



NEWSLETTER 58 AUTUMN 2013

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YOUR NEW CHAIRMAN

Although I joined WIRG some 20 years ago and was soon elbowed onto the Committee its taken me all that time to get to the top!

I am Tim Smith, a metallurgist by training but have been editing a steel magazine for the past 25 years – a post I retired from this November which should give me more time for my industrial archaeology activities.

These are numerous, as well as being active in WIRG on the Committee and the Experimental bloomery furnace and Forays I am also on the Council of the Historical Metallurgy Society, the Trevithick Society and a member of the Dartmoor Tin Research Group (my early stamping ground – a pun worthy of our past chairman Sheila Broomfield who has ably led the group for the past several years). I recently dropped out of the Peak District Mines Historical Society – I simply ran out of shelf space to keep all the publications.

We are making plans to reintroduce forays which were neglected this year – not because with 450+ bloomery sites located and 178 water powered sites recorded there is nothing more to find – but because we were running out of sufficiently mobile (on legs) members to help with the field work. Consequently we plan to concentrate on a few specific areas of known iron activity looking at the landscape as a whole to understand how these sites operated e.g. routes too and from the site, location of ore, where the charcoal was made and, in the case of water powered sites, where the water came from. If getting cold and wet (or sunburnt this summer) in the

field is not for you then there is plenty of scope to look at documentation of blast furnace and forge sites, relating to these activities and the people who ran them. Several sites have been proposed with Robertsbridge blast furnace and forge near Salehurst dating from 1541 and still standing in 1793 being selected for detailed analysis but other sites include Coneyhurst Gill, where the existence of a forge has been suggested, and Huntsbank Wood where we will be looking for a bloomery (or two), under the professional eyes of Judie English and Vivienne Blandford respectively. You can look these sites up on the WIRG database www.wirgdata.org maintained and populated by our President, Jeremy Hodgkinson and Committee member Jonathan Prus.

If you like hot metal, come and help with smelting iron at our bloomery furnace at Pippingford which Brian Herbert among others maintains. We are also advising on the activities of the Rural Life Centre at Tilford where they have built a half-scale blast furnace typical of the type operating on the Weald, constructed from drawings made by the late Reg Houghton from excavations and a WIRG visit to extant Walloon furnaces in Belgium. If you missed the visit to the Tilford site you can see the furnace in operation at www.youtube.com, and sometime in the future on BBC TV in a sequel to the Victorian, Edwardian and Wartime farm series – this time The Tudor Abbey Farm (pity no Abbeys operated blast furnaces but who's to let the truth get in the way of 'good' TV).

So there are far more activities within the group than the Summer and Winter talks and we are open to suggestions from members on topics or sites you want to investigate.

Tim Smith

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This year has seen the passing of two distinguished members.

Peter John Ovenden

1929-2013

Peter Ovenden's name featured regularly in early issues of the WIRG Bulletin. His day job, in the Department of Chemistry at Southampton University enabled him to bring to WIRG scientific skills, much needed for the fledgling group. He lived close to the western part of the Weald, which was home to few other members in those days and he convened a local field group to examine some of the more westerly ironworking sites. His published site records were models of clarity. He served a time on the Committee and was actively involved in the group for at least eight years.

Brian Gordon Awty

1925 – 2013

News of the death of Brian Awty, at the age of 88, was no surprise to those who knew that he had been cruelly incapacitated by a stroke three years ago but, in his passing, students of Wealden iron have lost a remarkable scholar. His unravelling of the family connections of the ironworkers who brought the technology of the direct process to the Weald is known to many, but the full extent of that research is yet to be published.

After war service in the Indian Army, Brian gained a degree in German and Spanish at University College, London, before returning to Sheffield as archivist for Newton, Chambers & Co., where his interest in iron began. He then joined Lancashire Record Office, in Preston, and his first published work on the iron industry dates from that time. Following this, he was a librarian at the British Library of Political and Economic Science at the London School of Economics until 1982. Brian's early writings were on aspects of the iron industry in the northern counties, but during his time in London he became acquainted with the Weald and from this grew his interest in the continental origins of the ironworkers there, and of the wider development of the iron industry in late-medieval western Europe. His knowledge of languages enabled him to tackle the archives available in continental collections, opening up a huge body of information.

Brian served on the WIRG Committee for a short time and was the Group's President for a term. He contributed eleven articles to the Bulletin, his 1984 paper in the Bulletin on the foreign ironworkers in the 16th century Lay Subsidies being essential reading. He will be particularly remembered for his instigation of, and



Brian Awty (centre) and the WIRG group at Le Vaumain, Pays de Bray, 1989

participation in the two continental forays that members undertook, to the Pays de Bray in Normandy in 1989, and to the Ardennes in 2005. His knowledge was prodigious and on one occasion, during a visit to France for a proposed European Union project linking Mid-Sussex District and the Department of Seine-Maritime, those present witnessed Brian, speaking impeccable French in his Yorkshire accent, addressing a room full of rapt local dignitaries from the Pays de Bray on the iron industry that had been carried on in their Communes, a subject of which few had any inkling.

Brian wrote many papers on his research, in French as well as English. His work has been of great interest to genealogists, and he was always willing to field enquiries about iron-working families, replying in copious detail. He will be fondly remembered, but his work will be his greatest legacy.

SUMMER MEETING 2013

With the weather mercifully giving some respite from the high temperatures of the previous fortnight, 35 or so members assembled at Stonegate Village Hall on Saturday 20th July. After coffee, Brian Herbert gave a presentation on the 14th century canal postulated along the Rother valley west of Bivelham Forge, which was to be the subject of the afternoon visit. He explained the scant evidence for the canal, which may have extended the navigable reach of the Rother nearer to Mayfield, where the archbishop of Canterbury had one of his residences. The large consumption of Gascon wine apparent in the archbishop's household, and the transportation of the fragile casks in which it was stored, may have provided the motive for such an undertaking. The construction of Bivelham Forge some three centuries later may have utilised part of the canal to form a leat to supply water in what was essentially a wide valley unsuitable for the traditional pond bay. Passages from the forge accounts of the Pelham family

illustrated aspects of waterway construction and maintenance and prompted considerable discussion. Tim Cornish had collaborated with Brian in the research for the presentation, but was not able to attend the meeting.

ANNUAL GENERAL MEETING

The President, Jeremy Hodgkinson, opened proceedings and, in turn, introduced Shiela Broomfield and Vivienne Blandford, who presented their reports, respectively, as Chairman and Treasurer. The President was elected for a second term of three years, and the officers and committee were elected, *en bloc*, for the ensuing year. Their names are given below. Tribute was paid to Shiela who was stepping down as Chairman after eight years in post. The President urged any members who felt they could contribute to the management of the group to make themselves known to any of the committee as co-option was available as a precursor to election. Other business included a question about the way in which the group would be using money from the Pettitt legacy. In response, the President referred to the enhanced online sites and people database, to the support being given to the Rural Life Centre at Tilford, to opportunities for further excavation, and to the recent death of Brian Awty, a distinguished member and former president of the group, whose unpublished work on the development of the iron industry from its origins in Sweden and Germany through to Britain and beyond was a suitable project for WIRG support.



Brian Herbert addressing members on the site of the postulated canal at Bivelham

VISIT TO BIVELHAM FORGE

After an agreeable buffet lunch, members departed in the direction of Mayfield for a walk along the course of the canal and leat that Brian Herbert had described in the morning. The pleasant weather and easy terrain meant that many members felt able to enjoy the stroll, taking the opportunity to speculate on the earthworks they saw and engage in discussions along the route.

The New Committee

Chairman: Tim Smith
 Vice-Chairman: Alan Davies
 Hon. Secretary: Judie English
 Hon Treasurer: Vivienne Blandford

Shiela Broomfield Jonathan Prus
 Brian Herbert Tony Singleton
 Simon Stevens

ASHBURNHAM FURNACE

A significant anniversary escaped notice earlier this year – the bicentenary of the final blowing-out of Ashburnham Furnace on or about the First of March 1813. It was the last time that local iron was commercially cast in the Weald. Tragic circumstances marred the occasion when a six-year old boy, William Jones, died from alcohol poisoning. Jones's fellow worker, William Hobday, himself only 10 at the time, recalled the occasion in old age to the vicar of Penhurst, shortly before his own passing in 1883. The last surviving Wealden ironworker, he remembered the founder, William Rummins, whose initials appear on one of the last products of the furnace, a fireback, cast that same year and now preserved at the Furnace. The very last castings, also firebacks, are in the Manor House, Penhurst.



An 1813 Ashburnham fireback with the initials of William Rummins, the founder

FACE THE IRONMASTER

**Sir Henry Neville
 (1564-1615)
 Owner of Mayfield
 Furnace**



Hear more about him at the next Winter Meeting

WHAT HAS BECOME OF THE "ROBERTSBRIDGE PROJECT"?

The first field work starts in December. Instead of looking at individual sites, in isolation, we aim to look at the whole gamut of resources that iron makers used, primarily during the blast furnace period but also the bloomery period. This starts with the iron making sites, because that is the easy part, but will include ore extraction, charcoal production and the transport systems.

The choice of Robertsbridge as the study landscape was not altogether arbitrary. Factors influencing this choice include the fact the members have already (on an individual basis) started investigation; also it is an area with a blast furnace and a forge site. But most importantly it is the subject of an extensive documentary record – the Sidney accounts, some of which were published by David Crossley in 1975. It is also a multi-period study with Roman and undated bloomery sites in the area. There are no documentary records for the earlier periods. But what defines the "Robertsbridge area"? It would be rash to define this before the project has started because some factors such sources of ore and product distribution are partly unknown. A better approach seems to be to use the historical and archaeological evidence of the early modern blast furnace system as a starting point.

Study methods

We will stick with the tried and tested methods of fieldwork that have served so well in the past, but also try to integrate the fieldwork with other methods. In particular we would like to match each foray with other activities including archaeological excavation and desk-based studies of maps and documents. One of the outcomes of this study will be an electronic (layered) map of the iron-relevant features.

Water management features

There are three valley systems feeding into the study area that relate to the Robertsbridge blast furnace and forge. The most obvious of these is the Rother, with its tributary the Dudwell, both of which have leat-like features leading from other forges. A second stream system (the Darwell and Glottenham) join the Rother close to Robertsbridge. It is possible that the Rother is centrally important as the route out for most finished goods. The third starts near the Wimbletotts Wood bloomery site and fed Robertsbridge blast furnace and probably the forge as well.

Mine pits

Only one area of mining in the Weald has been thoroughly surveyed – Tugmore Shaw in Hartfield, in 1987. We now have an opportunity to tackle a larger mined area with mining activity in a number of clearly separated areas. We also have a fair chance of showing how these mines were connected to the ironworks by tracks and roads.

Woodland features

Charcoal production areas will be mapped (where possible). Woodbanks and woodland roads and other boundary features are relevant to both ore extraction and charcoal production. Noting ancient coppice structures may help understand early-modern woodland management in iron producing areas.

Place name research

Because of David Crossley's work we can link a number of woods and fields to minepits and charcoal production via the Sydney Ironworks accounts. There is another fair sized project extracting data from the tithe maps. Similarly the old OS maps are a potential source of relevant data.

Excavation

The wood at Scots Hollow (part of the larger Lordship Wood area) contains a fascinating feature associated with bloomery furnace debris. The mystery feature has characteristics that are consistent with bloom-smithing, but no such site has been excavated in Britain so we do not know, in advance, what we are looking at. The wood is owned by a WIRG member who wants to see it properly excavated. Judie English and David Lea will provide experienced leadership for this dig, probably in May and June 2014.

Although two small shaft minepits have been excavated and a number exposed in section at Sharpthorne brickworks, no large Wealden minepit has ever been sectioned. It would be really nice to find a landowner prepared to allow such a dig. There is a problem with this idea: almost all known large (and indeed small) minepits are surrounded by trees whose roots would make cleaning and interpreting the sections rather difficult. If these problems could be overcome we might try and find out how big pits were managed, what happened to the spoil and whether we can find any evidence of seasonality in the mining activity.

In addition to formal excavation there are iron-working residues on the surface in many of the places referred to. Collecting samples for identification and mapping their distribution will be a key part of the programme.

Judie English, Brian Herbert, Roger Houghton, Jonathan Prus, Bob Turgoose

Activity dates:

Forays:

- ◆ Dec 14th (locating and mapping features in the Lordship Wood area)
- ◆ Jan 11th 2014 (as December)
- ◆ Feb 15th (locating water management features downstream from Wimbletotts Wood, minepits and charcoal production in the Vinehall Forest)
- ◆ Mar 8th (as Feb., working from Salehurst upstream)

Excavation days: *Planned for May/June 2014, dates to be agreed later.*

Contact for times and rendezvous details:

jonathan@avens.co.uk

EXCAVATIONS IN THORPS' WOOD, BREDE, EAST SUSSEX

For three weeks in April 2014 a small but varied and dedicated group of volunteers braved the initially very wet conditions in Thorp's wood and were rewarded with some interesting discoveries and some fine weather towards the end of the dig.

Iron working site

The excavations at the iron working site were carried out on a 'promontory' like piece of woodland between the confluence of two small woodland gill like streams and concentrated on the 'hot spots' that had been targeted in the earlier geophysical survey and initial test pits last year.

All of the trenches at this location revealed a considerable amount of slag, the waste product of the smelting process, a few pieces of burnt clay furnace lining, roasted ore and a few pieces of dateable pottery.

The few finds of pottery and ironworking debris initially suggest an early (1st to 2nd century AD) date which conflicts with the coin that was found slightly upstream and was of a much later date (364-378 AD).

In Trench 1, a good deal of slag and areas of burnt clay and charcoal were carefully removed and the different layers recorded until the final layer revealed the bases of two iron smelting furnaces, one above the other. It is likely that there were more furnaces in this location owing to the amount of slag, furnace lining and burnt material but they had not survived as well as the two in Trench 1. An unusual gully type feature was also found running across in front of the furnaces, and had been filled in with slag.



The bases of two bloomery furnaces in Thorp's Wood, Brede

Charcoal Platform

Two dedicated volunteers were responsible for excavating a long trench which stretched for roughly 12 metres across the centre of a charcoal platform. A shallow layer of top soil in which bluebells were growing was removed from the top surface which

indicated that this was not a recent event as the bluebells had had time to re-colonise. Charcoal and darkened soil was spread across the length of the trench and pieces of charcoal were collected for C14 dating and checking for the species of wood used. We might be able to see whether the charcoal platform was used over a long period of time or represents a single use. The charcoal platform had been levelled and trees roots had broken into and disturbed the bottom surface of the platform. Charcoal platforms are rarely excavated and the results will be useful in the study of these features.

This was once a busy location with several furnaces in a relatively small area, and sadly not much remains of the furnaces themselves as they were relatively fragile structures. However we have collected some good dating evidence and we await with interest the results of these tests.

Vivienne Blandford

UPPER WILTING FARM, CROWHURST, EAST SUSSEX

Archaeologists from Oxford Archaeology, working along the route of the Bexhill-Hastings link road, have revealed evidence of a late-Iron Age/Romano-British ironworking site with an associated settlement immediately north west of Upper Wilting Farm. Excavations of the iron site are at an early stage, but sections have already been dug across a substantial slag heap, which is at least 0.8m deep in places. Potential remains of several bloomery furnaces have also been identified and some large flows of slag.

Full advantage is being taken to engage the services of a metallurgical expert at an early stage. The opportunity to fully excavate a site should be hugely useful in revealing details of the processes and chronology involved.

The area around Upper Wilting Farm is rich in the remains of ironworking from the late-Iron Age and Roman periods, with the sites at Beauport Park, Crowhurst Park, Fore Wood and Bynes Farm nearby.



One of the exploratory trenches into the slag heap along the route of the Bexhill-Hastings link road.

SOME CAST-IRON GRAVE SLABS FROM SHROPSHIRE

In the *WIRG Newsletter 57* a number of cast-iron graveslabs from areas beyond the Weald were listed, including a number from Shropshire. A recent visit to Ironbridge provided the opportunity to record a few examples.

At St Lawrence church Little Wenlock (SJ 647068) there are three slabs. One is set into the floor of the original chancel and seems to be the earliest known from Shropshire. It is a very small slab, only about 0.85 by 0.45m, hence presumably for a child. The raised lettering 1611 R^{BF} is repeated at each end of the slab. It is not known to whom the initials refer. At this date the nearest contemporary furnaces are all over 10km distant - could this suggest that there was an unrecorded early furnace, perhaps somewhere in the Dawley area, where ironstone was being mined in the early 17th century?

Outside the church are two adjacent slabs, both with finely incised lettering, but difficult to read because of moss and bird droppings. One is in memory of Elizabeth Fletcher (died 1762) and her husband William (died 1788, aged 90 years). The second records three generations of the Baynon family of Coalmoor, about 2km to the east: Sarah (died 1790, aged 62 years), Richard (died 1886, aged 35 years) and Mary, presumably his mother (died 1893, aged 80 years). This slab is decorated with swags along the top and roundels in each bottom corner.



Little Wenlock, Shropshire, graveslab of 1611

At St Peter church Wrockwardine (SJ 625121) just north of the old A5, there are also three slabs. One is a very fine slab with moulded edges, on a table tomb, well cast with raised letters. This records the death of John Ferriday of The Trench in 1833, aged 65 years. The Trench is an area some 7km to the east, north of an area called Wrockwardine Woods, where two coke furnaces have been recorded, but they seem to have closed by 1830. John may have been a descendant of the Fereday/Ferriday family, who had extensive interests in the iron industry, though their business had collapsed by the early 19th century. However, Ferriday is a common Shropshire surname.

A second slab with carefully incised serif lettering is in memory of the daughter of Alan Parton,

who died in 1769 aged one year and one month. Unfortunately, this ground level slab is much obscured by vegetation. Close to this is another iron slab which is heavily corroded but seems to have had no lettering. It is set at the foot of a vertical sandstone slab, with an undecipherable inscription, but it is not clear if this is an original juxtaposition.



Wrockwardine, Shropshire, graveslab of John Ferriday of The Trench, 1833

A trawl of the web reveals several other cast-iron graveslabs not listed in Newsletter 57. Benthall, south-west of Ironbridge has three memorials, one a very fine slab of 1761 to Eustace Beard, Trowman, which is decorated in each corner with a broken anchor and rope in high relief. Several slabs are recorded at Broseley, one apparently with similar decoration to the Beard stone, and there is one slab at Barrow, east of Much Wenlock. At Holy Trinity, Coalbrookdale, there are a number of small cast-iron plaques. This church was consecrated in 1854, having been funded and endowed by Abraham Darby IV - he joined the Church of England in 1849, was baptised at St Lawrence, Little Wenlock and is buried at Holy Trinity, Coalbrookdale.

Peter and Susan Crew

WIRG BULLETIN, SECOND SERIES, VOL. 34

Articles for inclusion in next year's Bulletin should be sent to **David Crossley** by **31st March 2014**. His address is on the back page.

A Date for your Diary

WIRG WINTER MEETING 2014

Speaker: Tim Cornish
***Mayfield's Tudor gunfoundry:
 the site, its history and context***

Nutley Memorial Hall
 Saturday 1st February 2014
 2.30pm

There will also be a sale of books on the iron industry, formerly belonging to Brian Awty, proceeds from which will go towards the publication of his book, *Adventure in Iron*.

A GOLD RING AT PIPPINGFORD

Whilst digging a drainage ditch at WIRG's Pippingford bloomery furnace site during the July smelt, Victor Kellett unearthed a finger ring. He claimed that he had "struck gold" as he held up a well-worn, size "J" gold ring, suitable for a very small finger.



Engraving on the inner surface of the gold ring

The pictures show engraving on the ring's inner surface and the now, almost featureless outer surface, causing the ring to weigh less than 100g. Because the script is little worn but the hallmark (possibly Edinburgh) is well worn, it suggests that the ring is somewhat older than the indicated date of 1896. The type of inscription was very popular during the Victorian period and is termed MEMENTO MORI - "remember that you will die".

There are signs of two cuts across the ring; perhaps a repair or where part of the ring was removed for engraving.

It was decided that the ring would be returned to the land owner, Alan Morriss, whose family has owned Pippingford since 1919; in 1896 it was in the ownership the Anderson family.

Brian Herbert

**Prefer to have your Newsletter
 by email in colour?**

Contact the Editor
 (details on front page)

ANOTHER USE FOR LOCALLY CAST CANNON

Lewes, Nov. 24

For the Loyalty of the Gentlemen, Tradefmen and other the inhabitants of the Parifh of Lamberhurft, let it be recorded to Pofterity, that on the 15th Day of November, 1760, was proclaimed our prefont gracious Sovereign Lord GEORGE the THIRD'S happy Succession to the Crown of Great Britain, which was as follows, viz.

About Ten o'Clock in the Forenoon, the Proclamation began on the New Stone Bridge that is over the River that parts the Counties of Kent and Suffex; from thence they proceeded to the Court Lodge, the Vicarage, to the Parfonage, the Furnace, and laftly to Great Scotney; at One o'Clock the Bells began to ring, which continued till Nine at Night without Intermiffion; during the Afternoon Cannons were brought from the Furnace, and planted near the Park-Gate; at Six Lights were put in the Windows, the Cannons and fmall Arms began to play, the Bonfire blaz'd, the Bells rung, and the Rockets afcended the Air, fo that their united Fire feemed to blunt the Rays of Luna, and their Echo from the neighbouring Hills, united to the Voices of a grateful People, lul'd old Æolus to Reft; thefe with Healths, crowned with Bumpers, paft away the fwift minutes of thofe Children of old Time till Twelve, when the awful Thought of the fucceeding Day put a Stop to this nocturnal Jollity, and all withdrew with the greateft Decorum. In a Word, we may truly fay, that Nature, the Gods, and Gentlemen, &c. of Lamberhurft, united with one Accord, to celebrate the 15th of November, for the Proclamation of Great GEORGE the THIRD.

**From the *Sussex Weekly Advertiser*
 1st December 1760**

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
 (details on back page)

BULLETIN 33 CORRECTION

Due to a copy editing error, a figure and a table were omitted from Alan Davies' article, 'Estimating 18th-century cannon boring times and throughputs'. The missing items, which should have been included on or after page 45, are reproduced here, and we extend our apologies to Alan for their omission.

Gun Size Pdr.	-----Small/Med Guns-----						-----Great Guns-----			Totals	Measure
	4	6	9	12	18	24	32				
Nos. Guns Bored	2	2	0	2	2	0	2	10	Total Guns Bored		
Boring Capacity Hrs.	70	4.3	5.8	6.9	7.3	7.4	7.9	8.3	66.2	Total Boring Hrs.	
Selling Price/Ton £		13.7	13.7	13.7	14	14	15	15			
Gun Debenture Value £		7.5	15.0	17.8	22.4	28.0	36.8	44.3	234.4	Total Value £	
Average Pdr. Value =	14.4								95	Boring Utilis'n %	
									31.4	Great Gun Boring Hrs.	
									34.8	Small/Med Gun Boring Hrs.	

Table 3 – Single Mill – Single Shift - Example Mixed Weekly Schedule

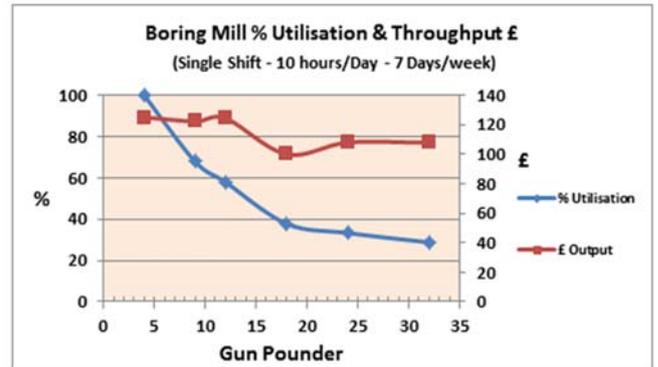


Figure 5 – Mill Utilisation & Weekly Output Value for Gun Size

THE STIANCES ARCHAEOLOGICAL PROJECT – SEASON TWO

Thanks in part to another extremely generous grant from the Tebbutt Research Fund, pupils from the village primary school in Newick, East Sussex have had a further chance to experience an archaeological 'dig' close to their school as part of a project organised by University College London Centre for Applied Archaeology. Again more than 200 children aged between 4 and 11 years old were able to become involved in archaeology, half of their number for the very 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. The results of the 2010 season showed that part of the field had been occupied by buildings since at least the 18th century until the early 20th century, and that the occupants had left plenty of datable evidence such as pottery and clay pipes. This year we again targeted this area (given the name *'The Cottage Site'*). But we also looked at another part of the field, a peculiarly flat area identified during 3D modelling of the field in 2010, which rapidly became known as *'the other bit'* or *'the bit down the hill'*.....

With the aid of professional archaeologists, teachers and classroom assistants from the school,



Young archaeologists at Stiances

mums, dads, assorted other relatives, governors and anyone else brave/foolhardy enough to volunteer to help, the kids came up trumps again this year. The Cottage Site again produced a range of finds reflecting the occupation of buildings in that part of the field mostly dating from the 18th and 19th centuries.

Finds ranged from pieces of broken pottery, glass and clay pipes to the bricks and tiles from the demolished building(s), to more 'personal' artefacts such as the remains of a knife, a fork and a number of decorated buttons. Some of the character of the interior of the building(s) was shown by the survival of door fittings, and part of a decorative metal plate, probably from the cooking range. Peculiarly the excavation this year also yielded metalwork elements from a number of different sizes of shoe, and the remains of part of a leather boot, complete with brass eyelets.

Test-pit digging in *'the other bit'* was less productive in terms of quantity and range of finds, but did uncover evidence of medieval occupation. Pottery dating from as early as the 13th century was found in the test-pits, suggesting that the flat area may be the location of the remains of a medieval building of some kind. Certainly the 3D survey undertaken during the 2010 season showed that there are a number of these flat areas (which archaeologists like to call 'house platforms' in the absence of a better term), perhaps fronting onto a sunken lane, suggesting the presence of some kind of settlement in the field during the Middle Ages, as suggested by Fred Tebbutt in the 1970s.

So as well as recovering datable material from the 'known' location of at least one later building, the children's work has uncovered evidence of a whole new phase of medieval occupation at the site this year. Coupled with the presence of a thin scatter of prehistoric flintwork of Mesolithic or Neolithic date (which hints that hunter/gatherers were camping at the site more than 10,000 years ago), there is now clear evidence that many people have lived and worked in this deceptively quiet field over the years. Sadly it does not appear that their activities included any form of ironworking!

Simon Stevens

SLAG FOUND ON THE SOUTH DOWNS

After many years of casually looking for slag on the South Downs, a few pieces have now been discovered south of Alfriston. The illustration shows a scaled photograph of five pieces, which show as well as possible that the slag was only just molten and had quickly solidified to leave large voids.

The slag was found at about TQ4900 0225 as isolated pieces on a typically steep, narrow, NW-SE track, although it has recently been widened to about 2m, which probably caused these samples to appear. They are very slightly magnetic and can just be detected with a metal detector, suggesting that it is wüstite, although a larger mass would be easily detected.

There is a possibility that the material may be associated with an unnamed reservoir built to the south some 200 ft further up hillside and there is also a car park for the golf course at this point with an access road coming from the south suitable for construction materials; but such materials definitely did not come along this narrow track.

An iron ore, Iron Sulphide (Marcasite FeS_2), is found as isolated nodules in the Middle Chalk, either spherical or rod-shaped. As these nodules are not found in a mass it is difficult to find a useful amount unless a rock-falls occur on a beach, such as the cliffs west of Eastbourne, Sussex.



Slag found on the South Downs near Alfriston

Unfortunately, sulphur from this type of ore is transferred to the iron during the smelting process and causes the iron to become brittle. Also, two pieces of this wrought iron cannot be fire welded, a basic necessity in the past called “red short” or “hot short” by blacksmiths. It may be circumvented by breaking and heating the iron sulphide ore prior to smelting or else leaving it to weather for a considerable time.

Brian Herbert

Imagine... having X-Ray vision

Understanding our past use of land can be difficult, particularly when trees prevent you easily seeing the ground. But what if you could look through the trees?

An innovative, aerial laser survey - called LIDAR - has been undertaken at St Leonard's Forest. It has revealed fascinating facts about the Forest and shown that the woodland we see today was not always present. Mining and rabbits have been the two most notable influences from the past!

Before **After**

Mine pits
Especially in the 16th and 17th centuries, the High Weald was the centre of Britain's iron industry, with around 100 forges and furnaces spread across the area. At its peak, it produced almost all the cannon and cannonballs for wars such as the Spanish Armada. Mine pits were dug to extract the below ground iron ore and they litter this part of St Leonard's Forest. They are much bigger than the average pit found in the area, perhaps reflecting harder rock or stronger workers!

The rabbit economy
Rabbits were originally from the Mediterranean, and were introduced to this country for their fur and as food. But, like anyone used to warmer climes, they didn't thrive in the damp British weather. So their farmers built them nice, cosy mounds to live in! Up to 80 metres long, many of these broad rabbit mounds survive amongst the present-day woodland. Archaeologists call them "pillow mounds", reflecting their pillow-like shape. Some were even constructed on really steep slopes, showing how important marginal land must have been. At the height of rabbit farming in the 17th century, St Leonard's Forest was known as the Great Warren. Look around you and imagine this landscape of open heathland, scrubby birch, and a rabbit economy.

Our thanks go to the organisations who have supported our work on St Leonard's Forest.

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An attractive and informative interpretative panel about ironworking in St Leonard's Forest, displayed beside a woodland track near Colgate (TQ 2170 3188)

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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 published and emailed in colour but printed in monochrome). **Please send images as separate files, not embedded in the text. Captions should be included with the text, not added to images.** Digital images need to be at least as big as their expected published size (column width 86mm), ideally at 300 dpi or more.

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