



NEWSLETTER 52 AUTUMN 2010

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LETTER FROM THE CHAIRMAN

Dear Friends

It seems incredible that a year has passed since I last sat at my computer to write my chairman's letter. Once again it was good to see so many of you in Lamberhurst for the Annual General Meeting. It was a very special one as we were treated to what was in essence the presidential address although Jeremy Hodgkinson was not actually officially made our president until the start of the business meeting after his splendid talk. Jeremy's lectures are always very well researched and he has the ability to address his audience so well. I attend many lectures at other, often prestigious, institutions and am appalled at the low quality of speakers. They may know their material but are unable to put it over – they shouldn't do it!! Of course we had no such problems with Jeremy and we all learnt a great deal of the history and background of the Hoathley Forge and Gloucester Furnace which enhanced the afternoon visit to the actual site.

The business meeting started with a tribute to Dot Meades who has stood down as president. She has held every position possible within WIRG and her unique contribution to the Group from its inception in 1969 is to be highly commended. In August Jeremy, myself and our respective partners took Dot and Tony out for a very pleasant lunch in the delightful town of Clare in Suffolk and gave her a beautiful pastel of a spot in Ashdown Forest as a thank-you from WIRG.

I had the very pleasant duty of nominating Jeremy Hodgkinson as president and this was, of course, accepted unanimously.

After this the AGM followed the usual pattern with the adoption of the annual report and accounts I am also pleased to say that we now have a new treasurer – Vivienne Blandford and also two new committee members – Judie English and Jonathan Prus. They are very welcome and bring the committee

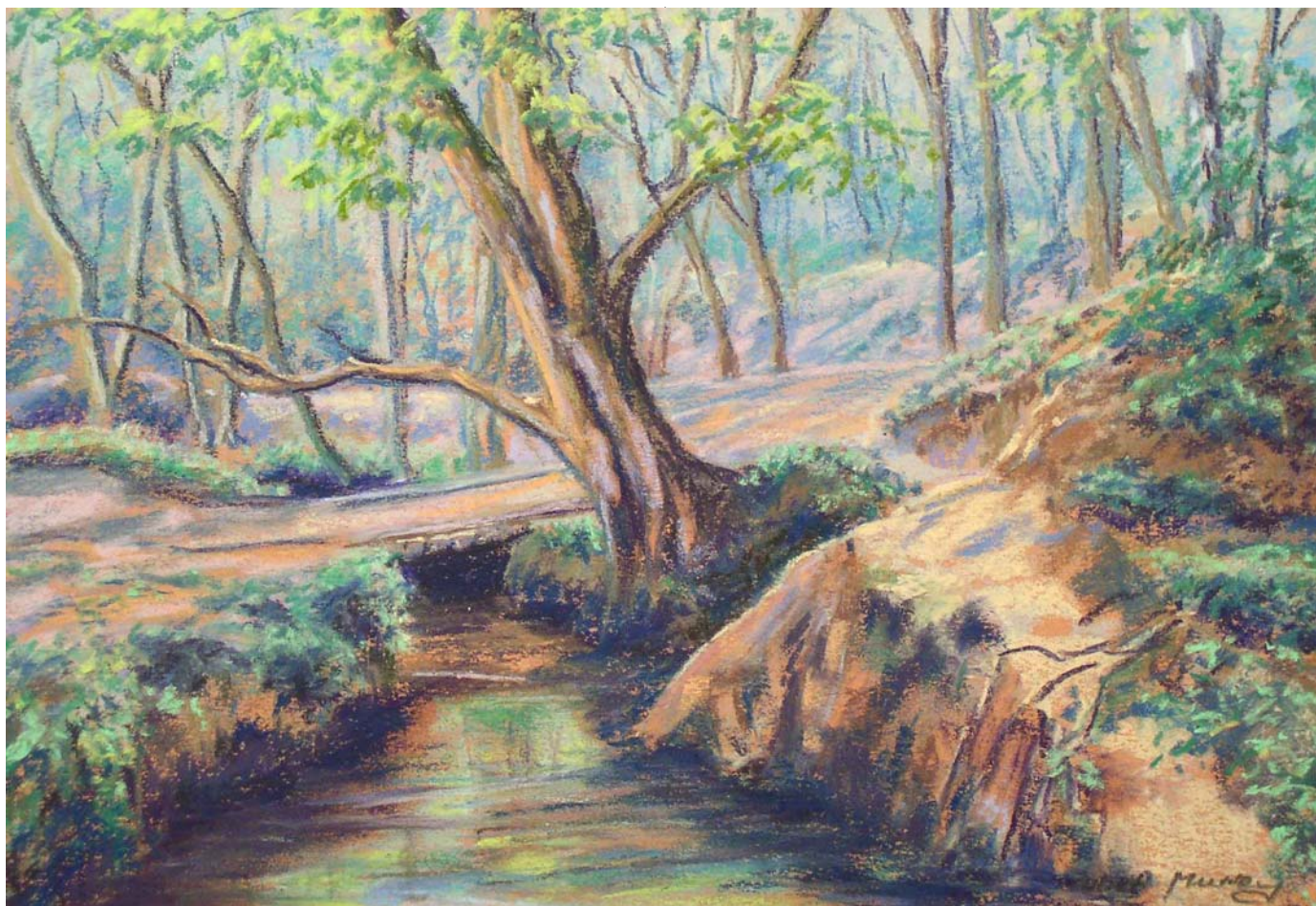
to a better level. David Willcocks has left the area but we are very grateful to his help during his brief stay on the committee.

One of the main items on the agenda was the adoption of the new, revised, constitution bringing it in line with the guidelines of the Charity Commission. The formulation of this has occupied a great deal of time and it is with great relief that I can report that it has been accepted. The main reason for tackling this task was the legacy that WIRG has been left. This needs much careful thought as to how we are to use it and any suggestions are very welcome. Of course with the word 'Research' in our title perhaps this is an opportunity for some more of this to be done. As I have mentioned before help is forthcoming if needed!

continued on page 2



**Dot Meades with her gift from WIRG
(see overleaf)**



‘Bridge near Misbourne’; pastel by Juliet Murray,

continued from page 1

I am also pleased to report that an award/grant from the Tebbutt Research Fund has been given to Simon Stevens and his community project – more of this elsewhere.

I hope to see many of you on the 29th January 2011 at the Winter Meeting in Nutley as usual. Details will be sent later.

Best wishes for a very happy Christmas and all the best for 2011.

Shiela Broomfield.

NEW SECRETARY NEEDED FOR 2011

David Brown has given notice that he will not be standing for re-election as Secretary of WIRG at next year's AGM. Members are asked to give serious consideration to offering their services for this essential office. Responsibilities include managing membership applications, organising meetings, compiling agendas and taking minutes. David has indicated that he will be happy to continue as secretary of the Field Group.

Hoathley Forge and Gloucester Furnace

It had been 25 years since WIRG had last held its AGM at Lamberhurst, and that occasion saw the publication of Cleere and Crossley's book, *The Iron Industry of the Weald*. To many members the sites of Hoathly Forge and Gloucester Furnace were unfamiliar. Fortunately, pleasant weather and the chance to catch up with acquaintances and friends led to a good turn-out.

The morning started with Jeremy Hodgkinson expounding the history and layout of the sites that were to be visited later in the day. A forge had existed on monastic land at Bayham in the 1520s, but by 1548, after the abbey had been dissolved, Hoathly Forge had been established further downstream. Alexander Collins, whose father had operated Socknersh Furnace and Burwash Forge, was the instigator, and had seen to the construction of a leat of near half a mile in length - known as the Hoathly Ditch - which diverted water from the River Teise (opinions differed as to how it should be pronounced) to provide a head of water to drive the bellows and hammer. Collins's son, Stephen, sold the site to Robert Filmer in the 1580s and it was subsequently worked by successive members of the Saunders family, whose association with the site was to be a recurring theme.



Dressed stonework outside Hoathley Farm, possibly recycled from Gloucester Furnace after it was demolished

Failing as a forge, it was purchased in 1694 by William Benge, a local ironmaster, who obtained government support to build a furnace in its place. A visit by the then Princess Anne and her young son, the Duke of Gloucester, resulted in the furnace being renamed in his honour. Benge's ownership was short-lived and, getting into financial difficulties, he was forced to sell the site to Peter Gott. It was during this period that the furnace came to cast the railings around St Paul's Cathedral. A complex set of castings, they cost over £11,000 and, at £56 per ton, were three times the cost of guns at the time. Remaining in Gott ownership, in 1725 the works were leased to Thomas Hussey and John Legas, the latter having previously worked as clerk there. Hussey already had control of the Pelham works, and he and Legas took on the other ironworks that the Gotts had inherited from Peter Farnden: Beckley furnace, Westfield forge and the boring mill at Horsmonden.

After Hussey's death, Legas went into partnership with William Harrison, and Gloucester furnace became an important gun foundry during the wars against the French that began in 1740. Blessed with a more reliable water supply than most furnaces, it was able to remain blast for over three years in the early 1740s. Legas's death in 1752 placed the works in the hands of Richard Tapsell, whose bankruptcy in 1765 caused the furnace to be operated briefly by the London firm of Wright & Prickett. After an even

brief use by a William Collens, the furnace was last in blast in the early 1780s. In 1795 the site was sold back to the Filmer family and within a few years a corn mill was built there, which was active until the 1920s.

The New Committee

Officers

President: Jeremy Hodgkinson
Chairman: Shiela Broomfield
Vice-Chairman: Tim Smith
Hon. Secretary: David Brown
Hon. Treasurer: Vivienne Blandford
Bulletin Editor: David Crossley

Other Committee Members

Judie English
 Brian Herbert (Publications)
 Tony Singleton (Website)
 Simon Stevens

Co-opted

Jonathan Prus
 (from 26 September 2010)

VISIT TO THE LAMBERHURST IRONWORKING SITES

Mercifully devoid of the need to clamber over barbed wire fences or wade knee-deep through bracken or brambles, the AGM afternoon visit was a pleasant amble along a public footpath and back.

Starting in a local farmyard, members' attention was immediately drawn to the revetting of a sandstone bank on the other side of the road, adjacent to Hoathly Farm. The shape and position of the blocks of dressed stone might, it was suggested, have been re-used from the furnace structure; the lintel from above one of the furnace arches had been brought to the same property and installed above the kitchen range. The footpath to the ironworks runs parallel to the leat that diverted the river in 1548; since the 1920s it reverts to the original river course about two-thirds along its length. The path crosses the current stream before crossing the, now-dry, 'ditch', the scale of which surprised many.

As the party neared the forge site, vegetation and farm buildings obscured the view, and a glimpse through the trees enabled the curious to see what survives of the forge pond shown on earlier maps of the area. Emerging from farmland into a neat space close to houses, the path drops down indicating the head of water that the diversion of the stream had



Jeremy Hodgkinson expounds upon the Hoathley Ditch

caused. Beyond a hedge line to the east, masses of slag could be seen in the river, indicating the site of the forge. Continuing down the track, next to a later oast-house, the Georgian dwelling that probably housed key furnace staff is built over a stone culvert (not visible but noted by the owners) that carried water diverted from the ditch down to the furnace. Passing the early nineteenth-century corn mill, the drive way runs parallel to the old head race for the furnace wheel on its west side, and the later tail race for the corn mill to the east. As the ground rose on the west side, the probable site of the furnace became apparent as a low, roughly square mound beside the track. Behind it, a small quarry was the likely source of the building stone for the furnace stack.

After much standing around and speculating about how things worked, steps were retraced to the cars.

PHYL PETTITT LEGACY

Members who attended the AGM heard that WIRG had been left a generous legacy by Phyl Pettitt, widow of former Hon. Secretary, Joe Pettitt. A cheque for £45,000 was paid into the group's account earlier this year, and the Committee is actively considering ways in which this gift can be used. Members are invited to make suggestions for consideration by the Committee. If you have an idea you would like discussed, please contact one of the officers whose contact details are on the back page.

We welcome the following new members:

John Hill, Waterlooville
Dr M Martineau, Tonbridge
Robert Turgoose, Rye

BULLETIN 31 (2011)

Articles for next year's Bulletin should be submitted to the Editor, David Crossley, by 31st March.
Contact details on last page.

ACCIDENTAL & EXPERIMENTAL ARCHAEOMETALLURGY

WIRG'S contribution to the Historical Metallurgy Society Annual Conference 2010

The theme of the 2010 Annual Conference of the Historical Metallurgy Society, 'Accidental & Experimental Archaeometallurgy', attracted 89 delegates from UK, Europe and USA. Instead of the more usual mixture of lectures and field trips for this annual event, these were replaced by eight demonstrations on the smelting of ores – all but one ferrous. Four of the furnaces successfully produced iron which was forged on site by blacksmith Hector Cole – who some may know from his regular appearances on TV smithing various artefacts.

WIRG, fearing insufficient drying time for a monolithic clay furnace, constructed a 'portable' furnace made out of 33 pre rammed clay bricks each weighing around 15kg and air dried over the previous 2 to 10 months.

The Saturday before the event saw a band of volunteers loading the half tonne of bricks into Anne and Graham's van each individually wrapped to ensure a safe journey from Pippingford to West Dean, near Chichester, some 55 miles. Once delivered to the site construction of the furnace began with the removal of turf and the levelling of a circular piece of ground about 1m diameter which was filled with 50mm depth of 20mm gravel to act as the furnace foundation. Each brick had been made tapered in shape to accommodate the circular shape of the furnace shaft. The first course was laid that afternoon with pre sieved clay brought from Pippingford wetted and rammed between the blocks to seal the joints.



WIRG's furnace - the first course of bricks laid

The next day saw the final three courses added to take the furnace to its full height of about 1m – these courses having one block less than the base course so as to produce a larger diameter hearth than the shaft of the furnace. Joints were sealed as before with rammed clay. The tuyere was put in place through the second course of blocks angled down 25° with its tip protruding 50mm beyond the inner wall of the furnace. In the base course, a block had been

deliberately omitted to provide a slagging arch, a steel lintel supporting the blocks above. Sand was placed in the base of the furnace to seal the hearth from the gravel.



The finished furnace

Three days later, and the day before the official demonstration, the furnace was fired with wood to preheat it and then charcoal and a pre-smelt carried out using 13kg of a rich palletised Swedish ore (96% Fe_2O_3) – far richer than our usual Wealden ore of about 50% Fe_2O_3 . A dense ‘nascent’ bloom resulted but this consisted mainly of what is believed to be FeO (wustite) – the stage prior to reduction to Fe. We await analysis to confirm this.

On the day of the demonstration smelt, a wood fire was lit in the furnace at 8am followed at 10am by charcoal and an air blast (10 litres/sec) to preheat the furnace to 750°C (measured about 30cm down from the top of the furnace). Charging of ore and charcoal



The sectioned bloom

at a 1:1 ratio commenced at 11am and the air blast was reduced to 5 litres/sec (supplied by an electric blower as shortage of manpower prevented the usual bellows from being deployed). 19kg of roasted Wealden ore was added in 1kg charges along with 100g of mill scale starting after charge 5. Charging took place over a four and a half hour period followed by a burn down of 45 minutes. Attempts had been made to tap off slag before the 14th and during the 18th charge but this was unsuccessful as the slag had frozen below the bloom.

The bloom was removed at 4-30pm following some hard hitting with a heavy pole to free it from the side of the furnace. A pool of molten slag was observed above the bloom during this procedure. On removal of the bloom from the furnace, slag surrounding the bloom was removed by brisk hammering and the hot bloom transferred to a smithing hearth for consolidation by Hector Cole. This proved only partially successful as Hector found the bloom ‘porous’ and difficult to smith into a useful piece of iron. Hence, it was left as a rough block for later sectioning and sampling. On sectioning, the bloom showed a high iron content. Analysis of its carbon content and slag inclusions is awaited.

Concurrent experiments were conducted by seven other experimenters: -

Gerry McDonald attempted to prove that cast iron could be produced in a bloomery furnace by using excess charcoal (2:1 C : ore) which produced an apparently solid bloom which ‘squirted’ out molten material on smithing. We await analysis to see if this was cast iron, but Hector and Gerry believe so.

The US contingent led by Lee Sauder produced the largest blooms using rich haematite ore from Cumbria, despite its high silica content of 20%. Lee blows at a very high rate, about four times WIRG’s rate, using a generator and pump and is well known in USA for his knowledge of smelting and smithing – all be it using techniques not available in antiquity.



The American team consolidating their bloom

Jake Keen (whom we had worked with some years back on a Time Team programme) demonstrated two furnaces, a small portable shaft furnace located over a pit to collect the slag and a tall (~2.5m high) furnace which he hoped would operate by convection without forced draft. In practice, the small furnace had to be destroyed to recover the

bloom as the pit had been too shallow and slag welded to the furnace base and the convection furnace required forced draft on the second day to keep it alive. The bloom, if present, has not yet been recovered from this furnace which will have to be destroyed to reach it.

Two other shaft furnaces, one smelting Yorkshire bog ore of about 40% Fe content constructed by conference co-organiser, Roger Doonan of Sheffield University, proved less successful as did attempts to smelt ores in shallow pits in the ground (bowl furnaces) by David Dungworth of English Heritage who had organised the experimental sessions and co-organised the presentations. Likewise, an attempt to produce copper matte by Roger met with only partial success.

The conference session heard 11 papers ranging from blooming experiments; the value (or otherwise) of experimental reconstructions; forging in Mali and of Anglo-Saxon swords; and the production and welding of brass – the latter for assembly of statues. The final paper summarised the work of the late Prof R F Tylecote, a founder member of HMS which grew out of the Institute of Metals in the mid 1960s.

HMS organises two two-day conferences a year in June and September. The next event will take place in Helmsley Yorkshire 4-5 June the theme of which is Royalty, Religion and Rust.

Further details of the event and HMS are available on the web site at www.hist-met.org/.

Tim Smith

THE STIANCES ARCHAEOLOGICAL PROJECT

Thanks in part to an extremely generous grant from the Tebbutt Research Fund, pupils from the village primary school in Newick, East Sussex have recently enjoyed an 'Archaeology Week' as part of a project organised by University College London Centre for Applied Archaeology (UCLCAA). The venture allowed 230 children aged between 4 and 11 years old to become involved in archaeology, usually for the first time.

The archaeological potential of the site, which survives as a series of earthworks in a pasture field called *Little Stiances*, was first identified by Fred Tebbutt in the 1970s. Recent research has shown that there had been a cottage within the field from at least the mid 18th century until its demolition in the early 20th century.

An initial geophysical survey by a team from UCLCAA confirmed the presence of buried masonry associated with the cottage and garden. Other features picked up in the survey included possible earlier enclosures.

Then came the school's 'Archaeology Week'. Members of staff from UCLCAA were able to show the children various archaeological methods including site reconnaissance, map work and finds recognition. The pupils also helped one of UCLCAA's surveyors with a topographical survey. And last-but-not-least, the children embarked on the closely supervised archaeological excavation of a number of



Children from Newick discovering

test-pits.

Finds from the test-pits included a range of pottery dating from the 15th to the 19th centuries, large quantities of brick and tile, and an assortment of other artefacts, such as clay pipes and a scatter of Mesolithic flintwork. Finds of particular interest to the children included a half penny of George III (dated 1770-5), a Victorian clay marble and a heavily corroded padlock, although all finds were greeted with an infectious enthusiasm (especially pottery "with patterns AND writing on it" to quote one pupil!).

In terms of academic significance, the recovery of Mesolithic flintwork was of particular importance, and fits a pattern of hunter/gatherer activity in the region based on the system of river valleys. The presence of 15th century pottery confirms the longevity of more permanent habitation. Unfortunately there was no direct evidence of ironworking at the site.

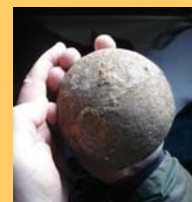
A public Open Day was organised to allow visitors to look around the site and see what had been uncovered. Despite poor weather, there were nearly 200 visitors, mostly family groups consisting of an old site hand, siblings and mum and dad who came along to be shown which hole "I dug" and what "I found".

There are a huge number of people to thank for their help. Firstly an enormous debt of gratitude is owed to John and Catherine Sclater for allowing access to the land and for their continued support throughout the project. Thanks are also due to local historian, Tony Turk for sharing his extensive knowledge, to Luke Barber of the Sussex Archaeological Society for examining the finds, and to Mrs Thomas, the Headteacher and all the staff, parents, relatives, and pupils from the school for all their hard work.

Simon Stevens

A HISTORY OF THE WORLD in 100 objects

One of the objects suggested by members of the public is this cannon ball found near Biddenden Hammer Mill, Kent.



FIELD GROUP REPORTS

Foray to Devil's Gill and Lakestreet Wood Gill February 2010

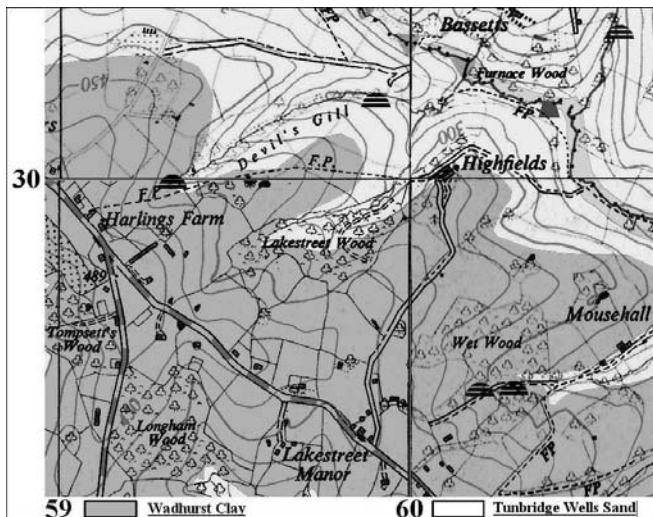
After many weeks of abysmal weather and two cancelled forays, this one started out sunny and frosty. It was fortunate that we could park 13 cars only a few yards below Devil's Gill.

Two bloomery furnace sites are recorded on the WIRG database beside Devil's Gill stream, both undated and without a description. The lower bloomery site was rediscovered, but with great difficulty. Several pieces of slag were found on the right hand bank, but at first its source could not be located. After much probing around the area, a bed of slag was probed about 1 ft. below bank level (relative to field level), and is at the extreme limit of the metal detector. It is thought that this is the bloomery furnace site, although without spades the deep slag could not be reached; in any case, we had not asked for permission to dig. It is thought that the two are one and the same.

On continuing up Devil's Gill it soon became apparent why it had acquired this name; it turned into a deep, steep-sided gill, although not as steep-sided as the one in Sandyden Wood (see Autumn 2009 Newsletter). Due to the gill's steepness it seemed very unlikely that it would have been possible to operate a furnace here, nevertheless, many charcoal sites were seen, all close to the top of the gill's banks; not unreasonable considering that a level platform is vital.

After negotiating almost to the top of Devil's Gill with many isolated pieces of bloomery slag found in the stream, no source could be found. As it seemed likely that we were now on land belonging to Harlings Farm, for which we did not have permission, we did not continue searching.

On heading towards Lakestreet Wood Gill, a patch of slag was discovered beside a mine pit (see map), and even rolling down the side, a most unlikely situation as well as being on the corner of three field



Map of foray area, showing geology and sites

boundaries. Further investigation into the field to the south, using the metal detector, suggested that it was likely to be the floor of a barn, long since gone, because of the abrupt cut-off of the slagged area. On further investigation on Google Earth it was a surprise to see the outline of a barn at this exact point. The Harlings Farm bloomery was not found, probably because it was beyond the Highfields Farm's boundary.

At this height the geology changes from Ashdown Sand to Wadhurst Clay, see map, this undoubtedly accounts for the many large, water-filled pits. However, considering the potentially large amount of ore available, there seem to be no significantly eroded tracks from this area towards Coughshopley blast furnace to the E-N-E, nor to Mayfield furnace only 2 m to the south in the opposite direction.

We made our way eastwards to the bifurcated gill in Lakestreet Wood, again quite steep-sided and deep, but surprisingly no sites were found, even after checking along the easternmost gill.

Brian Herbert

Sectioning the Penhurst to Ashburnham Leat at Penhurst Furnace April 2010

The WIRG foray group of ten members undertook a dig for its final meeting of the 2009-10 season, on a glorious sunny day proving that spring may have arrived at last. WIRG's digs usually investigate bloomery furnace sites to search for dateable pottery. If charcoal is found buried deep in the slag, this may be sent to a university which specialises in carbon 14 dating, but on this dig we might just find a clay pipe. This latest dig took place on the course of the (now) well-known Penhurst Furnace to Ashburnham Furnace leat, dug around 1721.

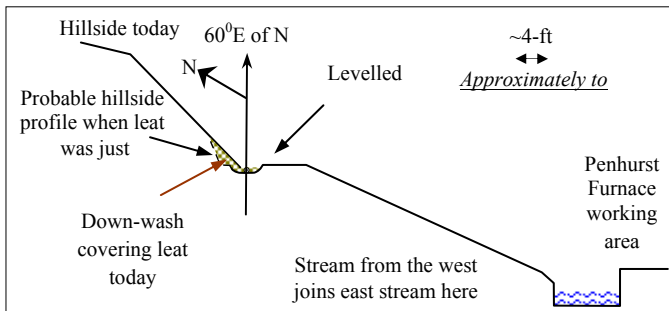
It was decided to dig the first sections near the start of the leat because, at a later date, the difference in height of the two ends of the leat will be measured using a sophisticated GPS system for which the bottom of the leat must be located at both ends.

The unstable nature of the geology of this part of the leat, towards the bottom of a steep, Wadhurst Clay-based bank meant that the choice of location for the dig was limited. In another 50 years or so this first part of the leat may have collapsed completely. There is also a stratum of sand at the top of the bank and this may also be seen in the field to the south, across Penhurst Lane.

Two sections were dug across the leat, located on the Beech estate, some 25m downstream from the earthen causeway (forest track) over the Ash Bourne stream. Before the leat was dug, the river bank rose steeply up to the north and necessitated a wide, (almost) level platform to be dug into, and along, the hillside to hold the leat; this technique is also seen at other parts of the leat. As very few leats have been sectioned, by digging these two sections simultaneously some 3m apart, the learning curve

would be steeper; it was reasoned that information learned from one section could be corrected in the other. To minimise damage to the leat each section was made only 1m wide (along the leat), leaving the leat's width and depth to be measured from the section; from this data the water flow-rate may be calculated, (although the leat's slope will still have to assumed), using the Manning equation, formulated by Robert Manning, 1816-1897, an Irish civil engineer. Unfortunately, the actual height of the leat's water cannot be determined and this will have to be an educated guess; the only clue being that the water would not have overtopped the bank otherwise it would have eroded the edge.

Initially progress was easy, just clearing away many years of leaf litter, but it soon became clear that some 400mm of the leat's width was partially filled by many years of downwash from the steeply rising bank to the north. It is possible that, initially, the bank may have been dug yet further back to reduce the effect of this downwash,



Idealised section through the landscape at the leat dig (view against flow)

Fortunately for the navvies digging the leat, the underlying soil was Wadhurst Clay, so puddling was a simple matter, but not so fortunate for the modern diggers who found clearing away this claggy clay (then later putting it back again) time consuming to say the least, and this meant that a third leat section could not be undertaken on the Ashburnham estate. The stratum of sand mentioned earlier is quite close because when digging the clay it was felt to be very gritty. Fortunately, the two leat sections compared very favourably and a working sketch and notes are reproduced at the end of the article.

Only a proportion of the Ash Bourne's water fed the leat, although the bay and pond initiating the leat was probably destroyed by the earthen causeway already mentioned. More leat water was contributed by the nearby stream from the west, further along the leat, as well as several very small streams crossing the leat's path, but these only in the wetter months. From these arguments it is probable that the leat's dimensions will not vary much along its course so making it unnecessary to dig many more sections. However, one more section where the leat passes through the Ashdown Sand would be useful to study how puddling was managed on a porous soil. A final section close to Ashburnham Furnace will be necessary so that the overall fall of the leat may be

measured. To this end, a marker has been left at the dig to indicate the bottom of the leat and this will be utilised when using the GPS system to measure the leat's total fall.

Brian Herbert

ORDNANCE NEWS

News of two pieces of Wealden iron ordnance has appeared in the pages of the *Journal of the Ordnance Society* (vol. 20, 2008).

The first concerns a gun in Karatsu Castle in Japan, which may have been recovered from the wreck of a ship that ventured into Japanese waters in 1644. It is 8 ft. (244cm) long and has a bore of just over 4 ins. (10.5cm), making it probably a saker. On the first reinforce is cast a coronet above a garter encircling a wyvern, the badge of George Clifford, Earl of Cumberland (d. 1605). John Stow, the Elizabethan chronicler, records the making of 42 cast pieces of great ordnance for the earl's ship, the *Malice Scourge*, by Thomas Johnson, the Queen's gun founder who was working at Horsmonden at the time. The earl of Cumberland's ship, later known as the *Red Dragon*, changed hands before the earl's death and travelled to the East Indies, falling into the hands of the Dutch who made use of her before she was no longer sea-worthy, and her weapons were transferred to other ships; which is possibly how the gun ended up in Japan.



The Stirling Castle gun on display at Ramsgate Maritime Museum

The second piece of ordnance is nearer home. The *Stirling Castle*, a third rate ship of the line, was built in the 1670s and saw action with the fleet at the Battle of Beachy Head in 1690. She was wrecked on the Goodwin Sands in a violent storm in 1703, and lay there until her remains were discovered in 1979. Over the ensuing years the wreck was investigated when the shifting sands allowed. When disintegration was noted one of the guns, a 32 pdr. demi-cannon, was raised and landed at Ramsgate. After stabilisation

and desalination, the gun and its carriage were to be separated and work began on removing the concretions from the gun barrel. It soon became apparent, from the gun's number and from the reddish colour of the barrel that this was one of 'Prince Rupert's Patent Guns'. These 'turned and neiled' guns were an experimental type made in the late 17th century from a design by Prince Rupert. They were very expensive and, although of high quality, were eventually found not to be sufficiently superior to ordinary cast-iron guns to merit the government paying the large sums for them. The Brownes, who operated out of Horsmonden, over-committed themselves to their manufacture and got into financial difficulties when the Office of Ordnance stopped buying them. The *Stirling Castle* gun, was one of a group mortgaged to Thomas Western by Mary Browne to realise some capital. It can be seen at Ramsgate Maritime Museum.

A recent correspondent has sent details of an English iron gun outside the entrance to the palace in Mandalay, Burma (or Myanmar, as they like to call it these days). Again, it is a demi-cannon of 9½ ft. weighing 57 cwt. 0 qr. 8 lb. It has the cipher of George II and the crowned 'P' proof mark indicating it was not for government service. Given its location, it is likely that it belonged to the East India Company. Of particular note is the 'W' cast on the trunnion, indicating that it was made at Waldron Furnace. Waldron was operated by John Legas, who was in partnership with William Harrison, and it is interesting that the furnace seems to have been capable of casting guns of that size.

JSH



The crowned 'P' mark of the Woolwich Arsenal proof

THE WEALDEN GLASS PROJECT

Tom Munnery writes:

The Wealden Glass Project is starting to gather some momentum again after the break of last year.

Stage one, a desk based assessment of the area, was completed last year, giving us a clearer idea of what some of the sites may be able to offer us archaeologically.

Stage 2 is looming upon us, which will involve a walkover, fieldwalking, topographical survey and geophysical work over a selection of the sites. This

will lead to further work (probably in the form of excavation) on a selection of these candidates later on in 2011.

Precisely which sites will be surveyed in Stage 2 depends on a number of issues, including access. I attach the full list. The immediate priority is to try and arrange work on the arable sites, as listed below (work on the pasture and woodland sites will wait until February/March 2011).

Understandably for the land owners of these sites, they would not like a group of people walking over their land without their permissions. **We are therefore asking whether any of you have any information on the land ownership of the sites listed below, as we know some of you have recently worked in the area on projects. If you could let us know if you have any information it would be greatly appreciated so that we can commence with the work as soon as possible.**

The list of potential arable sites currently stands at:

Imbhams, Chiddingfold SU 9275 3362
 Prestwick Manor, Chiddingfold SU 9727 3521
 Glasshouse Lane, Kirdford TQ 0081 2367
 Lyons Farm, Kirdford TQ 0026 3137
 Burchetts, Wisborough Green TQ 0497 2853
 Gunshot, Wisborough Green TQ 0360 2909
 Malham Farm, Wisborough Green TQ 0650 2955
 Lordings Farm, Billingshurst TQ 0765 2445
 Steepwood Farm, West Chiltington TQ 0800 2228
 Primrose Copse, Loxwood TQ 0575 3311
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VOLUNTEER WORK WITHIN THE KENT HISTORIC ENVIRONMENT RECORD (HER)

The Historic Environment Record for Kent is the prime county record for information on archaeological sites, historic buildings and landscapes, archaeological events and sources. It is maintained by Kent County Council in Maidstone and consists of over 42,000 records, stored in a computerized database and linked to a mapping system.

The information in the HER comes from a range of sources - archaeological projects carried out as part of the development control system, academic and other researchers, national projects and casual or chance discoveries. Similarly, it is used for a range of purposes - to inform planning decisions and archaeological projects, as a basis for archaeological research and for education, public access and outreach projects.

An enormous amount of new archaeological

work is carried out each year - we receive over 350 archaeological reports per year in addition to the results of a large number of research projects. All of this information needs to be added to the HER so that it is accessible for those who want to use it.

Kent County Council is looking for enthusiastic volunteers who would be willing to help add this information to the HER and thereby play a critical role in the conservation of Kent's heritage. We are also aware that some volunteers will have extensive knowledge of their own and we hope that they will feel able to add this to our existing information.

What would I do?

Volunteers work within our HER team, helping to create new HER records from our resource of archaeological reports. We provide full training (no prior experience is assumed) and support during your volunteer period. You work through the archaeological reports, compare them with existing records and, as appropriate, either add information to existing records or create completely new ones. Most of this work is based on the reports alone, but sometimes it is necessary to use aerial photographs, historic maps or other documentary sources to enhance the record.

What would I learn?

Lots! Volunteers wishing to make a career in archaeology will gain vital experience at working with a real HER in a busy county Heritage team. They will learn about the thinking process behind HERs, the software used and how information is gathered and managed. Volunteers who are just interested in making a contribution to Kent's heritage will learn about the very latest archaeological discoveries in the county, much more about their own area or theme of interest and how a busy county unit operates.

Who can volunteer?

Anyone with an interest in the heritage of Kent and an understanding of UK archaeology. You might be an undergraduate studying archaeology, a member of a local history or archaeology society, a graduate or archaeologist looking for more experience or a member of the public with good knowledge of the past who wants to become involved in Kent's heritage in a meaningful way.

How can I find out more?

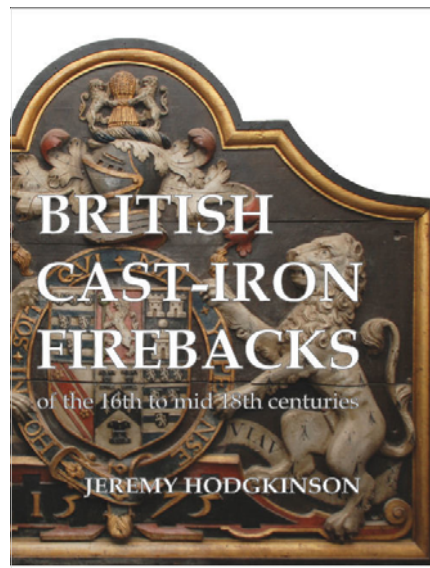
To learn more please contact me at the address below and I will be happy to chat to you or to welcome you if you'd like to make a visit first.

Ben Croxford
Historic Environment Record Officer Heritage
Conservation Kent County Council
Invicta House
County Hall
Maidstone
ME14 1XX

Tel: 01622 223528 Ben.croxford@kent.gov.uk

DAY COURSE THE IRON INDUSTRY OF THE WEALD

Saturday 5th March 2011
Tonbridge Adult Education Centre; 10am to 3pm;
£35; Course Code 7017 TON-10-D;
Course Tutor: Jeremy Hodgkinson, MA, FSA
For further details, contact
Kent Adult Education, Head Office, College
Road, Sittingbourne, ME10 1LF; 0845 606 5606.



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DATE FOR YOUR DIARY

WIRG Winter Meeting
Saturday 29th January 2011
Further details to follow

TEBBUTT RESEARCH FUND

Grants are available towards 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. The applicant should write a letter giving details of themselves together with relevant information concerning the research envisaged.

Applications to the Hon. Secretary**WIRG CONTACTS**

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EDITOR'S NOTE

Thank you for your contributions and please keep them coming. Newsletters are published in March and November each year. Items for publication, normally not exceeding 500 words, should be received by 14 February and 14 October, respectively, for inclusion in the forthcoming issue. Please send by email preferably, by CD or hard copy; I can work with most PC formats. Line drawings and photographs are welcome (colour or monochrome; the newsletter is printed in monochrome but appears on the internet in colour). Please send them separately, not embedded in the text. Digital images need to be at least as big as their expected published size, ideally at 300 dpi or more.

PUBLICATIONS FOR SALE

	PRICE	
	BY POST (UK)	AT MEETINGS
<i>The Wealden Iron Industry</i> , Jeremy Hodgkinson (2008)	17.20*	15.99*
(discount price- 1 copy per member)	12.00*	12.00*
<i>The Iron Industry in West Hoathly</i> , ed. K. Coutin	6.50	5.50
<i>Excavations of a Late 16th./Early 17th. C. Gun Casting Furnace at Maynard's Gate, Crowborough, Sussex, 1975-1976</i> , O. Bedwin.	1.90	1.50
<i>A Middle-Saxon Iron Smelting Furnace Site at Millbrook, Ashdown Forest, Sussex</i> , C.F. Tebbutt.	1.60	1.20
<i>The Fieldwalker's Guide and an Introduction to the Iron Industries of the Weald</i> , B.K. Herbert.	4.00	3.50
<i>Guns Carried on East Indiamen, 1600 – 1800</i> , Ruth Rhynas Brown.	1.50	1.00
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<i>Parson Levett and English Cannon Founding</i> , Brian G. Awty.	2.50	2.00
<i>Metallurgical Analysis of Ferrous Alloy Produced in a Primitive Furnace</i> . R. C. D. Sampson & B. K. Herbert.	5.00	4.00
<i>The Penhurst to Ashburnham leat: a first foray + map</i> (2007)	2.00	1.50
<i>The Penhurst to Ashburnham leat: a second foray + maps</i> (2007)	2.00	1.50
<i>The Penhurst to Ashburnham leat: the flow rate + graphs + map</i> (2007)	3.00	2.50
<i>Fernhurst Furnace</i> . Chichester District Archaeology No. 2, J. Magilton (ed.).	13.70	12.00
CD of Series 1 <i>Wealden Iron Bulletins</i> , Vols. 1 to 17, with searchable index.	6.00	5.00
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<i>Index for Wealden Iron</i> , Bulletin of the Wealden Iron Research Group 1st ser. Vols 1-17 and 2nd ser. 1-20	2.50	2.00
Publications are available from the Publications Officer, Brian Herbert (see Contact List above)		
Cheques payable to WIRG (except where marked* - payable to J. S. Hodgkinson)		