Wealden Iron



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Field Notes

compiled by J.S. Hodgkinson

Beauport Park Romano-British Ironworks, Battle, Sussex

March & April 1990

This extensive site has been comprehensively described by Rock¹ and by Straker.² The excavation of the bath house discovered there has been the subject of a recent article.³ In common with many of the large sites in the Hastings area, the layout of the site has undergone much alteration in the latter part of the last century through the removal of a large quantity of slag by Mr Byner, the local highway surveyor.

The site layout bears many similarities to those at Chitcombe and Bardown, with the slag heap tipped towards a stream. However, in both the latter, the depth of slag is greatly exceeded by the linear extent of the site. At Beauport Park the opposite is the case and the volume of slag, prior to its subsequent use for road metalling, has been estimated at 30,000 cubic metres, which would have yielded about 30,000 tonnes of iron over a period of 140 years.⁴ That this site was operated by the *Classis Britannica*, that finds have provided a date range for the site of 100-240 AD, and that a ten-room bath house was constructed on the site, are well documented. What is not documented is any inquiry into the working areas of the site, or the patchy evidence for areas of habitation for what must have been a veritable army of ironworkers.

Subject to surviving evidence, the map opposite (Fig.1), attempts to reconstruct the layout of the site prior to Mr Byner's depredations, with subsequent discoveries included. Among the latter are portions of several metalled tracks discovered by Dr Brodribb. Members of the Field Group carried out a resistivity survey in the area marked to the north east of the tracks. Although hampered by the presence

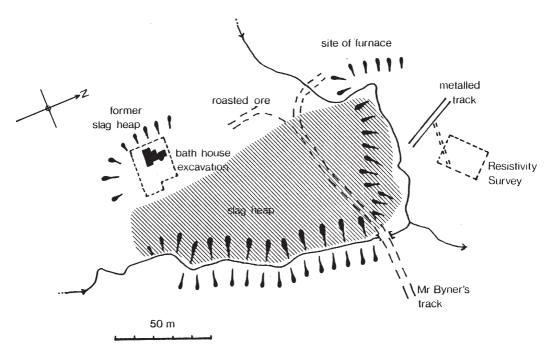


Fig 1: Beauport Park

of trees, the measurements support the existence of the minor track heading east off the main track (Fig.2). Further investigation in the vicinity would help to establish whether, as has been speculated, the area is criss-crossed by several tracks which were possibly the paths between buildings, perhaps accommodation barracks.

The location of the smelting area is suggested by the way in which the slag has been dumped, with the furnaces on the west side of the site, on the higher ground. This is supported by the observation of an area of roasted ore immediately uphill from the slag heap. The remains of a smelting hearth to the north west of the slag heap were reported to have been destroyed during the landscaping of the adjacent golf course. The excavation of the bath house from under a layer of slag suggests the former existence of a slag heap on the south-west side of the site.

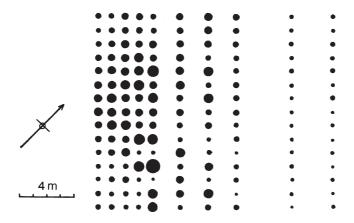


Fig 2: Beauport Park resistivity survey

A bloomery in Speldhurst, Kent

A concentration of bloomery slag has been located along a stream near Danemore Lands Farm (TQ 536403). We are grateful to Marc Houghton for informing us of his discovery.

Three bloomeries at Parrock, Hartfield, Sussex – January 1990

Concentrations of bloomery slag and cinder have been found at TQ 454344 and TQ 455344 in Paternoster Wood, and at TQ 452343. Paternoster Wood lies on Wadhurst Clay and the ground is pitted with the evidence of early iron mining. The large coppice stools, mainly of alder, show that this area has been coppiced for many centuries, and a number of areas blackened by charcoal burning were seen.

These three sites, added to the site found in Ave Maria Wood, and to the fourteen found by Fred Tebbutt, reinforce his view that Parrock was a distinct centre of ironmaking.⁵

A Romano-British bloomery at Horam, Sussex – May 1990

A substantial bloomery site, some 50m long, with tap slag and furnace debris, has been found at TQ 594168 in Clappers Wood, part of Valelands Farm, Marle Green. The Field Group dug two trenches through the slag heap and recovered five sherds of pottery from within the slag, including two adjoining pieces of the base of a cooking pot or jar with an indented line on the base. The sherds are of a grog-tempered, grey fabric, with a brown-burnished finish. They are wheel turned and the base ring on the adjoining sherds appears to have been added later, the indentation possibly being to key the fresh clay to the old surface. All the sherds are of a type common in the south east in the Romano-British period.

Also of note are a quantity of cylindrical pieces of slag, 1-2cm in diameter and up to about 8cm in length. These have been observed

on other sites and are considered to be slag plugs which had flowed into, and eventually blocked, the tuyères of the bloomery furnaces. The quantity excavated, which was more than twenty, suggests that blocked tuyères were a common occurrence at such works, possibly when blowing ceased at the end of smelting.

Medieval ironworking in Reigate, Surrey

Excavations at a small, multi-period site formerly occupied by Brewery Cottages, Bell Street, in Reigate (TQ 253501), have revealed a pit, the contents of which include burnt clay with wattle impressions, fragments of charcoal, tap slag, and pottery of c.1200 AD. The excavator, David Williams, who informed us of his find, believes the contents of the pit to have been brought from elsewhere.

Slag used as hardcore

The occurrence of a quantity of bloomery slag in an area of nursery woodland prompted a trenching excavation at Tidebrook, in Mayfield parish (TQ 609296). Although some substantial pieces of slag were noted, including part of a furnace bottom and a tuyère plug (see above), it was concluded that the slag had been brought to the site early in the post-medieval period and laid beneath a layer of sandstone lumps as a base for a small building. A range of pottery sherds dating from the late medieval to the 19th and 20th centuries was found.

Medieval ironworking at Alfold, Surrey

A concentration of tap slag has been found at Great Wildwood (TQ 050354), during work on the laying out of a golf course. A shallow trench through the slaggy area revealed some sherds of shell-tempered ware from the late 12th or early 13th centuries. The site may be linked to the medieval moated site at Vachery (TQ 068367). We are grateful to Judie English for informing us of this site.

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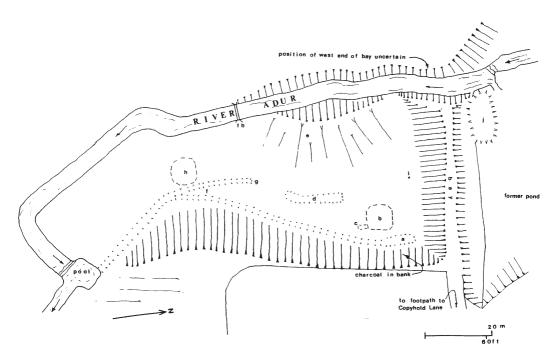
Cuckfield Furnace Site Survey 1989

Cuckfield Rural TQ 304230; Cleere & Crossley (1985) 327

J. Berners-Price, R.G. Houghton & J.S. Hodgkinson

Due to the undergrowth on the site, distances and directions are deceptive, and for this reason some slight revision of the conclusions in Cleere & Crossley is necessary. The site is, in many ways, typical of Wealden furnace sites, with the probable position of the furnace dictated by the access for wagons, and evidence of water management in the arrangement of water courses. Letters in the text refer to the site plan.

From its position in relation to the bay, between the probable furnace site (b) and the east side of the valley, where charcoal in the soil suggests the location of a loading bridge, the depression (a) would appear to have been the bellows wheel pit. A ditch (f) running at the foot of the bank from this point southwards would form the logical course of the tailrace. The small bank of slag (c) lends support to the siting of the furnace. A clearly defined hollow (d) had hitherto



Cuckfield Furnace site

been assumed to be a wheelpit but its actual location in the relation to the furnace (b) seems to contradict this. Its clear-cut outline suggests a recent origin.

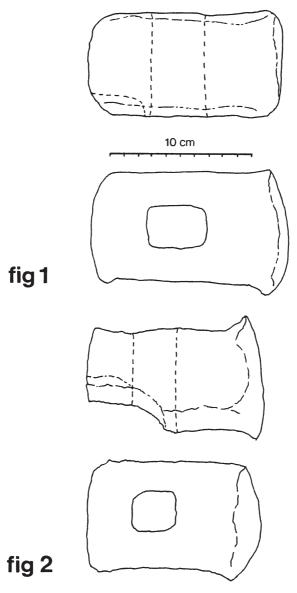
The present course of the River Adur on the west side of the site appears to be unnatural and the raised ground (e) on the east bank may be the original land surface, separated from the western valley side by a man-made cut. Part of an earlier, natural river course may remain in the depression (g), upstream parts of which would have been filled in to extend the working area. The continual need to remove slag from the working area would account for the slag heap at (h). Evidence of stone used in the furnace structure is suggested by the stone block $(0.6m \times 0.5m)$ at (i).

Two Wealden Wrought Iron Hammers

J.S. Hodgkinson

Two iron hammer heads bearing common features have been found at locations in the Weald: in The Hawth, a stretch of woodland in the centre of Crawley and at Bartley Mill Farm, Wadhurst. The one from Crawley was discovered by Mr D. Langridge in the roots of a tree in the side of one of the minepits in which The Hawth abounds. The minepits are believed to have been associated with Tilgate Furnace, which operated in the late-16th and 17th centuries. Details of the recovery of the example from Wadhurst are not known.

The hammer from Crawley (Fig.1) is 5.5ins (14cm) long and weighs 7lb 12oz (3395g). The hammer from Bartley Mill (Fig.2) is 4.75in (12cm) long and weighs 5lb 10oz(2552g). Both are made from single pieces of wrought iron, apparently pierced while hot to make the hole for the shaft. In both examples, more probably through corrosion over the centuries than usage, sections of the rear of the hammer heads have become detached. In the example from Bartley Mill the section extends to the full width of the rear of the head, whereas in the one from Crawley only part of one side has been lost.



Figs 1 & 2: Wrought iron hammers from the Weald

The Shorter Oxford Dictionary places the Old English word *slecg* as the origin of the modern word sledge, meaning a large, heavy hammer usually wielded with both hands.¹ It is likely that sledges would have been common objects at Wealden furnaces. In the inventory of the Royal Ironworks in the Forest of Dean, made in 1635, a sledge is mentioned in the list of equipment of each furnace.² A hammer described as a *sclegge* is cited as the weapon used by William Fownder, alias Frengman, to murder Martin Taillor at Brookland Furnace, Wadhurst, in July 1534.³ Incidentally, Bartley Mill is about 1.5km downstream from the site of Brookland Furnace.

Both hammer heads have been conserved by Brian Herbert. The hammer from Wadhurst has been retained by the Group for exhibition purposes; the one from Crawley has been deposited in the Ifield Mill Museum.

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 subsequently amended to 1985

Henry VII's First Attempt to Exploit Iron in Ashdown Forest

Brian G. Awty

Rhys Jenkins showed that it was in preparation for his war with Scotland that Henry VII commissioned Henry Fyner to erect ironworks in the royal Forest of Ashdown in 1496. A recently calendered document in the Public Record Office shows that the building of ironworks in the forest and the employment of artificers from overseas had been contemplated by Henry five years earlier.

The consolidation of the French monarchy by the absorption of Brittany had been one of the first foreign policy problems to confront Henry. The defeat and death of the last independent duke of Brittany had occurred in 1488. Early in 1491, the duke's daughter and heiress, Anne, contracted a proxy marriage with Maximilian, the future Holy Roman Emperor. In April the French seized Nantes, the most important town and port of the duchy. In response to an appeal for help Henry issued a commission on 7 July 1491 for the levying of a benevolence to finance his projected campaign in France. In fact he was unable to get his army across the Channel before October 1492. By then Charles VIII had seized the duchy, had persuaded Anne to repudiate the unconsummated marriage, and had married her himself. Henry had to accept this *fait accompli* and agreed to be bought off.

Nevertheless, Henry landed in France with a force of over 25,000 men and preparations for war had been intense. They must be considered to have included an agreement made by Henry on 20 July 1491 for a 10-year lease (PRO, E 211/460) of *all the mynes of iren and iren werkes within his forest of Asshedown* to Joahnnes de Peter and John Heron.

The king was at his own expense to sende over the see for such and as many artificers and workmen as by the said Joannes and John Heron shalbe thought necessary for the gettying, melting, trying and making of such iren and barres of iren as shalbe fownde within the said mynes. Henry undertook also in all goodely hast [at his own] propre cosies and charges doo to bee made ... within the said forest two water mylles and a forge with all maner engynes, instruments and all necessaries concenyng and behovefull for the forging and making of suche iren and barres of [iren] as shalbe goten within the foresaid mynes. De Peter and Heron were to keep the two mills and forge in good repair, but were to take within the said forest such and as muche wode and tymber for the making of coles for the fuyer aboute the foresaid mynes as shalbe to theym necessary and behovefull without anything paying therfor. As rent they were for every six daies that the

forsaid milles shalbe occupied in and aboute the making of the said iren and barres of iren deliver or cause to be delivered to our said souverain lord m'm' [2000] weight in gonnestones redy made. When the king no longer had need of this supply they were to pay thereafter 100 marks (£66.13s.4d.) per annum during the remainder of the lease. Whilst the king was to pay for the recruitment of the foreign workmen and for bringing them to the forest, De Peter and Heron were to pay all the wages for their work in the forest.

One of the interesting features of the lease was the fact that it provided for the supply of charcoal also, made available against the rent payment in gunstones or cash. This presumably accounts for the size of the rent charge, against which the £20 or six tonnes of iron per annum levied on Newbridge ironworks appears very low. Also of interest is the fact that the working week is calculated at six days. Is this the adoption of the continental *fondée*, or is it envisaged that the works should run on the direct (bloomery) system, and that production should cease on the Sunday?

Unfortunately, all the Duchy of Lancaster Ministers' accounts for Sussex for the period 6/7 to 9/10 Henry VII are missing, so it is impossible to know whether this scheme ever took effect. John Heron was presumably the king's servant of that name, mentioned as such already in December 1487 (Patent Rolls Henry VII, 1 (1485-94), p.223), who later became Treasurer of the Chamber. He is unlikely to have been the London merchant of the same name who, during the 1490s, became involved in the Perkin Warbeck plot against Henry, but was fortunate enough to be pardoned. I have been able to find no person of the name of De Peter involved in the iron industry in France or the Low Countries, but such involvement would seem likely. Had the name been Le Peter, an occupational surname would have been involved, bringing to mind the John Paler of Rotherfield, who held Howborne Forge in 1574. A later member of this family was probably John Cowper alias Paler of Rotherfield, who died around 1607. However, the probate records contain only Caveats for both of these gentlemen. The English word pail is derived from OF *peyelle* (OED), and *paelerie* was the making of frying pans, but the document itself insists on De Peler on at least four occasions, and in any case the 1524-25 Subsidy Rolls do not appear to provide the missing link between the De Paler of 1491 and the John Paler who held Howborne in 1574.

English Cast-iron Ordnance of 1564

Brian G. Awty

These lists of cast-iron guns are both preserved in State Papers Domestic for October 1564. The first, concerning purchases of guns, was noted by Dr Teesdale in his book on Ralph Hogge. It comes from a time just over ten years after Hogge had succeeded Parson Levett as the principal founder of cannon in the Weald, though the document makes no reference to the person by whom these guns were cast.

It must be inferred that the Office of Ordnance had just purchased the guns mentioned in the first list. Perhaps the second list is of guns made superfluous by the new purchase. It is not apparent that the culverins and demi-culverins in the two lists differ substantially, their weights being roughly similar. However, the cannon periers clearly differ, the new guns showing a decrease in weight, though whether of around a sixth or a third it is impossible to determine – either the weights of the two guns are incorrect, or else their weights were wrongly added together, because the correct total would be 4100 - 0 - 6 and not 5000 - 0 - 6 as stated.

It is very useful to have the weights of cast-iron guns from the early years of Elizabeth I's reign, for which there has so far been little to go on. Dr Schubert mistrusted earlier estimates, but in compiling his own list, for demi-cannon and full culverins based on surviving

guns, unfortunately used untypical examples. The typical Wealden demi-cannon was the 32-pounder rather than the 42-pounder; we can now see that his estimate for full culverins – around two tonnes – was about 20% too heavy. If we compare these 1564 guns with those produced at Horsmonden in the 1650s, the 1564 demi-culverins equate perhaps with 9-foot demi-culverins (listed but not produced at Horsmonden) and the full culverins with the 8½ foot culverins cast at Horsmonden. We would have to know the lengths of the 1564 guns to make exact comparisons, but the lists as they stand provide no evidence that a century's experience enabled the Horsmonden founders to produce lighter guns.

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PRO, SP 12. 35/2 [Endorsed:] 3 octobris 1564.

Charges of making cast ordinance

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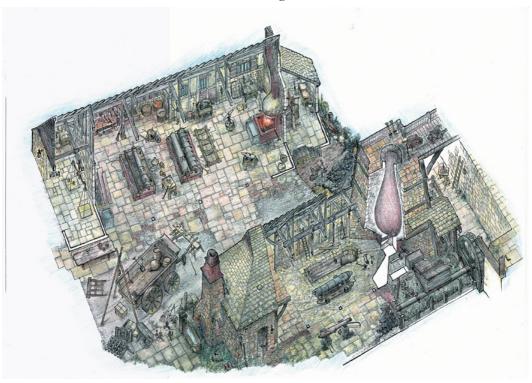
[Endorsed:] 26 octob' 1564 Mr Rand[olph], Lieutenant of the ordnance,

Memorandum Solde the xxvj of october 1564 thes parcelles of Cast yron ordenance following, viz.

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demy Culvering	one poiz one weing	2500 2500 5000	1 2 3	0 0 0

N.B. Mr Bromefield was Randolph's predecessor as Lieutenant of the Ordnance.

Reconstruction of a Wealden guncasting furnace R.G. Houghton



For a larger size picture click here

Iron-working Sites in the Haslemere Area

Carla Barnes

A search for more facts about Northpark Furnace in Lynchmere parish has revealed information about other sites in the area, derived from checking and cross referencing the parish registers for Bramshott, Fernhurst, Haslemere, Lynchmere and Woolbeding. Of these, the Lynchmere register reveals the most information and the parish seems to have been a focal point for the district. It lies in the far north-west corner of Sussex bounded in the north by the river Wey, with the Surrey parish of Haslemere on the north bank. Some Haslemere land formerly lay within the parishes of Thursley to the east and Frensham to the west, their common boundary being Britton's Water, a tributary to the Wey which runs through Sickle Mill (Fig.1) now identified as the forge site of Sturt Hammer. Lynchmere's remaining Wey boundary is faced by the Hampshire parish of Bramshott. Going south west along the boundary there was a small detached portion of Bepton parish with a short abutment to the Linch parish and all the remaining boundary is with Fernhurst which forms a "horseshoe" from the abutment with Linch right back up to the River Wey. Linch parish church was ruinous during the sixteenth and seventeenth centuries. Lynchmere church was convenient not only for its own parishioners but also for people from Linch and Bepton detached, for whom Woolbeding was too remote, and for those in the River Wey areas of Thursley and Frensham whose parish churches were respectively eight and six miles distant.

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Mill Sites on the Wey and its Tributaries

The River Wey rises on Blackdown at Crotchets Farm and at Chase

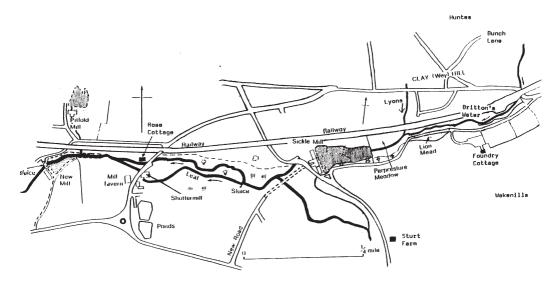


Figure 1

Lane. On the Crotchets Farm stream there are pen ponds and leats between the source at SU 914294 and the confluence with the easterly stream at SU 905317. On the Wey at SU 903317 is the site of the corn mill at Lowdermill. The river thence flows north west through former watermeadows, now built over by the modern Camelsdale, to the confluence with Brittons Water.

What is now called Sicklemill (SU 887325) lies on the latter stream and its supply was until recent years augmented from the Wey by the leat shown on the map. Forge cinder can readily be found at Sicklemill and it is suggested that this is the site of Sturt Hammer which is mentioned in four seventeenth-century parish register entries:

3rd May 1624	Buried Samuell Barden of Sturt Hammer in the p'ishe of Haselmeire [Lynchmere PR]
19th Dec 1635	Buried Samuell Blanchett a wandring boy from Sturt Hamer [Haslemere PR]
25th Sept 1654	Baptised Elizabeth daughter of John Hoade of Sturt Hammer [Lynchmere PR]
27th Nov 1656	Baptised Dority daughter of John Hoade of Sturt Hammer [Lynchmere PR]

An abstract title to Sicklemill, recited c.1900, is held by Waverley District Council, the present owners of the property. This includes a corn mill (later the document mentions a paper mill), two cottages, two gardens and "one parcel of land called the Hammer Place and one pond called the Hammer Pond ... and one yard of bondland called Sturt ... and one parcel of land called the Cinder Place ..." A document at Winchester R.O. (Eccles II 1735) transfers the ownership of Sicklemill from the four daughters of John Hoade (see entries for Dority and Elizabeth *ibid*) to James Simmons the paper maker. The Waverley District Council abstract, and the Hoade/ Simmons transfer when taken with the parish register entries suggest that Sturt Hammer was on the site of Sicklemill in the seventeenth century.

A 1710 baptism in the Haslemere register shows "Dority dau. of

John Hoade Sicklemaker" and further suggests continuity between Sturt Hammer and Sicklemill. John Hoade was buried in 1712 and there are no more references to sicklemaking. Some ten years ago, Mr Orchard of Sturt Meadow immediately opposite Sicklemill (a house built on land shown on the Waverley District Council map accompanying the abstract of title of Sicklemill) uncovered sickles which he presented to Haslemere Educational Museum. He also found a floor which he felt might be a working floor or hearth under what is now his garage. There is plenty of forge cinder in the area.

A forge name which cannot at present be associated with any mill site is Wheeler's Hammer. This appears in J.W. Penfold's transcript of the Haslemere parish registers:

5th Nov 1609	Buried Richard Bartholomew at Wheeler's
	Hammer
26th Dec 1609	Baptised Constance Hilman from Wheeler's
	Hammer

There are near-contemporary references to a Wheeler family who occupied land in the area of Sicklemill and Britton's Water (Swanton & Woods p.131 and Rolston pp.9 & 29) in the Haslemere parish registers. The two authors give useful references but no site for the forge. The writer is pursuing a line that Wheeler's might have been on the site of Sturt Hammer/Sicklemill.

Downstream at SU 884325 is Shotter Mill, for which the writer has only found references as a corn mill. Straker (pp.448/9) regarded this as a forge, an attribution followed by Cleere and Crossley (p.356). However, the reference used by all these authors to a forge on Budgen's map of Sussex (1724) is incorrect as are their references to parishes. This leaves only Straker's citation of Capes' statement (1901) that an ironworks was abandoned in 1776 which presumably should refer to Pophole. Straker found "hammer cinder" at Shottermill (there is plenty to be found along the short flow between Sicklemill and Shottermill) and forge bottoms have been found by the writer and Jeremy Hodgkinson in garden walls at

Rose Cottage, north of the mill; there is however no evidence that the source was local. A 6lb cannon-ball has been found beneath the floor of Rose Cottage. When Straker visited Shotter Mill it was called Oliver's Mill as it had been for many years and is still known as such by locally-born people.

At SU 877326, downstream, is New Mill, another former paper mill. Pitfold Mill (SU 882326) is on the tributary which joins the Wey from the north immediately upstream from the site of New Mill pond; Pitfold was also a paper mill, but previously a fulling mill. Research into the three paper mills, worked by the Simmons family in the 18th and 19th centuries, is being undertaken by the Haslemere Archaeological Society.

The site of Pophole Forge straddles the boundaries of the three counties at SU 875326; this is the site of a medieval corn mill referred to in a perambulation of the boundaries of Woolmer and Alice Holt Forests c.1200. Research by the writer shows that existing published references should be revised and that the available material should be noted. The first problem is whether there was ever a furnace at Pophole. No furnace slag has ever been found. The 1574 and 1588 lists indicate that there was a furnace but Lord Montague did not appear in person to sign his bond and hence an erroneous entry may have survived unchecked. The evidence below suggests that Pophole was always a forge.

In WSRO, Chichester, a case in the ecclesiastical court dated June 1598 concerning non-payment of tithes to the manor of Lynchmere and Shulbrede (EpI/11/8), contains four relevant depositions. Nicholas Cover was aged 67 and stated that Edward Tanner was the occupier of Pophole in 1594 with "one of Lurgashall called Garrett". He said the hammer was erected some 20 years before the case. Roger Quennel remembered that 20 years before, the pond was created across the Surrey/Sussex boundary to facilitate the hammer. Edward Tanner "hath and is farmer or occupier of the waters". He had heard that money was paid by the ironworks to the tithe of Lynchmere.

Thirdly, John Benett, the clerk or vicar of Lynchmere, said that the hammer block was sited on the point where the three counties meet. He said that "Old Fawkerner" and "Young Fawkener" between eight and ten years before had had the ironworks and that possibly Tanner's partner for five years was called Thomas Amy. Six years before, Charles Barden had been hammerman to Young Fawkener. The final deposition was from Thomas Ireland, aged 60, who said "one Amy and Tanner had had the hammer five years ago and Tanner lost his partner twelve months ago".

The second of these deponents, Roger Quennel, may have been related to Robert Quennell, whom T.S. Cooper (Surrey Arch. Colls. XV (1900), pp.40-50) states "became ironmaster, working the furnace at Imbhams in succession to Lord Montague. In 1612 he was buried at Chiddingfold". Robert's brother Thomas had, according to Cooper's reference, married Alice Irelond. The final deponent, Thomas Ireland, may have been the Thomas Ireland whose marriage is recorded in Lynchmere parish register on 24th June 1573 and whose daughter Alse was baptised in July 1577. More certain are Lynchmere parish register entries to Charles Barden, the hammerman: he first appears in 1586 when he married Alice Bettsworth from a local family and they had several children baptised. Between 1586 and 1640 there are 26 references to two generations of Bardens in the Lynchmere and Haslemere registers, of which three seem particularly significant:

LPR 1601 Married Nicholas Olde als. Marian & Rose Barden widow

LPR 1604 Buried Nicholas Olde that was slayne

LPR 1604 Married John Bryday and Anne Barden

These show the connection between the Bardens and the immigrant families studied by Brian Awty in *Wealden Iron* 2nd series Vol 4. Many immigrant names appear in Lynchmere and Fernhurst parish registers, although almost none are found in neighbouring parishes. There had been a Maryan Olde at Maresfield in 1576 and perhaps coincidentally a Barden there in 1551. Other significant names which later appear in LPR are a Nicholas Laby (in 1552 at Maresfield) and

a Charrelles Pullyn [Charles Pollyn] (1552 and 1560). Blasse Bryda was at Worth and Charles Pullyn appears there 1572.

Blasse Bryday, finer, place of employment unknown, first appears in the Lynchmere register in 1570 and between then and 1583 there are recorded the baptisms of eight of his children. In 1584 his daughter Alic married Gorge [sic] Larby. There are many Larbys under various spellings in local registers, commencing in 1569 with Jane, daughter of James Larbie. The first mention of Larby in Fernhurst parish register is the burial of Peter Larbie in 1576. The immigrant name Perigo appears in a damaged baptismal entry of 1568 in LPR. The first reference to Garratt is in 1576 in Lynchmere, "Bapt. Marye the child of Mihell Garratt". This may be the Garratt referred to in the tithe case above. There is a Thomas Parye buried in 1577, perhaps the immigrant name Pavye.

There are numerous 17th-century references to 'the Hammer' and to "Pophole Hammer" in Lynchmere parish register and none in the one for Haslemere. The writer believes that some 'Hammer' entries might refer to Sturt Hammer.

1599	Bur. Alce Osmande the dau. of a pore traviller wch
	was drownde at the brok at the Hamme
1626	12 dec. Buried William Alwinn a vagrant who died
	at Pophole Hammer 1631 Bur. Elizabeth dau. of
	Thomas Hoade at ye Hammer
1631	Bur. Joahne wife of William Jarlott at ye Hammer
1632	Bapt. Thomas son of Thomas Jarlott at ye Hammer
1633* 3 Feb.	Baptised Ann dau. of Thomas bare at Pophole
	Hamer
1636	Bapt. Thomas son of Thomas Hoade'at ye Hammer
1662 8 Aug.	Baptised Margret and Jane daus. of John Kilsham of
	Pophole Hammer

^{*} By 1639 Thomas Hoare and family had moved to Woodmans Green which is about equidistant between Northpark and Inholmes Copse on foot. A further reference to Pophole has been found in a Court Baron document, from the Shulbrede Priory Collection (uncatalogued) dated 20 July 1825. This concerns the admission of James Simmons of Sicklemill to

Pophole Hammer and refers to the ironworks as "formerly stood". The site was being acquired to control the waterway in the interest of the paper mills upstream. In this document is recited a Court Baron of 8 James I when "to the same court came Roger Shotter and surrendered into the hands of the Lord of the said Manor [Anthony 2nd Viscount Montague] all that house and all those lands on which the aforesaid house called ... the Iron Hammer and commonly called Pophole Hammer".

Ш

Northpark Furnace (SU 878283) lies on a south-flowing stream outside the Wey catchment. The parish boundary crosses the bay, the furnace being in Lynchmere and the pond in Fernhurst. All was on Montague land, for Northpark was an ancient hunting park for the lords of Cowdray. Today the pond is part of Lower Lodge Farm. The working area was known historically as Hatch Hill which was part of the Parrys and Hurlands estate and the area has been in the ownership of the Hollist family since 1793 following the Shotter family. Adjacent to the site are indicative names: Furnace, Minepit, Pit, Iron, Orelands, Clinker and Hatches.

Sixteenth-century evidence for Northpark is as yet inconclusive: it is not named on the 1574 lists and either Imbhams (in Chiddingfold parish) or Northpark could have been "the furnace in Haslemore or thereabouts". Northpark is possibly more likely than Imbhams to have been one of the unnamed ironworks in the will (1592) of Anthony Montague (PRO PROB11/81/22). The 16th-century occurrences of immigrant names in the Lynchmere parish register have been noted under Pophole: Mihell Garratt (see 17th-century Jarrett entries below) is one who could have either worked there or at Northpark.

There is a more promising reference in the Lynchmere and Shulbrede Court Roll for 1614 (WSRO Cowdray 264). In that year an iron mill had been completed on a copyhold called Peerish, a form of Parrys (above). The tenant was William Shotter, the Shotter

connection with the iron industry being noted under Pophole Forge (above). The furnace is explicitly named in Lynchmere parish register entries onwards from 1631:

1st July 1631	Elizabeth dau. of John Jarrett at Northparke
	Furnace baptised
6th Oct 1631	Long Nell deceased at Northpark Furnace
25th April 1637	Elinor Percivall daughter of Mary Percivall a
	wandering harlot born at the iron furnace in
	Northpark
17th Dec 1637	Leuvy a vagabond woman at Northpark
	buried

In the middle of the 17th century it is likely that William Yalden, steward to Viscount Montague, leased the furnace. In 1643 he leased Northpark and the remainder of the Cowdray Estate (Cal. SPD Vol G105 p.515) but the furnace is not specifically mentioned. Rent payments in 1659-61 for "the ironworks" suggest a connection with Northpark (WSRO Cowdray 5149 f.18)

Northpark is mentioned in the lists of Wealden furnaces: it was operating in 1653 and 1660, but in 1664 it was described as ruined. It is shown on a map of 1660 (WSRO Cowdray 1640). Stent's map of 1680 shows the pond in water. WSRO Cowdray 96 (dated 1683/4) which itemises transport of iron to Pophole, names carriers who can be identified as landholders close to Northpark Furnace.

In the 18th century, papers from the Hollist Collection (WSRO Add. Mss 38663-7 esp. 38666) dated 1708-12, refer to rights to take ore. WSRO Add Ms 38664, a Court Baron of Lynchmere (1712) states the right of the Cowdray Estate to take iron ore for the furnace built on Hatch Hill (i.e. Northpark Furnace). The 1717 list of English ironworks does not include Northpark, which is also omitted from Budgen's map of 1724, although as the latter omits several notable features in the vicinity, the absence of the furnace may not be significant.

Research at WSRO has shown the connection of John Butler with

this should read 1769

Northpark Furnace in that the draft lease (WSRO Cowdray 1443) and the two leases (Cowdray 1444 and 1445) relate to Northpark as well as Pophole and cite "formally in the occupation of John Butler". The Butler Family Memoir of 1815 (Bramshott & Liphook Preservation Society) shows how Butler brought workers from the north; although some aspects of this memoir may not be wholly reliable this point may fit local legend of a shanty town on the Wide Road to the furnace (WSRO Cowdray 1664 dated 1775). In 1729 the 21-year lease (with 7-year option) was made to Joseph Wright and Thomas Prickett (WSRO Cowdray 1443-4). They were gunfounders at Southwark. A further lease of 1775 (ibid 1445) gives James Goodyear of Guildford the tenancy. He leased Abinger Hammer (1776-80) and was bankrupt in 1777. One of the assignees of his bankruptcy was Richard Crawshay, the London ironmonger who later operated the Cyfarthfa ironworks in South Wales. The Sussex Weekly Advertiser of 13th and 20th January 1777 advertised "Iron Foundry to be Let" which can be deduced to be Northpark and Pophole.

Acknowledgements

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David Crossley and Richard Saville, *The Fuller Letters: Guns, Slaves and Finance 1728-1755*, Sussex Record Society, Volume 76 (Lewes 1991); 344 pages, 9 illustrations, index, £17.50.

The Letterbook of the Fuller family is the single most important document relating to the Wealden iron industry in the eighteenth century. In it is correspondence on all aspects of the Fullers' business in casting; supply of raw materials, technical aspects of gunfounding, letters to agents, purchasers and other ironfounders. In addition, though of less relevance to the study of the Wealden iron industry, are the other subjects covered by this volume, namely the management of the family's estates in Sussex and in Jamaica. Also there is much family correspondence, and letters which give insights into the political scene in Sussex during the first half of the eighteenth century; the Fullers were Tories although, towards the middle of the century, economic expediency made their views less extreme.

The majority of the letters are transcribed in full, although more routine aspects of business or family correspondence are precised. The original spelling has been preserved. A comprehensive introduction provides the background to the main subject areas of the letters, particularly iron founding. The index, by Ann Hudson, is most thorough, as befits a primary source which will be of use to a wide variety of readers.

From the iron founding point of view the fascination in these letters lies in the extent to which they portray the iron trade in all its aspects, and reveal the variety of problems and concerns which beset ironfounders like the Fullers. But therein also lies the limitation in the view we are given in these letters, for they illustrate the preoccupations of a rare breed. The Fullers were unique in the variety of interests which makes their correspondence so absorbing. By the early eighteenth century, no other Wealden ironfounders were so involved in agriculture, politics and colonial business. Most of the ironfounders with whom the Fullers had regular dealings, such as Harrison, Jukes or Bowen, were essentially merchants with no landed business. The danger exists of historians representing the Fullers as exemplars of Wealden ironfounders in that period.

The closest contemporary letterbook of an ironmaster (1788-97), that of Richard Crawshay, published too late to be mentioned in the Introduction (Evans 1990), shows, as one might expect, a more single-minded concern with the problems of the iron trade. The similarities between the letters of Crawshay and Fuller bear out the importance of the Fullers' correspondence, though in their case as ironfounders whose commitment to the development of their guncasting business was diluted by their other activities and by their background.

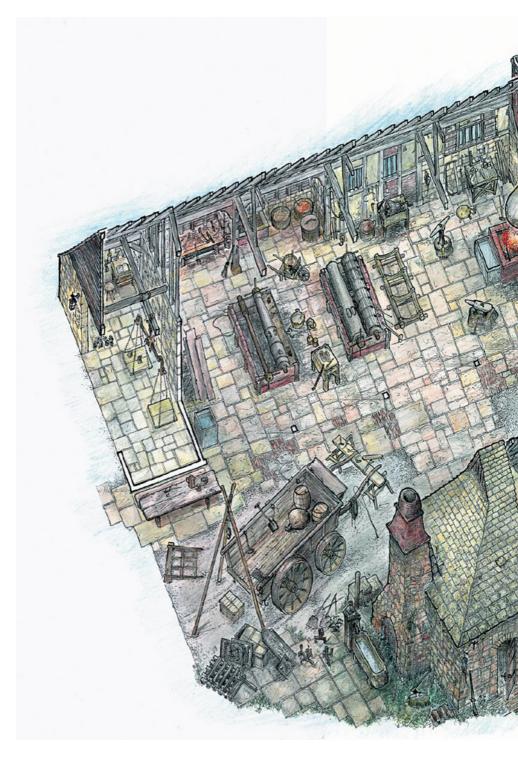
The attitude conveyed by letters to the Board of Ordnance in 1748 and 1749 seems to characterise their approach to business. They preferred to rest on their reputation, built up by years of reliable service, rather than seek ways of improving the efficiency of, for

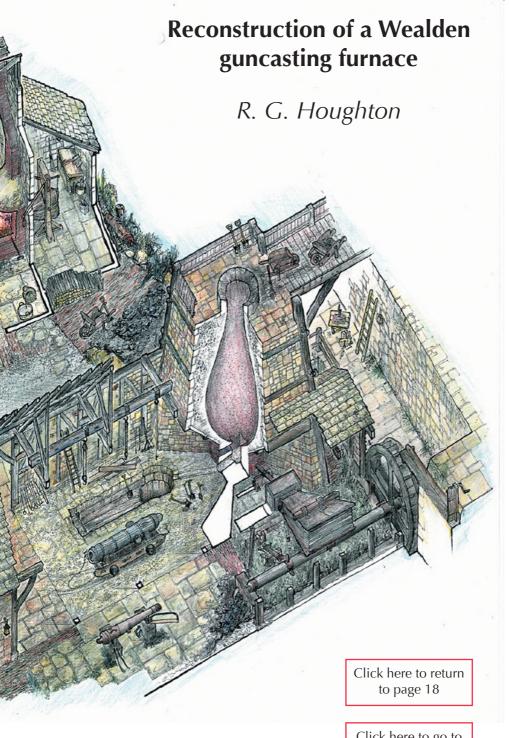
example, their technology, or rashly enter the uncertainties of the merchant gun trade. Such caution saved them from joining several Wealden ironfounders in bankruptcy after the Seven Years' War, after the period of this volume, but it also caused them to resent the competitive and, by contrast, ruthless attitude of the coming men in the iron trade, of which Crawshay was to be one.

This excellent volume deserves to find a home on the bookshelf of any serious student of the Wealden iron industry, and all who want to partake of a unique view of eighteenth century life. It is a pity that the opportunity was not taken, however, to complete the picture, at least as far as the iron industry was concerned, with the publication of the letters which form part of the Fuller papers but which were written after the end of the Letterbook.

Reference

Evans, C.G., (ed), *The Letterbook of Richard Crawshay 1788-1797*, South Wales Record Society (Cardiff 1990).





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