with LiDAR still needs interpretation, so will not replace other more time consuming methods entirely, but does allow large areas to be surveyed relatively rapidly. The data may contain many features that are modern such as buildings or even cars. LiDAR data in the Surrey area has a vertical accuracy of 5cm to 5-15cm, so these anomalies can often be detected. By adding layers of differing data and using the transparency feature it becomes possible to integrate the data for interpretation purposes.

Cherestey Abbey

In fig 1a the full extent of the 1km square tile over Chertsey Abbey can be seen. This includes many modern features including the M3 and the lakes. In the bottom left hand corner the abbey fishponds are visible. In fig 1b I have focused in on that

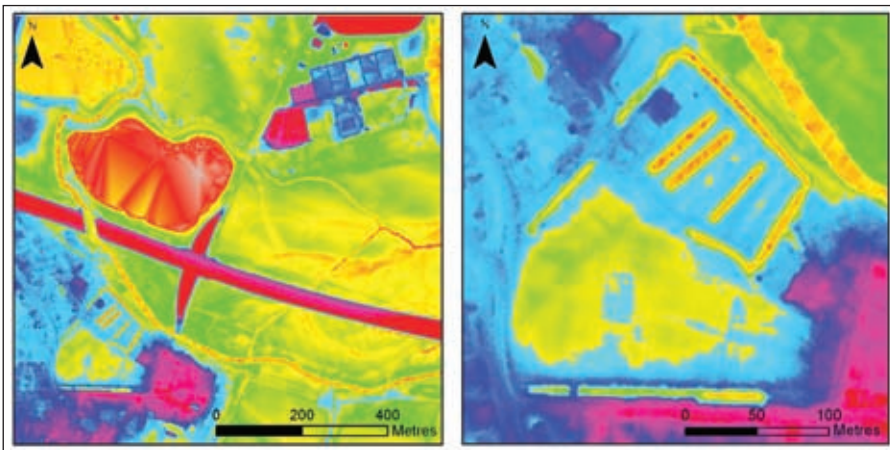


Fig. 1. Chertsey Abbey.

feature to highlight the moat and ditch system that surrounds them, but notice that not all of the ditch system is visible and the playing fields have been manipulated, raising them above the natural level.

Woking Palace

In the next example from Woking I have focussed on the area of the Palace to show how LiDAR deals with flat areas. As you can see on fig 2a the features of interest produce very subtle changes in colour and there are possible palaeochannels visible. Focusing in on the palace in fig 2b, the moat that is normally obscured by Oldhall Copse becomes visible. There is a faint line marking where a possible moat arm runs, but it is obscured by a mixed signal probably because of heavy foliage when the data was recorded.

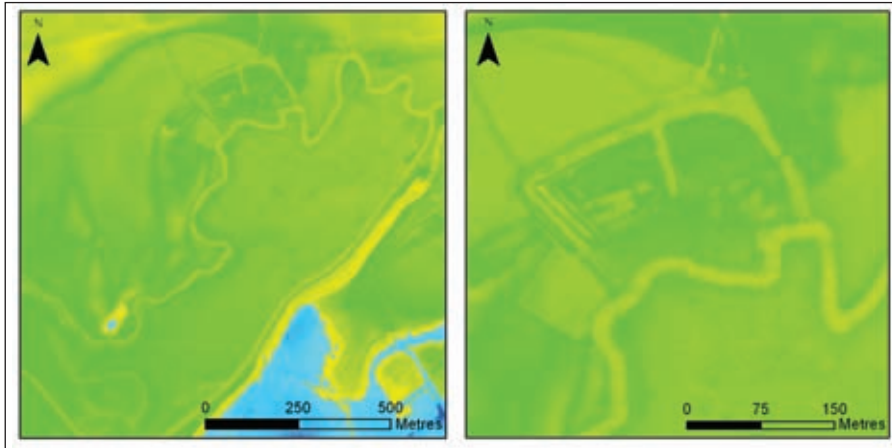


Fig. 2. Woking Palace.

Newark Priory

The tile of data over Newark Priory in fig 3a shows how different images can relay a variety of information. The false colour image shows how flat the floodplain is and that

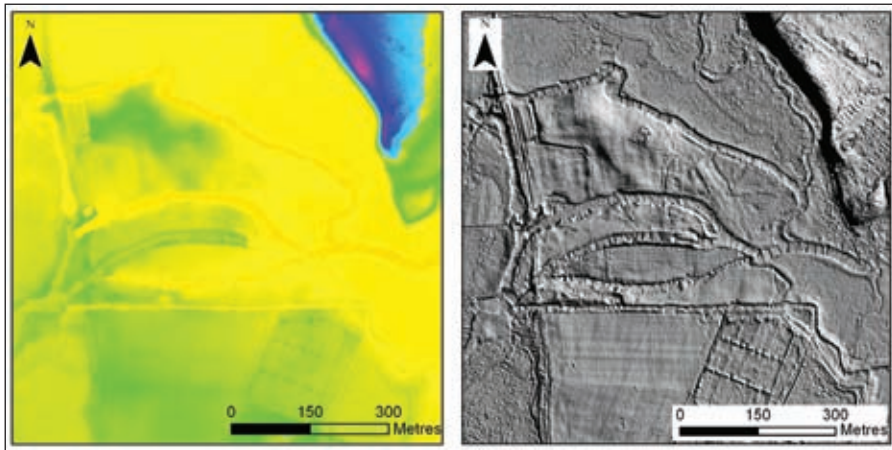


Fig. 3. Newark Priory.

the navigational lock is of a differing height to the abbey stream. When using greyscale and a feature called hill-shade in fig 3b the features to the east of the ruins are much more pronounced. Comparing this data with a survey taken on the ground could be advantageous.

Waverley Abbey

The image in fig 4a concentrates on a feature described by English Heritage as 'earthworks relating to water management and cultivation, including fishponds and areas of ridge and furrow.' These are obscured from aerial photography by tree cover. The extent to the south of these features has yet to be investigated with this technique. These features are under tree cover for the most part and lie on land owned by multiple people/organisations so access could be an issue. Seeing their extent we can begin to investigate the purpose and date of these features.

Although these images are from well known areas of Surrey that have been surveyed in more traditional ways the LiDAR data can be seen to complement this information. When you combine the images as layers in a mapping program, features may come to light that are not recorded in conventional mapping and this allows large areas to be accurately charted where access may be an issue.

I was generously given a grant by Surrey Archaeological Society to purchase the tiles of data from the Environment Agency's outlet the Geomatics Group, for which I am grateful to be able to present them here.

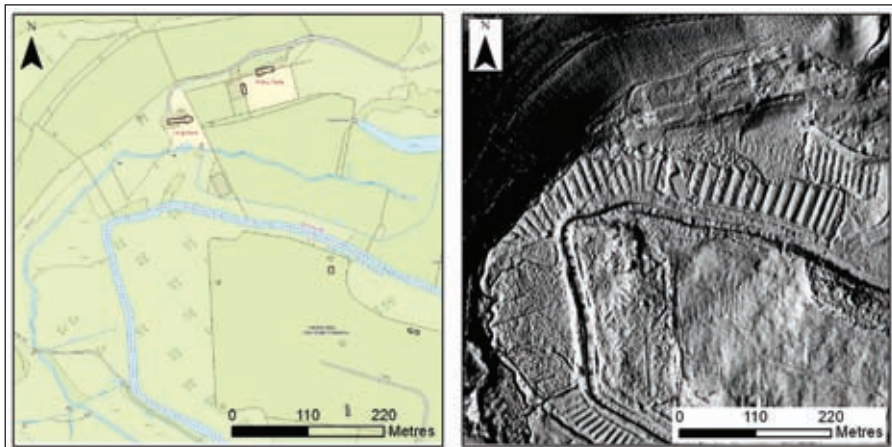


Fig. 4. Waverley Abbey.

EXCAVATIONS AT FLEXFORD in April 2012

David Calow

Previous excavations in 2010 and 2011 suggested Roman buildings at the high points of the northern field. Flint floors with postholes were found indicating at least two different phases, but providing little information about the size or purpose of the structures.

A large trench was therefore excavated by machine in April 2012 to expose an area of high resistance next to the flint floors and uncover two roughly parallel ditches which followed a similar north-south alignment to the building structures.

The two ditches were less than three metres apart and, whilst they might have been on either side of a hedge or palisade, they were not parallel and of different construction. One was a well-cut, U-shaped ditch about 0.8m deep with very little

evidence of occupation in the silt whereas the other was poorly cut, with little shape and shallow but with plenty of darker material. There were few finds from either ditch and not enough to be sure which pre-dated the other. Magnetometry suggested both terminated 5m south-west, and that to the north-east the better cut ditch curled west to join the other. The purpose of the ditches remains unresolved.

The next observation was that the less substantial of the two ditches was a continuation of, and only 15m from, a large and well-cut V-shaped ditch examined in 2009. Moreover, while the 4m long section examined in 2009 was filled with black occupation material and produced 21kg of pottery, the 5m long section examined this year had no occupation material and hardly any sherds. It was clear that what the magnetometer results suggest is a single enclosure ditch that has a very different appearance and history at different locations.

This observation was reinforced by further excavation of the same ditch in the north-west corner of the enclosure. Here the ditch was deep and well-made. It appeared to have been V-shaped and re-cut to be almost square with an additional square cut and deeper section along the western side. Again the main ditch fill was black, but although there were finds, a 10m length yielded only 7kg of pottery. It will be necessary to examine the ditches more carefully to understand the enclosure.

Trowelling elsewhere in the large trench was initially disappointing but by the second day grey marks and fixed flints started to emerge. As work continued these formed a pattern which we marked by flags. Even then the features were not clear, but expert trowellers, stimulated by results achieved by Pauline Hulse, revealed substantial postholes up to 60cm in diameter, lined with flints and with packed further flints on the northern side. Small exploratory trenches and extensions to the main trench revealed more postholes until we had 19 in total marking out a Roman aisled building at least 12m long and 8m wide. The building was oriented north-south, with at least six bays formed with round timbers approximately 30cm in diameter. Although most posthole fills had no finds, several produced good quantities of Alice Holt pottery. Nikki Cowlard bravely drew every flint in the trench, not stopping even for hail.

We cannot be sure we have the complete building; it might be wider, although that is unlikely, and it might be longer. We assume the central hall was higher than the side aisles. There was no evidence for the floor, external walls or internal partitions and although there was probably a tiled roof nearby whether this building had a tiled roof cannot be said. There was no sign of regularly used hearths so it is perhaps more likely that the building was used for animals or storage than as somewhere to live. However, the great concentration of pottery found in the ditch section closest to the north end of the building and excavated in 2009 may suggest otherwise. There is much to unravel next year.

One further small trench was attempted where the magnetometer had found evidence for a ring of magnetic activity 10m in diameter with an anomaly suggesting a feature at the centre. Excavation at one point on the circumference found occupation layers with what seemed to be early Roman pottery. Beneath these was an unexpected and tightly packed flint layer. Examination of the flints showed the ring feature identified by the magnetometer was formed by a 60cm wide belt of what appeared to be reddish decayed smithing debris throughout the flints. A post hole was found in the flints just inside the ring. More work will be needed to understand this feature and its possible relationship with the anomaly which seems to be at the centre of the ring.

The April 2012 excavations at Flexford were characterised by cold winds, rain and hail. I am very grateful to Emma Corke and Nikki Cowlard who supervised the trenches, Alan Hall who kept the records and photography under control and Isabel Ellis who organised the finds team. Roger Brookman arranged the tools and tent,



Flexford in April: drawing and trowelling in the rain

David and Audrey Graham provided resistivity and total station surveying and Roger and Lynda Duckworth kindly gave us access to their land.

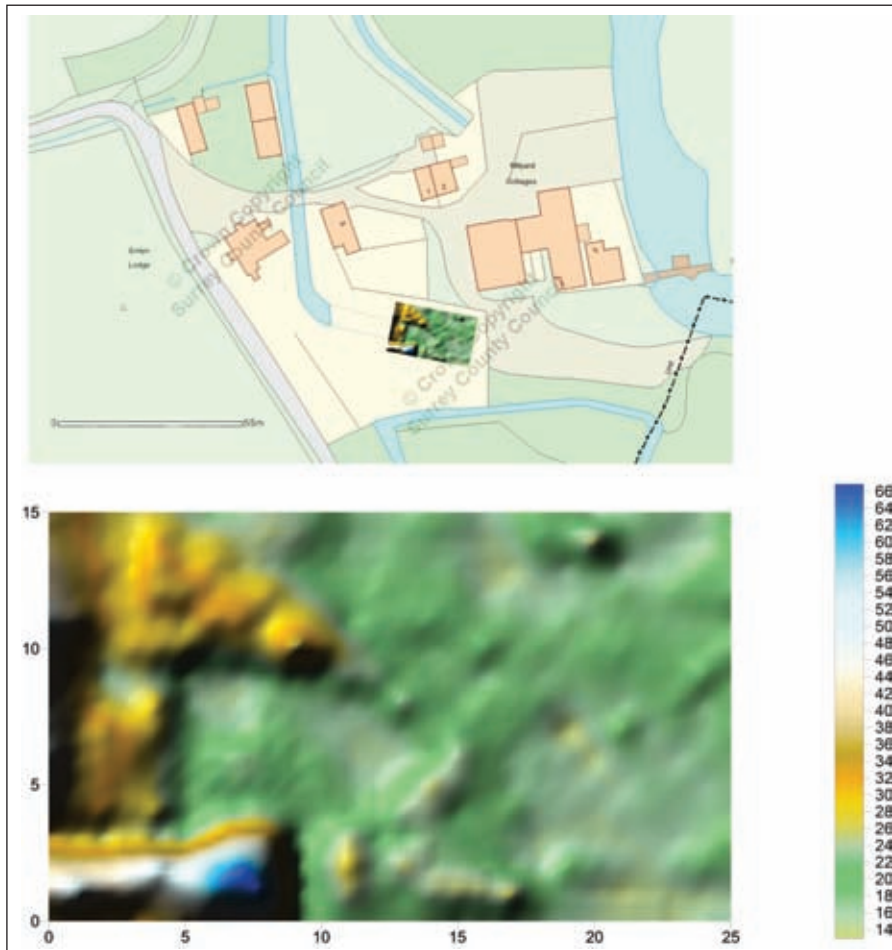
Mairi Sargent, Dave Williams and Phil and Anne Vallis were the metal detectorists without whose efforts our knowledge of the site would be greatly diminished. The main thanks go to the twenty members of the Society who worked in bad conditions to unravel more of the Romano-British rural settlement at Flexford.

ALEXANDER RABY AT DOWNSIDE HILL, COBHAM AND COXES LOCK, ADDLESTONE: an update

Richard Savage

The interim report of the Society's evaluation/training excavation of Downside Mill in 2008 was published in *Bulletin 411* (November 2008). Subsequent analysis of the remains of iron and copper-working residues found deposited in one of the millraces when the earliest of the mills was demolished around 1814 has shown these to be of national significance in the development of iron-working technologies in the UK in the late 18th century. In particular they indicate the early use of the 'cold puddling' technique developed and patented by Thomas Cort. A letter has been found in the Science Museum archives from Alexander Raby confirming that he worked with Thomas Cort on the development of this process.

Although we had not expected to find such metallurgical remains during the nine day training excavation (which had been expected to do little more than expose the foundations of the water mill shown on a plan of c1795 and on a resistivity survey by David and Audrey Graham – see accompanying figs), it was felt appropriate to seek specialist advice on the recovered material. The metallurgical remains were first reviewed by Dr David Starley, who opined they were potentially of national significance, a view confirmed by Dr David Cranstone. Quotes were sought for a full analysis and these came in around £4,000. Although Dr Barney Sloane of English



Downside Mill: 1795 plan and area of resistivity survey.

Heritage made the point forcefully that the Society could reasonably have expected the possibility of finding metallurgical remains in the evaluation (and thus to have planned for the funding of analysis of such remains), nonetheless English Heritage would exceptionally fund and carry out the work at its laboratories at Fort Cumberland in Portsmouth. A full scientific and technological report (Research Department Report Series 43-2011) has now been published by Dr David Dungworth, Dr Sarah Paynter and Matt Phelps and is available on the English Heritage website at <http://research.english-heritage.org.uk/report/?14995>.

The core part of the conclusion reads:

“The examination of the slag and other industrial residues from Downside Mill provides evidence that dry puddling was being used there at the end of the 18th century to convert cast iron into malleable iron. The most abundant type of waste at the site, a flowed fayalitic slag, derives from this process. These slags contain magnetite rather than the wustite typical of bloomery smelting slags and smithing slags. Two slag fragments contained more manganese and silica than typical and

lacked the distinctive flowed morphology of the majority of slag. These were tentatively identified as waste from a 'running out' refining hearth, used to refine cast iron prior to puddling. Evidence of the use of these processes at Cobham Mill at the end of the 18th century is significant since little is known about how quickly or widely dry puddling was adopted following Corts' patents in 1783 and 1784. Slag from an iron foundry, using a cupola furnace, was also recovered. All of these processes; iron casting, refining and puddling, probably took place in the upstream mill but the waste was dumped into the wheel pits of the ovoid mill.

A small amount of slag from copper alloy casting was found. Some frothy wustite-rich slag, possibly from a large chafery-type smithing hearth, was also identified and in several instances this was mixed with waste from copper alloy casting, suggesting that somesmithing activity took place near to the copper foundry in the ovoid mill."

The Society is indebted to all those named above who assisted in the analysis and the production of the report on the important metallurgical finds at Downside Mill. The full excavation report is now in course of final preparation for publication in the Collections.

There have also been developments regarding Alexander Raby's other manufacturing site at Coxes Lock at Addlestone, where cast blocks of waste slag from copper working were found incorporated as part of an underwater wall when this portion of the Wey Navigation was drained for maintenance work in 2010 (a report is held in the Surrey Heritage Environment Record office and specimens of the slag blocks are to be examined by English Heritage). It had been assumed at the time that the blocks of copper slag had been brought in by rail from Raby's other works in South Wales as such blocks of copper waste are found as building material in Bristol and through Gloucestershire (David Dungworth, *pers comm.*). However, David Barker has now found an indication that copper smelting may have been undertaken close to Coxes Lock during the period of the Napoleonic Wars, on a site to the east of the Navigation rather than at the iron works to the west of the Navigation. The following article appeared recently in the Newsletter of the Addlestone History Society (November 2011) and is republished here with their consent.

COXES LOCK ADDLESTONE

David Barker

The initial discovery and recording of a number of cast slag blocks at Coxes Lock Mill, Addlestone, Surrey has been enhanced by a further exposure of the same feature in 2010.^{1,2} Published work on the site and the metalworking phase of its history make no reference to the metallurgical possibilities raised by these finds; however the evidence for non-ferrous activity at the site is also suggested by a number of archival references and linked activity.

The originator and principal occupier of Coxes Lock Mill during its metal working phase was Alexander Raby, active here between c1777 and 1807. Working from a number of other locations simultaneously, Raby's involvement in working both iron and copper is well documented.³ A detailed search of the surviving archive of the Wey Navigation with specific reference to Coxes Lock has not shown a single reference to the transport to or from the mill of copper or any another non-ferrous metal.

Cast slag blocks are a well recorded by-product from copper smelting and brass working and are to be seen used in a variety of forms in the context of a building material cheaper than brick or stone.⁴ Gloucestershire has numerous recorded examples transported from the industry in the Bristol area. A number of possibilities are proposed for the existence on the site of these Surrey blocks. The most obvious of these is that they were introduced contemporaneously from another facility

altogether. If Raby was smelting as opposed to melting copper or its alloys at his Surrey sites it would follow that the process would produce the by-product of a slag. That coal was imported via the Thames and Wey Navigation is clear: the transportation of suitable ore is as yet unproven. A number of copper mills existed in the Thames valley before and during the periods 1776-1783 and 1793-1815. Local to Addlestone were those operating at Wraysbury, Cobham and Byfleet. A scenario based on the additional importation of copper ore is possible particularly in the context of the Napoleonic War. French privateers were a threat to the coastwise trade and a temporary solution to the problem was sought. Raby himself had been a victim of their predations when a cargo of his cast iron carronades was captured off Beachy Head in 1804.⁵ Copper was a highly important strategic material in the context of naval operations and its use for sheathing during both conflicts. Both materials could be transported from South Wales sources overland via the Severn and Thames to the mills rolling sheet copper or to other sites for conversion into suitable cake or bar and then rolled and transported to the dockyards. If it is shown that transporting both ore and fuel to the Thames valley did not occur, Raby's involvement with copper via his Cobham, Surrey works and the South Wales industry from 1796 would give a secondary source for this material used in a critical position at his active iron works at Addlestone. The particular use of the blocks at Addlestone in the context of the millpond and its feed from the canal raises the possibility that they were integral in the original construction of the feature suggested to date from c1782 with both their mass and waterproof nature being desirable features in the context of a constantly fluctuating waterline.

One coincidental but intriguing connection between the Coxes Lock area and possible copper smelting occurs in the manorial records of Pyrford. In January 1808, John Taylor of London, iron merchant, who had bought for £703 the facilities of Coxes Lock from Alexander Raby in 1807, purchased for £210 two copyhold messuages etc from James Cook of Wandsworth, copper smelter.⁶ (It is believed that these plots were on the opposite bank of the Navigation to Coxes.) No research into James Cook has been undertaken; however the copper industry of Wandsworth and the Wandle is recorded.

All the above may be rendered null by the results of an analysis of the slag showing it not to have any copper connection at all. However the clear evidence of the use of these massive blocks at a metalworking site, if produced there, would have implications for the metallurgical techniques used on the site. For example, the counterpart lease produced in connection with the sale of the site in 1834 refers to a piece of land, "on which Mr Rabys foundry stood".⁷ One reference to Raby's metalworking activity has not been commented on before and may be relevant. A history of Carmarthenshire published between 1935 and 1939⁸ contains the following: "To Raby is also due the method by which an amalgam of iron and copper fused together could again be separated. After the Peace of Amiens, (1802) he brought a large quantity of guns which were successfully treated and at the end of the war with France; a great bulk of the cannon came into his hands." If true and Raby had developed or utilised such a technique it would be possible to envisage it taking place at one of the Surrey works still in his occupation by 1806. Practical considerations suggest the need for a suitable flux to accomplish the process. Perhaps the cast slag is related to this activity?

¹ Addlestone Historical Society Newsletter no 23, April 1990, p8

² Addlestone Historical Society Newsletter no 06, March 2010.

³ Alexander Ray, Ironmaster Proceedings of conference held at Cobham on 28th November 1998

⁴ *18th Century Slag Construction Blocks in Gloucestershire – A Survey* Nigel Spry, The Gloucestershire Society for Industrial Archaeology 2003 Pp. 36-58

⁵ Raby conference p35

⁶ Surrey History Centre G97/4/21 (Pyrford)

⁷ SHC G6/2/68

⁸ A History of Carmarthenshire Lloyel, Sir John E. (Ed.) 2 vols. Cardiff. London Carmarthenshire Society 1935-1939

LITHICS WORKING GROUP

THE ABINGER MESOLITHIC PIT DWELLING

Jenny Newell

Early in 2010 English Heritage approached Surrey Archaeological Society to assess the Abinger Pit Dwelling Museum, as the passage of time had left the premises in a state of disrepair.



Cherry's aunts painting.

was last refurbished in 1974 by the current owner, Cherry Clarke, assisted by family members and John Wymer, of lithics fame. The display cabinets were relined with hessian and information boards developed, including the painting of a board defining the animals of the time, by Cherry's aunt (see accompanying fig).

Rose Hooker grasped the nettle and presented the idea of a new refurbishment to the Lithics Working Group, who agreed to visit the site and assess what was required. We found the museum to have suffered from ingress by birds and marauding



Abinger – a mouldy map.

cattle, which had disturbed the displays. The cabinets had suffered from the damp environment, as well as the cattle, as also the wall boards which were stained and peeling.

Alan Hall visited the site and took a series of excellent photos to use as a reference point for future work, and these enabled us to plan the work with respect to the existing style and layout. At each stage we involved Cherry, who naturally has a great sensitivity to the site due to her early involvement with her family.

A three-pronged approach was decided upon to spread the workload and allow us to tackle three main areas: repairing the cabinets and bird proofing the building, resetting the displays and re-developing the wall boards.

Ken Waters and Robin Tanner, both skilled in carpentry, were ably assisted by Keith Winsor in repairing the frames and hinges of the cabinets. Their second visit was to apply linseed oil to the frames and clean the glass. Keith and Ken also meshed the louvres and inserted corrugated foam into the gaps in the roof space to prevent ingress by birds. New hessian was sourced for the interior of the cabinets (isn't eBay wonderful!) to re-line the displays. Alan's photos of the cabinet signage were used to produce new laminated signs.

A major task was to re-develop the wall boards and retain the integrity of the 1974 refurbishment. It was decided to replace the boards with a modern Foamex type board which is lightweight and damp resistant. Budget being tight we researched the job and once again the internet supplied the solution. The group's limited graphic skills were pooled to produce drafts for the printers, and using a montage of photos of the old boards, new pictures and text, we produced eight boards to overlay the originals. Throughout the works we hope we have been sensitive to the original nature of the museum and liaised on a regular basis with Cherry Clark to seek her approval.



Abinger – part of the new display.

The concept of a pit dwelling has moved on since the 1950's and we have referenced this with a new board showing the current thinking on Mesolithic 'dwellings', together with information on the major players. I hope we have enabled the valuable site to be informative and attractive to future visitors.

It is important to mention that without the time and labour, generously given over

eighteen months, it would not have been possible to complete this task, and leave the Museum fit for future visitors. Thanks go to Judie English, Rose Hooker, Ken Waters, Keith Winser, Robin Tanner, and Alan Hall for their contributions.

Should anyone wish to arrange a group visit please contact Cherry Clarke, Tel: 01306 730760 for an appointment.

MEDIEVAL STUDIES FORUM

WINCHESTER VISIT Saturday 23rd June

This study visit to Winchester will cost £17.50 a head to include all admissions, guided tours and presentations. Places are limited to 40, so if you are interested please contact the Meetings Secretary, Brian Creese, to check the availability of places. E-mail bjc@briancreese.co.uk or Tel: 07860 104012.

Programme

10 am	Meet at Westgate Museum – free entry
10.30	Walk to Winchester Cathedral
11	‘Medieval’ Guided Tour of Cathedral
12.15 pm	Lunch Break – there are plenty of opportunities to purchase lunch around the city centre or indeed to find a spot to eat your own picnic
1.10	Meet at Taylor/Selwyn Room, in the Education Centre, Winchester Cathedral
1.15	Presentations: ‘Winchester, Wessex, and the Anglo-Saxon Kings of England’ by Dr Ryan Lavelle, Senior Lecturer in Medieval History, Winchester University. ‘Views of a Medieval Community’ : Graham Scobie, recently retired Winchester City archaeologist.
3pm	Tea
3.40	Walk from Cathedral to St Cross Hospital
4	Guided Tour of the Hospital of St Cross
5pm	Close

ROMAN STUDIES GROUP

VISIT TO OXFORD

Members of the RSG sub-group of the Society went to Oxford in March, principally to visit the **Research Laboratory for Archaeology and History of Art** where radiocarbon dating is carried out.

We were given an introduction by Prof Mark Pollard. The Lab was founded in 1955 to develop techniques for application to archaeology. It has 25-30 research staff and a number of postgraduate students. Most of the funding is from research grants but they provide a national dating service to academic archaeology and do some commercial work. The Lab achieved a lot of publicity when it was one of the

organisations dating the Turin Shroud.

It now specialises in three fields:

- dating - radiocarbon (they had the first accelerator in the UK in 1980); luminescence dating of pottery and cave deposits; magnetic dating of kilns, etc
- biomolecular archaeology – eg strontium isotopes in teeth as indicator of origin; DNA studies applied to migration
- materials science.

We had a session on the analysis of materials: pottery, glass, metal and lithics. This involves geology and chemistry to determine the provenance of materials, how an item was made, etc.

Most of our visit was then devoted to ^{14}C dating.

Most of the work involved is in preparing the sample. To summarise:

- demineralise with acid
- neutralise humic acids, ie soil contamination
- remove bacterial contamination by molecular filtration
- freeze dry
- burn at 1700°C to convert to CO_2 (also nitrogen and sulphur oxides)
- reduce nitrogen and sulphur oxides and remove by gas chromatography
- freeze CO_2 using liquid N_2
- react with H_2 to form elemental C (and H_2O which remove)
- take the sample, by now approx 1mg, to the accelerator mass spectrometer (AMS).

We then visited the AMS which, of course, is a large machine which tells you nothing by looking at it. This briefly is how it works:

- the sample is vaporised and bombarded with an electron stream to form positive ions
- the ions are accelerated (the accelerator operates at 2 million volts)
- the ions pass through a magnetic field and are deflected by amounts which depend on their weight, lighter more, heavier less
- the isotopes ^{12}C , ^{13}C , ^{14}C are counted individually
- each measurement takes eight minutes and each sample is measured four times
- comparison of $^{14}\text{C}:^{12}\text{C}$ ratio in the sample with control samples enables calculation of age
- radiocarbon dates are converted to “real” dates by the OxCal program.

The whole process takes about 2 weeks, mostly in the preparation of the sample.

In the afternoon we visited the **Ashmolean Museum** where we were given a presentation on the end of Roman occupation around Oxford by Dr Susan Walker, Keeper of Antiquities. This focused especially on the site at Shakenoak where the owners lived a Roman lifestyle while running a fish farm. When the farm collapsed around AD200 the inhabitants built an Iron Age-style round house on the site of the ponds – an unexpected backwards step.

We also learnt about the Oxford potteries which were developed in the early 2nd century AD and underwent a major expansion as imports of samian declined in the mid 3rd century. High-quality domestic ware was produced using white clay from nearby Shotover Hill. The industry ceased abruptly by the early 5th century; presumably it had depended on the Roman communications and monetary economy. Although the potters and their raw materials were still there, they were unable to maintain even local production. Early Anglo-Saxon pottery was hand-made and we find Oxford wares of Roman date still in use on early Anglo-Saxon sites. We were shown Anglo-Saxon spindle whorls made from the necks and bases of Roman pots.

We were then privileged to visit the Conservation Dept where we saw the recently discovered Dorchester buckle undergoing conservation. The visit concluded in the Roman and Anglo-Saxon galleries. The Ashmolean is full of wonderful things and we all agreed that another visit was a must.

Many thanks are due to all the people who made us so welcome and especially to Charles van der Lande who organised the excellent visit.

MISCELLANY

WEALDEN IRON RESEARCH GROUP TEBBUTT RESEARCH FUND

Grants are available for research into any aspect of the Wealden Iron Industry or subjects pertaining to it. Applicants may be individuals or groups and the application can include any associated expenses, such as travelling and photocopying. It is anticipated that some £500 plus will be available from the Fund. The applicant should write a letter giving details of themselves, together with relevant information concerning the research envisaged.

Applications to David Brown, Hon Sec Wealden Iron Research Group, 2 West Street Farm Cottages, Maynards Green, Heathfield, Sussex TN21 0DG.
www.wealdeniron.org.uk

COUNCIL for BRITISH ARCHAEOLOGY (South-east) WALKS & SITE VISITS

Unless otherwise stated below all walks and site visits will be charged at the following rates: CBA SE member: £1; non-member: £3.00; children free.

Please use the named contacts for further details of these events.

Medway Megaliths Walk *Saturday 30th June 2012*

Meet at the Chestnuts, Park Road (leads on from St Vincent's Lane, off the A20), Addington (ME19), at 2pm. (Donation of £1 per person at The Chestnuts to the Kent Air Ambulance please, to be collected on the day).

Move on to the Coldrum at 3pm.

Car sharing is strongly advised as parking is limited at both sites.

Short walk from car park to Coldrum on path across field, moderate slopes.

Contact: evelyn.palmer@virgin.net or mobile: 07554 436473

Barcombe Roman Villa site visit *Sunday 15th July 2012*

Sunday 15 July, 1-5pm. Barcombe Roman Bath-House Excavations Open Afternoon. Church Field, next to St Mary's Church, Barcombe (BN8 5TS for satnavs). Park in church car-park. Visit the on-going excavations, view some of the finds and opportunities for children to have a go at digging! www.sussex.ac.uk/cce/barcombe

No charge, but donations welcome, and no need to book.

Stanmer Walk **Saturday 11th August, 11am to 2pm**

A walk around the woods at Stanmer visiting tumuli, prehistoric earthworks, Bronze Age settlement sites, medieval house platforms, 18th century houses and outbuildings, industrial archaeology and the excavation of an Iron Age enclosure and Romano-British peasant settlement. An incredible landscape in one small area, involving a circular walk of about 3 hours, and with a coffee stop and toilets in the middle. Please wear stout shoes. The walk has one slightly steep climb. Dogs permitted if controlled and on a lead.

Meet at Upper Lodge car park, along the Ditchling Road, Brighton. TQ 324098 (Explorer 17 map 1:25 000).

For further details contact John Funnell at john.funnell@brightonarch.org.uk or Tel: 07789245106.

REVEALING GODALMING'S PAST **'STAYCATION' ARCHAEOLOGY PROJECT**

This years' 'Staycation' hopes to run its own archaeology project, and we need your help. 'Staycation' is promoted by Godalming Town Council, and will run from 11th August to 19th August as a 'holiday at home, with a variety of events and activities aimed at the whole family. All (or almost all) events will be held within a stone's throw of the historic town centre.'

The interesting and lengthy history of Godalming is still evident to see in its range of buildings and architecture, including the 19th century town hall, nicknamed the Pepperpot, and the archaeology project will focus on revealing the origins and development of the historic town by involving families in a programme of test-pitting, to see what remains of it's history beneath the ground.

The Staycation Committee believe that introducing archaeology through a series of fun, hands-on experiences throughout the event, will be an ideal platform to engage local people in their heritage, and encourage continued involvement in local societies for further activities and research in the area.

PROJECT AIMS

- * Provide opportunities for participation by people of all ages, in particular family groups, in archaeological work.
- * Improve understanding of the origins and development of the historic town of Godalming
- * Link the work to other test-pitting programmes in Old Woking and Chobham and elsewhere in the UK (Currently Occupied Rural Settlement programme being run by the Access Cambridge Archaeology unit of Cambridge University)
- * Develop public knowledge and appreciation of the value and importance of the town's heritage and the value of archaeological work.

Further information from Louise Goodfellow at the following address: Town Clerk, Godalming Town Council. Municipal Buildings, Bridge Street, Godalming, Surrey GU7 1HR, Tel: 01483 523575; townclerk@godalming-tc.gov.uk

COURSES

UNIVERSITY OF SUSSEX

Sussex Institute

Centre for Continuing Education in conjunction with the Centre for Community Engagement

GEOARCHAEOLOGY IN DETAIL

9th-13th July, 10am - 4pm

at Barcombe Roman Villa

Tutor: Dr Michael J Allen

This is an on site practical course, which follows on the previous course: Geoarchaeology in Action, where students will be involved and learn about all aspects of the work.

An excavation will expose soils, alluvial sediments and peat and rare prehistoric waterlogged wood (oak timbers and preserved prehistoric hazelnuts etc); work will include excavation and section drawing and planning.

The course will include a guide and practical to the description of soils, sediments and peat, and discuss their formation and taphonomy whilst excavating this material. Students will discuss and formulate and implement sampling strategies, and aid in the specialist sampling and scientific sub sampling. It will discuss environmental analysis aims, cultural heritage resource management and significance of wetland preservation. Placing the remains into the on site and regional content in practice (augering) and theory.

BARCOMBE ROMAN VILLA

ARCHAEOLOGY SUMMER SCHOOLS (5-DAYS)

Excavation Training

6 one-week courses starting 25th June, 10am-5.30pm

Fees: £230 (£163 concs) per week **X9508, X9164-X9167**

An Introduction to Archaeological Surveying

Monday 2nd- Friday 6th July, 10am-5.30pm

Fees: £230 (£163 concs) **X9579**

Total Station Surveying for Archaeologists

Monday 16th-Friday 20th July, 10am-5.30pm

Fees: £250 (£183 concs) **X9644**

Geoarchaeology in Detail

(based on a prehistoric waterlogged site)

Monday 9-Friday 13 July Fees: £230 (£163 concs) **X9637**

To enrol on any of the Barcombe courses please Tel: 01273 678300; see also www.sussex.ac.uk/cee/barcombe

N.B. Barcombe Roman Bath-House Open Afternoon is on Sunday 15th July, 1-5pm

ANCIENT CRAFTS AND TECHNOLOGIES

5-day course from Monday 9th to Friday 13th July, 10am-5pm.

Venue: Michelham Priory, near Hailsham. Tutors: Tristan Bareham et al.

Fees: £230 (£163 concs) (Tel: 01273 678300) **X9006**

For further details on all the above courses see www.sussex.ac.uk/cee

EXHIBITION

THE HOGSMILL RIVER: A JOURNEY THROUGH TIME

Kingston Museum

19th May to 14th July 2012

In August last year a community archaeology dig and survey took place on the banks of the Hogsmill River at Southwood Activity Centre, Tolworth. The fieldwork was part of a £30,000 Heritage Lottery Funded project organised by the Kingston upon Thames Archaeological Society to study the history of the river and was reported in the October 2011 Bulletin.

The results of the fieldwork have now been turned into an exhibition that aims to present the results and the techniques employed, as well as putting it into a wider context.

The Hogsmill has a rich historical past. Results from the fieldwork show that peat deposits are present that date to the Early Mesolithic period, and although today the river is a meandering stream, research shows it has changed course and in the past was much wider and faster flowing. In the post-medieval period there were rumoured to be thirteen mills along its banks, producing gunpowder for the Royal Navy and peaking in the Napoleonic War. Two of the most famous Pre-Raphaelite paintings; *Ophelia* by Millais, and *The Light of the World* by Holman Hunt, were painted on the Hogsmill.

The exhibition will be an opportunity to learn more about the fieldwork project, the Hogsmill River, and its fascinating history and archaeology.

For information about the exhibition go to www.kingston.gov.uk/museum

Further details about the project and a blog about the fieldwork can be found online at www.kingstonarchaeology.org

EXCAVATION

WOKING PALACE

Excavations 2012

With funding now secured, the fourth season of excavation at Woking Palace will take place during the second half of September, culminating in a public Open Day on Sunday 30th September.

This year, as well as seeking experienced volunteers, we are able to offer a small number of places to members of the Society with little or no excavation experience. We will not be offering a formal training programme to an accredited academic standard, but rather the opportunity to learn the basics of excavation by working alongside experienced 'mentors' from the Society. The number of places will be limited and will be offered on a 'first come, first served' basis.

The slots for those seeking to gain initial experience will be as follows:

Saturday 15th and Sunday 16th September

Wednesday 19th to Sunday 23rd September

Wednesday 27th to Saturday 29th September

As in previous years, experienced volunteers are sought not only to dig but also to help with preparing the site for the excavation (from Wednesday 12th September) through to the final clearing up of the site (on the 1st and 2nd October). Work will

continue every day until the Open Day on Sunday 30th September, except on Mondays and Tuesdays which are days off.

Those interested in participating, whether as experienced excavators or as beginners, are invited to contact Richard Savage for further details and to let him know the days they would be available. Once again, AARG will be providing on-site processing of the finds and members who would like to help with this should contact Isabel Ellis.

We look forward to seeing many returning as well as new members on site.

Richard Savage. 22 Fairlawn Park, Woking, GU21 4HT, Tel: 01483 768875; e-mail: richard.savage@btinternet.com

LIBRARY NEWS

ACCESSIONS IN 2011 *(continued from Bulletin 432)*

SURREY GENERAL

Farley, Michael *The Bourne Society guide to local antiquities*. 1973 10896 F31
Screen Archive South East *The region of film: exploring the collection of Screen Archives in the South East*. 2007 10745 & 10818 DVD P3
Screen Archive South East *Reel life: Saturdays in film and sound*. 2007 10748 P3
Surrey History Centre *Ordnance Survey Historical Maps 25i:1 mile: CD1 maps 1 - 448 OS sheets 1.12-XIII.16* 2007 CD17; *CD2 maps 449-886 OS sheets XIV.1 XIX.16* 2007 CD18; *CD1 maps 887-1341 OS sheets XX.I-XXVI.16* 2007 CD19; *CD4 maps 1342-1768 OS sheets XXVII-XXXIV.16* 2007 CD20; *CD5 maps 1790-2267 OS sheets XXXV.1-XLVII.3* 2007 CD21

SURREY – LOCAL

Abdy, Charles *The Epsom Manorial Surveys*. 2011 10890 P31 EP
Arnold, Phillip *Early Woking buildings: post release notes for CD-9*. 2007 10847 P31 WOK
Bateson, Janet *Around Lingfield at war: wartime experiences in south-east England: 1939-1945*. 2010 10734 P31 LNG
Blackmore, Lyn *The pottery from excavations at Tolworth Farm 2000 and 2002: fabric, forms and discussion*. 2010 10899 F31 TOL
Bramley Village Society *Bramley and Grafham: a short history*. 1977 10813 P31 BRA
Colley, Susan *Aquires Garden Centre, Halliford Road, Shepperton, Surrey: an archaeological watching brief*. 2010 10785 F31 SHP
Compass Archaeology *'The Studio' 47-39 Farnham Road, Guildford, County of Surrey: a level 1 historic building record*. 2010 10735 F31 GFD
Compass Archaeology *No. 16 Abbey Gardens, Chertsey, Surrey: an archaeological watching brief in the Chertsey Abbey Scheduled Monument area*. 2008 10750 F31 CHY
Cowie, Robert & McCracken, Scott *St Mary's Church, Barnes archaeological investigations 1978-83*. 2011 10866 F31 BAR
Dane, D.M. Surrey *St James's Church, Shere: Christine Carpenter, the anchoress of Shere*. 1963 10814 P31 SHE
Dawson, Tim *Terrace Yard, Petersham Road, Richmond, London Borough of Richmond: an archaeological watching brief*. 2011 10792 F31 RIC
Dawson, Tim *54 Waverley Lane, Farnham, Surrey: an archaeological watching brief*. 2010 10788 F31 FRN

- Dyson, Tony *et al* *The Cluniac priory and abbey of St Saviour Bermondsey, Surrey: excavations 1984-95*. 2011 10773 F31 BER
- Egham-by Runnymede Historical Society *Thorpe: a Surrey village in maps: a record of its growth and development*. 2002 10727 P31 THP
- Epsom and Ewell History and Archaeology Society *Ewell: the development of a Surrey village that became a town*. 2004 10729 P31 EW
- Epsom and Ewell History and Archaeology Society *50 years of Epsom & Ewell History and Archaeology Society*. 2010 10756 P31 EP
- Fairman, Amelia *An archaeological desktop assessment of site Grange Walk, Bermondsey Spa, London Borough of Southwark, SE1*. 2010 10825 F31 BER
- Fear, Diana *Ploughing matches and Mangel Wurzels: Egham & Thorpe Royal Agricultural Association 1857-1906*. 1001 10861 P31 EG
- Fookes, Gwyneth (ed) *Chaldon: Bourne Society Village Histories 7*. 2001 10874 P31 CHD
- Fookes, Gwyneth (ed) *Catergam: Bourne Society Village Histories 2*, 1997 10878 P31 CAT
- Fookes, Gwyneth and Packham, Roger (eds) *Whytefeafe: Bourne Society Village Histories 9*. 2006 10877 P31 CAT
- Gadsby, Joy (ed) *Sanderstead: Bourne Society Village Histories 3*. 1998 10876 P31 SAN
- Gomshall, Shere and Peaslake Local History Society *Gomshall, Peaslake and Ewhurst: rural villages from Royal Vill*. 2010 10731 P31 SHE and 2nd imprint. 2011 10755 P31 SHE
- Graham, David *Watching brief on building works in Gardiner's wing, Farnham Castle*. 2006 10744 CD15
- Halsey, Craig *Varcoe Road, London SE16, London Borough of Southwark: geoarchaeological post-excavation assessment*. 2010 10824 F31 SOU
- Herne Hill Society Local History Group *Milkwood Estate: the story of a Lambeth community*. 2009 10846 P31 LAM
- King, Gillian *Three Valleys Water PLC, reservoir and track works, St Ann's Hill, Chertsey: an archaeological watching brief at Scheduled Ancient Monument no 20197 univallate hill fort and 14th century chapel*. 2011 10793 F31 CHY
- Knox, Frank *Gatton and its parish church: a brief history*. 1999 10815 P31 GAT
- Lewis, James *The Orchard, 8 The Avenue, Tadworth, Surrey: an archaeological evaluation*. 2010 10781 F31 BAN
- McNicoll-Norbury, James *Moor Park House, Moor Park Lane, Compton, Farnham, Surrey: an archaeological watching brief*. 2011 10779 F31 FRN
- McNicoll-Norbury, James *Maple Lodge, Eyhurst Close, Kingswood, Tadworth, Surrey: an archaeological evaluation*. 2010 10786 F31 KND
- McNicoll-Norbury, James *Wiggins Yard, Bridge Street, Godalming, Surrey: an archaeological evaluation*. 2010 10787 F31 GOD

To be continued ...

LECTURE MEETINGS

5th June

Annual General Meeting followed by Members Talks to Addlestone Historical Society at Addlestone Community Centre, Garfield Road, Addlestone at 8pm. Visitors welcome £2.

14th June

"How Safe is England's Historic Environment?" by Dr Nigel Barker Head of Regional Partnerships for London, English Heritage in the School of Management Lecture Theatre, University of Surrey at 7pm.

20th June

"Your water supply: every drop counts" by Alison Murphy to Holmesdale Natural History Club in The Museum, 14 Croydon Road, Reigate at 8 pm. Visitors welcome by donation.

21st June

"Brooklands Museum and its Aircraft Collection" by Julian Temple to The Friends of Kingston Museum in the Museum Art Gallery at 6.30 for 7 pm. Places may be booked, Tel: 020 8547 5006.

28th June

"Trade tokens" by Mick Martin to Egham-by-Runnymede Historical Society in the Literary Institute, High Street, Egham at 8 pm. Visitors welcome £2.

3rd July

"Canova's famous sculpture *The Three Graces*" by Paul Lock to Addlestone Historical Society at Addlestone Community Centre, Garfield Road, Addlestone at 8pm. Visitors welcome £2.

4th July

Meeting to be arranged to Epsom & Ewell History & Archaeology Society at St Mary's Church Hall, London Road, Ewell at 7.45 for 8pm.

10th July

Annual General Meeting followed by "A Sporting Miscellany" by Peter Bennett to Westcott Local History Group in the Westcott Reading Room, Institute Road, Westcott at 7.45 for 8pm. Visitors welcome £1.

18th July

"A History of Reigate Stone" by Lester Hicks to Holmesdale Natural History Club in The Museum, 14 Croydon Road, Reigate at 8pm. Visitors welcome by donation.

26th July

"Grandma flew Spitfires; The Air Transport Auxillary" by Richard Poad to Egham-by-Runnymede Historical Society in the Literary Institute, High Street, Egham at 8pm. Visitors welcome £2.

DATES FOR *BULLETIN* CONTRIBUTIONS

There will be three further issues of the *Bulletin* this year. To assist contributors the relevant dates are as follows:

	Copy date:	Approx. delivery:
434	6th July	6th August
435	21st September	22nd October
436	16th November	17th December

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The Council of the Surrey Archaeological Society desires it to be known that it is not responsible for the statements or opinions expressed in the *Bulletin*.

Next Issue: Copy required by 6th July for the August issue.

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