



NEWSLETTER 59 SPRING 2014

EDITOR: JEREMY HODGKINSON

3, Saxon Road, Worth, Crawley, RH10 7SA; Tel: 01293 886278; Email: jshodgkinson@hodgers.com

WINTER RAINS DRAIN HAMMER POND



Torrential rain on Christmas Eve 2013 caused the collapse of the spillway at the upper Hammer Pond at Thursley, in Surrey, resulting in the sudden draining of the pond.

Probably the earliest of the works at Thursley, the forge there was in operation before 1608. In 1635 a furnace described as 'newly built' may also relate to the site, but on Rocque's map of Surrey of 1746, by which date it was probably no longer operational, it was referred to simply as Hammer Pond, the name it has retained to this day. Restoration by the pond's owners will be carried out and it is understood that members of Surrey Archaeological Society will undertake a watching brief at that time. *Photo: Steve Arnold*

WINTER MEETING Nutley, 1st February 2014

A good turn-out of members assembled at Nutley Memorial Hall and were welcomed by the President, Jeremy Hodgkinson. He, in turn, introduced the speaker, Tim Cornish, whose subject was 'Mayfield's Tudor gunfoundry: the site, its history and context'. The major thrust of the talk centred on two key individuals: Thomas Gresham and his great nephew, Henry Neville.

Thomas Gresham had risen to prominence during the reign of Edward VI. Gresham had been based in Antwerp, then the principal entrepôt in northern Europe, and had used his skill and influence to reduce the indebtedness of the English Crown. After a brief hiatus, Gresham continued his financial services to Edward's successors, Mary and Elizabeth. The worsening situation in the Low Countries caused by increasing demands by the Dutch for independence from Spain led to Gresham abandoning Antwerp in 1567, whereupon he settled in England

CONTENTS

Thursley Hammer Pond	page 1	Ordnance News	6
Winter Meeting	1	Elizabethan State Papers Project	7
Field Group	2	New Survey of Footlands	7
WIRG Bulletin 33	2	Face the Ironmaster	7
Huntsbank and Hooks Woods	2	WIRG Contacts	8
Blackfold Furnace, Nymans	4	Editor's note	8
New Member	5	Publications	8
Recent Publications	5		

and was able to devote more attention to the estates that he had acquired by grants as reward for his services. Among these was the manor of Mayfield, formerly a possession of the Archbishop of Canterbury. There he set up an ironworks and began producing ordnance. He had already been established for as much as five or six years when he was one of those gunfounders named in Ralph Hogge's 'complaint' to the Crown in 1573. An example from his furnace, a *falcon*, which was discovered in the slag heap there in the 1820s, is on permanent display in Mayfield High Street. Another gun from Gresham's furnace was discovered about ten years ago in the Thames estuary in the submerged wreck of an Elizabethan ship dated to the 1570s. This gun was clearly marked in relief with the initials, TG, and a grasshopper, Sir Thomas Gresham's crest.

Gresham died in 1579, with no surviving children, and the ironworks passed initially to his niece's husband, Sir Henry Neville, a Berkshire courtier. It was his son, also Henry, who took up residence at the old archbishop's palace in Mayfield sometime in the 1580s and who continued the operation of the furnace. It had been pointed out at the beginning of the lecture that little remained of the working area of the furnace. A map of the site in the 1660s showed the basic layout with the furnace stack, the founder's cottage and, unusually, a separate pond for the boring mill. Evidence of a forge at the site has been suggested by the discovery of forge bottoms downstream of the furnace, the location of which has been lost beneath a concrete culvert carrying a former coach road.

Like other gunfounders of the period, Neville encountered an increasing number of restrictions imposed by Elizabeth I's government, which had been



Mayfield Furnace in the mid-17th century
(East Sussex Record Office AMS 5831)

fearful of iron ordnance falling into the wrong hands. It wanted to limit production to a few founders and to charge a premium for each ton cast, seeing gunfounding as a largely mercenary activity. Neville was ultimately successful in obtaining a limited licence to trade in guns, in 1592, in partnership with two foreign merchants, Ludolph Inglesteadt and Giles de Vischer, though within six years this had transferred to Robert Sackville. The various documents that members were shown provided an intriguing glimpse into Neville's attempts to secure business profit.

Finally, comment was made on the suggestion by two writers that Henry Neville had been the author of the works of Shakespeare. Examples of Neville's poor grasp of grammar and syntax was demonstrated as *prima facie* evidence that such a claim was highly unlikely.

The meeting concluded with some well-informed questions and answers, followed by tea and cakes laid on by Nutley Women's Institute, during which Members were able to view parts of John Baillie's new forge.

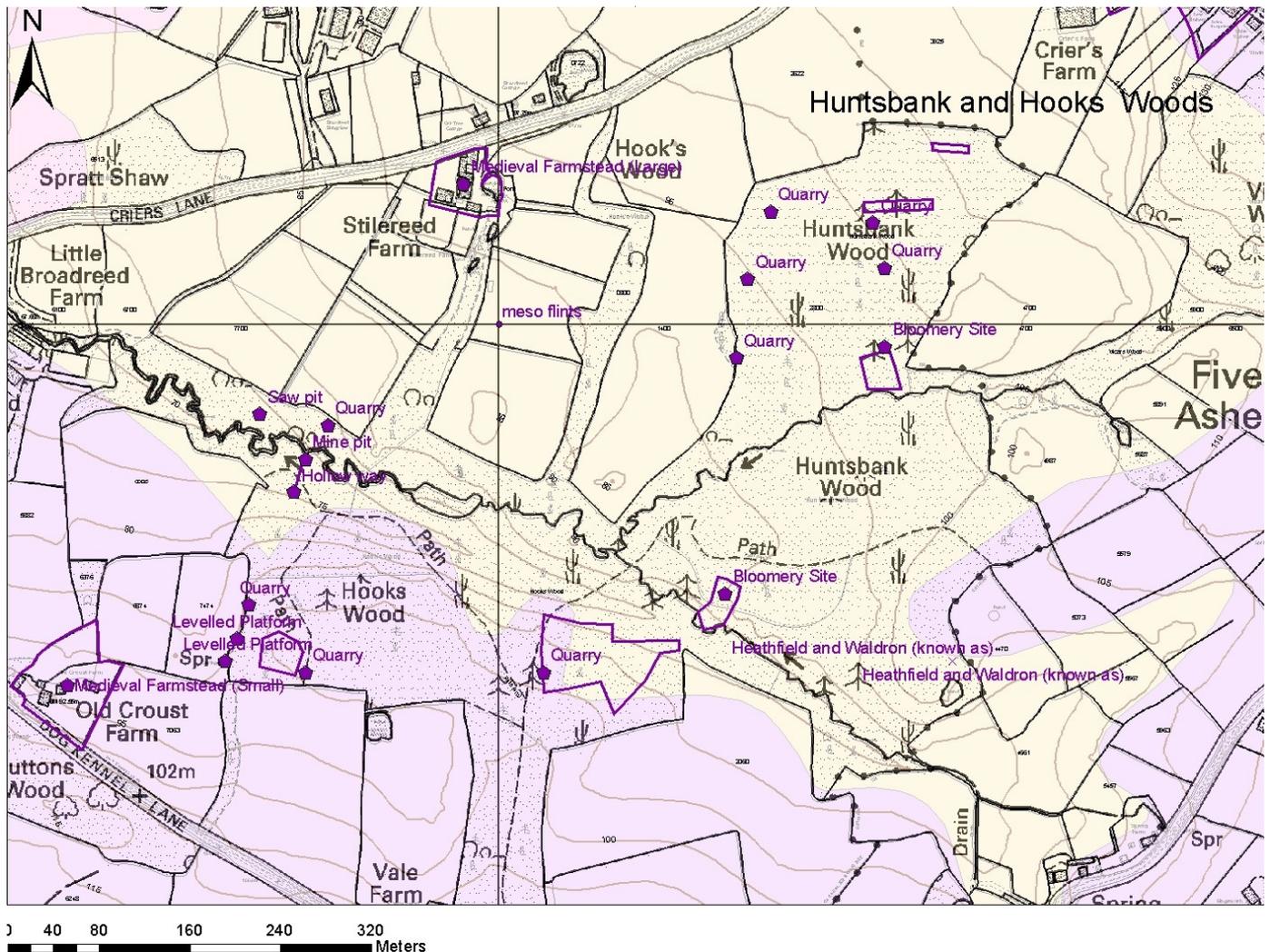
WIRG BULLETIN 34, 2014

Contributions for this year's Bulletin should reach David Crossley by 31st March 2014
(for contact details see back page)

FIELD GROUP

HUNTSBANK AND HOOKS WOODS November 2013

On a lovely bright but sunny day some sixteen members gathered for the first foray for some time on land belonging to Mr and Mrs Loftus. It was good to see some new members who had not previously been on a foray before. Hunstbank and Hooks Woods are located just north of the easternmost end of the A272 near the junction of the A267. The land is steeply sloping in places and is dissected by tributaries of the River Uck. The northernmost tributary flows north-east - south-west where it joins another tributary flowing south-east - north-west. In some places these tributaries flow through the typical steep sided gill valleys of the High Weald. The area falls within the area of the High Weald Area of Outstanding Natural Beauty (AONB).



Huntsbank and Hooks Woods, Hadlow Down; grid lines intersect at TQ 5525

The geology of the northern part of the survey area consists of Wadhurst Clay whilst the southern part, mainly within Hooks Wood, is of the Ashdown Beds with the south-east - north-west tributary marking the junction of the two beds. The woodland has been replanted with some conifers with stands of chestnut coppice. In Hooks Wood there are some good specimens of coppiced hornbeam with small oak standards and chestnut coppice. The northern boundary of Hooks Wood has a good example of a now outgrown laid hornbeam hedge. There were some areas that were unable to be surveyed because of the nature of the steep sided quarries and, in places, abundant patches of brambles which were growing on the disturbed quarried landscapes.

A previous visit earlier in the year by the organisers of the foray had ascertained that there were numerous quarries and had located two bloomeries which needed further investigation and recording. The party split in two groups in the morning with one group surveying the area of Hooks

Wood not previously visited whilst the rest of the group visited the northern section. A metal detector specially calibrated to pick up an iron signal was used to sweep the ground where slag and other debris had been located. Iron probes were used to detect the presence of slag beneath the ground surface and some controlled trowelling was carried out to locate examples of buried slag or ore. Handheld GPS units were used to take grid references of all archaeological features found.

Two bloomery sites were recorded, one of which had a significant amount of slag material tipped down the gill edge to form a substantial bank. At both sites it was noted that the smaller debris had been spread over a very large area and it was suggested this may have been spread by later agricultural practices. However no evidence of later field boundaries were found within this part of the wood which is unusual where agriculture has receded; it usually leaves some evidence. The majority of the quarries found were likely to have

been a source of ore for the bloomery sites and it is worth noting the Huggett's furnace site (operational in the 16th century) is reasonably close by although no evidence is visible of a connecting trackway in the woods. Possibly all ore quarried in these woods was used in the woods and not transported out. It is difficult to judge what else may have been quarried here as some of the quarries in the Ashdown beds are large and may have been a source of material for the brickworks relatively nearby, in the same direction of Huggett's furnace. Perhaps some of the tiny unclassified local roads were used to transport materials to either of the sites. Surprisingly no charcoal platforms were found during this survey but this probably reflects that this woodland has been replanted and is recorded on the Historic Landscape Characterisation as replanted woodland.

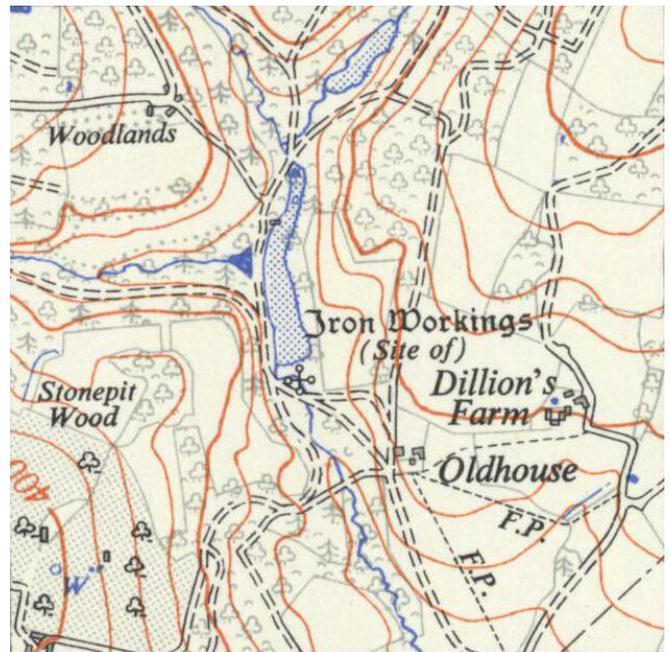
Owing to the lack of parking on the site, the owners of Wilderness Wood, Chris and Ann Yarrow gave us permission to use their car park for which we are grateful and all enjoyed the welcome refreshments at Wilderness Wood at the end of the day. Finally thanks must be given to Peter Ponsford, assisted by Roger Houghton who enabled this foray to take place and permission by the owners for access to their land.

Vivienne Blandford

BLACKFOLD BLAST FURNACE, NYMANS

A request was received by WIRG from the National Trust (NT) to find any remaining evidence for Blackfold Furnace on their estate at Nymans, Handcross, Sussex, with the idea of placing an explanatory plaque on the site, similar to the one placed at Mayfield Furnace owned by the Rausing family.

A morning foray was organised before an afternoon committee meeting, but prior to this a simplified geological map was produced to try and understand the estate's layout, hopefully to determine where the iron ore was dug. Also, a 200-page report, financed by the NT, records the archaeological, geological and field walking carried out on the estate. One important factor was noted: additions and changes to the many ponds in the valley have been made, culminating in the furnace pond where the bay was heightened and so covers a larger area and flood further up the valley; this work was carried out by soldiers returning after WW1. The geological map



The site of Blackfold Furnace at Nymans, Handcross (NGR TQ 2729)

shows that the upper stratum of the Wadhurst Clay is visible around the top end of the furnace pond which may have provided the source of iron ore; but no way could be seen of proving this. The remaining geology of the area is Tunbridge Wells Sand with all its bands of sand, sandstone, marl and clay, the latter used for the estate brickworks, but giving no indication of seams of iron ore, although there may have been iron ore in the clay used by the later brickworks.

The layout of the furnace site is typical of many in the Weald although the bay is rather high and wide, suggesting some alteration here. There is a (modern) spillway at the west end but probably in its original position, and another (modern) water exit at the east side which changes to a (modern) soil gully leading into NT's neighbour's garden, probably Oldhouse, whose lower garden is an extensive pond with islands and was a quarry in the past. No slag could be probed around the gully area and the metal detector gave no response, however just over the boundary fence a response was produced from something metallic, but was not pursued further.

More work would be necessary to determine how the bay was heightened: a) by just building-up on top; b) rebuilt on the pond side; c) rebuilt on the furnace side; unfortunately, the latter seems the most likely.

The large field on the pond's east side is named Furnace Green, suggesting some associated activity was carried out here; perhaps ore roasting and the workers living quarters.

One of two waterwheel bearings would have been located on or near the east bank of the gully but all that was found were some modern house bricks mortared together, making a small wall that had collapsed.

A final clue might be found on the high, east bank beside the working area. The loading ramp would have been located here, leading from the covered charcoal and roasted ore stores to the top of the furnace. The roasted ore fines would be detected by the metal detector whilst the charcoal fines would be visible in the soil. Some vegetation would require scything before any investigation could be carried out, probably by digging a shallow trench and using a metal detector.

From this three-hour foray it seems that very little is left but it might be possible to pinpoint where the furnace once stood.

Brian Herbert

NEW MEMBER

We welcome Martin Bates, of Robertsbridge

RECENT PUBLIC ATIONS

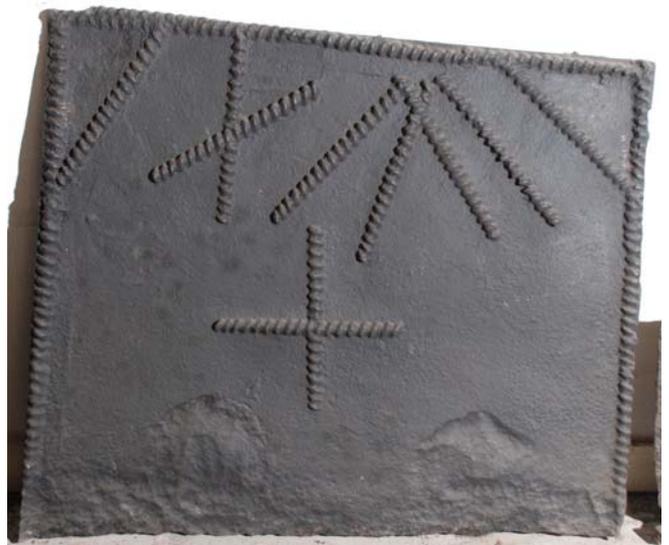
Pine, J., 2013, 'A re-investigation of Late Iron Age and Roman iron production, and Saxon activity, at Rathlin Road, Crawley', *Sussex Archaeological Collections*, 151, 13-25.

Land at the north-east end of Rathlin Road was part of the area excavated in the 1970s that revealed the ironworking complex of Broadfield. Investigations in advance of redevelopment of the area have provided the opportunity to uncover and re-examine some of the features described in the report that was published in 1992. The re-excavation was able to identify features that had been previously described, in particular parts of a number of smelting furnaces. From these and other features it was possible to extract further dating evidence which could be compared with recalibrated radiocarbon dates from the original excavation by J. Gibson-Hill. The sampled furnaces originally produced dates that ranged from the 4th century BC to the 4th century AD and, while these were not superseded, dating ranges of individual features was largely broadened. The first of two ditches that had hitherto not been dated was found to be of the cal BC 2nd-1st cent., while the second was of the 10th-11th cent. cal AD.

AVERTING EVIL: FIREBACKS AS INSURANCE

Jeremy Hodgkinson has followed up his seminal book on firebacks (which will be familiar to WIRG members) with an intriguing article, in collaboration with Timothy Easton, which explores the mystical symbols that some of these firebacks include. Entitled 'Apotropaic Symbols on Cast-Iron Firebacks' it is published in the *Journal of the Antique Metalware Society*, volume 21, 2013.

'Apotropaic' means 'intended to avert evil influence' and it seems that these symbols were intended to protect houses from evil spirits coming down the chimney or for averting destructive house or chimney fires. These symbols take the form of the letters M, W or V as well as saltires and crosses. The M perhaps stood for Mary and the V for *virginum*. These symbols were both subversive and ineradicable.



A fireback with apotropaic symbols; *Anne of Cleves House, Lewes*

The firebacks are mostly undatable, but seem to have been made in the south-east of England during Tudor and Stuart times, a period when society was slowly adjusting to the Reformation which had condemned Catholic use of physical aids to salvation, to be replaced by faith alone. The English translations of the Bible had revealed to ordinary people that 'graven images' were explicitly forbidden and so churches were purged of these, particularly the representations of the Virgin Mary who had been prayed in aid so frequently.

Eamon Duffy's work has shown just how deeply embedded the old Catholic beliefs were and

how slowly they were eradicated. Indeed, Christianity had always adapted to the pagan. The symbols on cast-iron firebacks representing Mary with an M (sometimes inverted as a W) are evidence of this. Carpenters sometimes carved these symbols on mantel beams, and it seems that iron-founders, who would have been similarly illiterate, incorporated these symbols into their work. Depositing redundant household objects in the spaces around the chimney was practised. The iron itself was also deemed to offer protection. The academic Ronald Hutton, who has recently embarked on a TV career, has studied the ritual year in Britain, and writes of practices designed to ward off or propitiate supernatural forces: placing food for witches on doorsteps, putting salt in key-holes or killing a cockerel and hanging its tail feathers on the stable door were all folkloric means of protection. The tradition of the Yule log was originally a form of protection. Firebacks can now be added as items of post-medieval house insurance.

Timothy Easton has been researching and writing about apotropaic symbols for forty years and added to Jeremy's considerable appetite for thorough research, this article includes items from across the country, with many well-chosen illustrations. Inevitably such a subject has to involve speculation, given the absence of much contextual information, but here this is intelligent and convincing; the article deserves a wider audience.

Tim Cornish

ORDNANCE NEWS

Robertsbridge cannon at Fishguard



Recent cleaning has revealed the 'R' trunnion mark on this 18th century cannon at Fishguard, Pembrokeshire, indicating that it was cast at Robertsbridge Furnace

Kingswear Tudor cannon



The Kingswear cannon

Further to the brief notice published in Newsletter 56 (Autumn 2012), the Editor visited Dartmouth last year and chanced upon the Elizabethan gun that had been brought up from the seabed near Kingswear Castle. One of eight located on the same site, it was brought ashore in 2003 and has been subject to a lengthy conservation process. Although no longer visible because of the coat of paint that has been applied to it, the gun's weight of 1 ton 10 cwt. is engraved below the apparent date of 1577 in front of the vent astragal. It is mounted on a wooden carriage near the western end of Kingswear railway station, the terminus of the Paignton to Kingswear Steam Railway.

A remarkable survival in Maryland, USA



A cast-iron cannon with its gunhead still

This cannon, cast at the Aetna Furnace in 1776 was discarded with its gunhead still attached - a rare example of what would have been a common sight at furnaces in the Weald a few years earlier. The

gunhead served as both the sprue, where the iron was poured into the mould, and the feeding head or riser, to act as a reservoir for slag and gas bubbles from the casting. Gunheads were sawn off, and remelted at finery forges. In this example, the gun appears to have been bored.

A small rejected gun found at Pippingford Furnace, and now in the Iron Gallery at Anne of Cleves House, Lewes, also has its gunhead still attached. The Maryland gun can be seen in Hagerstown City Park, NW of Washington DC.

ELIZABETHAN STATE PAPERS PROJECT

Photographic images of documents from the State Papers in the reign of Elizabeth I, which include Ralph Hogge's complaint, several of the lists of Wealden furnaces and forges dating from 1574, and the bonds of their ironmasters, are now available on a website compiled under the auspices of the University of Houston, USA.
www.uh.edu/waalt/index.php/Elizabethan_State_Papers_Project

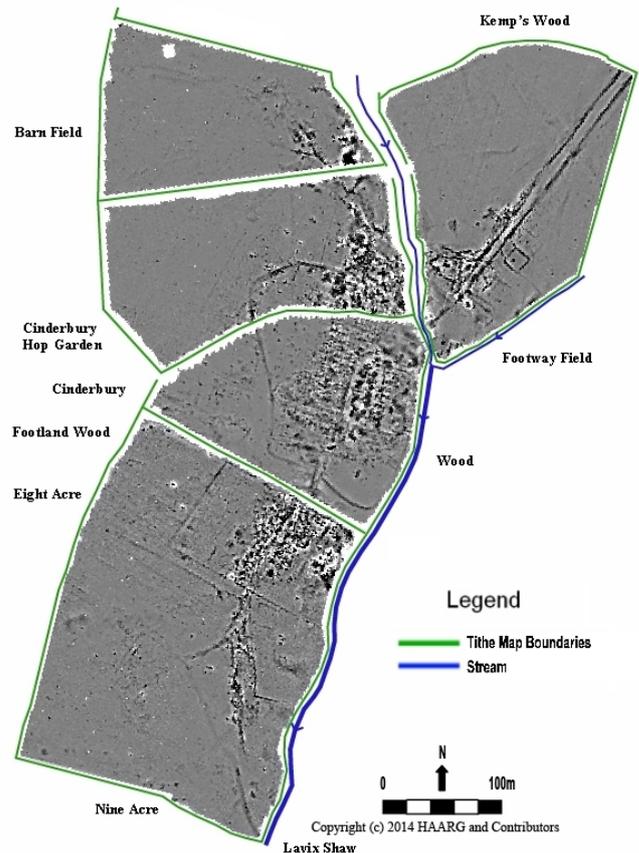


'The Declaration of Christopher Barker concerning Iron Furnasses' 1573

NEW SURVEY OF FOOTLANDS

K. & L. Cornwell (with D. Padgham), 'Footland Farm, Sedlescombe: A geophysical survey of the iron-production complex and its transport links', *HAARG Journal*, New series, 33 (2013), pp. 1-22

HAARG, the Hastings Area Archaeological Research Group, has recently published a survey of the Romano-British ironworking site at Footland Farm Sedlescombe, East Sussex. Ernest Straker found the site in the 1920s and it has been a source of interest to archaeologists ever since. Material found there



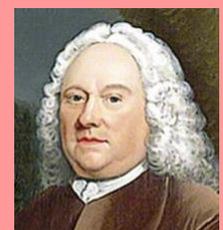
HAARG magnetometer survey of Footlands iron working site, Sedlescombe

dates to the Late Iron Age and on until the 4th century AD, making it one of the longest worked sites of the early period.

The HAARG survey examines all the previous sources relating to the site, including WIRG's report published in 1987, but the key addition is the magnetometry seen illustrated above. This shows the route of the road through the site and three main concentrations of activity, some of which are likely to be settlement while others will be industrial. Compared with recent geophysical surveys at Great Cansiron, Oaklands Park and Bardown, the active areas at Footlands can be seen as less concentrated but extending over a greater area. It is to be hoped that further surveys of this type will be undertaken, shedding light on other early Wealden ironworks.

FACE THE IRONMASTER

Sir Thomas Webster, Bt.
 1677-1751
 Lessee at Beech Furnace and Etchingam Forge;
 owner of Robertsbridge Furnace and Forge



WIRG CONTACTS

Chairman: Tim Smith, 15 Hazelwood Road, Partridge Green, Horsham, RH13 8EX. *tjsmith560@btinternet.com*

Vice Chairman: Alan Davies, Woodcote House, White Lane, Ash Green, Aldershot, GU12 6HN.
alan.f.davies@tiscali.co.uk

Hon. Secretary: Judie English, 2 Rowland Road, Cranleigh, GU6 8SW. *judie.english@btopenworld.com*

Hon. Treasurer: Vivienne Blandford, 'Greenbank', Shepherd's Hill, Buxted, TN22 4PX.
blandford@blandford.co.uk

Bulletin Editor: David Crossley, 5, Canterbury Crescent, Sheffield, S10 5RW. *d.crossley@sheffield.ac.uk*

Publications: Brian Herbert, 1, Stirling Way, East Grinstead, RH19 3HG. *brianherbert@btinternet.com*

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.

PUBLICATIONS FOR SALE

	PRICE	
	BY POST (UK)	AT MEETINGS
<i>British Cast-Iron Firebacks of the 16th to Mid 18th Centuries</i> , J. Hodgkinson (2010)	24.99*	24.99*
<i>The Wealden Iron Industry</i> , Jeremy Hodgkinson (2008)	15.99*	15.99*
<i>Excavations of a Late 16th/Early 17th c. Gun-casting Furnace at Maynard's Gate, Crowborough, Sussex, 1975-1976</i> , O. Bedwin.	2.00	1.50
<i>A Middle-Saxon Iron Smelting Furnace Site at Millbrook, Ashdown Forest, Sussex</i> , C.F. Tebbutt.	2.00	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>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)	2.25	1.50
<i>The Penhurst to Ashburnham leat: a second foray + maps</i> (2007)	2.25	2.00
<i>The Penhurst to Ashburnham leat: the flow rate + graphs + map</i> (2007)	3.25	2.50
<i>Fernhurst Furnace</i> . Chichester District Archaeology No. 2, J. Magilton (ed.).	14.00	12.00
<i>Second series Bulletins:</i> -		
Volumes 1 to 21 (1981 to 2001)	2.00	1.50
Volumes 22 to 33 (2002 to 2013)	2.50	2.00
<i>Note:</i> Vols. 5, 10, 15 & 20 have 5-volume cumulative indexes. Vols. 21 onwards are separately indexed		
<i>Index for Wealden Iron</i> , WIRG Bulletin 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)