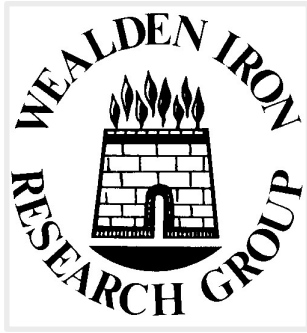




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ICKLESHAM ROMAN ROAD UPDATE

Newsletter 81 published in Spring 2025 gave details of the excavation of a section of Roman road in late 2024. Cameron Ross, the archaeologist leading the investigations, has now written a report of the excavations and finds. This is available at www.academia.edu/129178758/Icklesham Roman Road Report.

In 2025 a further section of road about 150 metres east of the first excavation was uncovered. The carriageway was also metalled with iron slag but much of the original surface had been removed and on the northern side the road had partially collapsed into the ditch.

Geophysics around Icklesham conducted in an attempt to locate the course of the road to the west of the village have revealed settlement features under fields to the south west of the church. These include two possible bloomery sites. To date the Roman road west of the village has not been found.

Both excavations are inside the field used as a car park for visitors to the annual Rye Show. They were fenced off and visitors were encouraged to inspect them. Alongside one of the exposed sections WIRG and the Winchelsea and Area Archaeology and History Society had stands which attracted hundreds of visitors during the day.



Judie English page 11.

Bob Turgoose

NORTH PARK FURNACE, LINCHMERE

THE EXCAVATION OF THE GUN-CASTING PIT

Forty-seven years have passed since the last gun-casting pit at a Wealden Furnace was excavated, by Owen Bedwin at Batsford Furnace, Herstmonceux. And there very little remained, the lining having almost been completely robbed out. It was about 2m across and had probably been constructed in the same way as the pit at Maynards Gate Furnace which Owen Bedwin had excavated three years earlier. That one was even narrower, at 1.5m, but it was possible to remove the contents to find the bottom 3m below. It was lined with timber hoops which had originally been faced with wooden uprights, and it would have had a boarded floor. At around the same time as the Maynards Gate pit was being excavated, David Crossley was doing the same at the site of Scarlets Furnace in Cowden, where its remains were revealed during work to restore the pond bay of the furnace following flood damage in 1968. Here, the pit was a similar diameter to the one at Maynards Gate, but it

splayed a little towards the bottom, and was constructed in the same way, although this time the lining had remained intact. Previously David Crossley had excavated a gun-casting pit next to the remains of the west furnace at Pippingford. This had been the most intact of the four pits, about 1.9m in diameter but narrowing towards the bottom and lined with wooden planks. Of particular note was the adjustable timber table found at the base of the pit, allowing the pit to be filled to different depths according to the length of the gun moulds placed vertically in it. Fragments of such a table had also been found at Scarlets. Overall the pit was 4.5m deep.

Over three days in September of this year the gun-casting pit at North Park was excavated by George Anelay of West Sussex Archæology. Unlike the others, the pit at North Park is brick lined. It had originally been about the same depth as the one at Pippingford, but the upper courses of brickwork, together with those of the adjacent wheel races, had been swept away by decades of storm water prior to the recent reconstruction of the sluices in the pond bay. The pit was, however, considerably wider at the top at over 2.4m and the

Fig 1: The casting pit at Pippingford showing part of the mould table



Fig 2: The excavated casting pit at North Park, 11 Sep 2025



sides sloped markedly inwards down to about 2m from the bottom, from where the sides were vertical. The brick sides had timber lining around about 60% of the circumference to a depth of a bit more than a metre, at which point there was a ledge formed by more brickwork, below which it was entirely lined with tightly-placed vertical planks. In the south-east corner and set into the side of the pit is a platform, originally boarded, which it has been suggested was to facilitate to the positioning and removal of the gun moulds, perhaps where those hauling on ropes and pulleys could stand. Similar platforms were recorded at Pippingford and Scarlets. Adjacent to this platform a three-sided wooden housing covered a lead pipe which descended the entire depth of the pit and which would have enabled the pit to be kept dry by means of a pump. There was a similar pipe in the pit at Pippingford, though without the wooden housing, and at Scarlets a length of half of a wooden pipe was attached to one of the staves at the side of the pit, presumably the remains of a similar means of pumping water. Nothing of archaeological interest was recovered from the filling of the pit, which comprised sand and clay, with a distinct clay layer

about a metre from the bottom. There was no moulding table. To preserve the timbers the contents excavated from the pit have been put back after the structure was fully photographed, measured and drawn for future publication.

The casting pit at North Park will have been the most recently constructed of the five Wealden pits that have now been excavated, gun casting not having started there until the late-1730s at the earliest under John Butler, whereas Pippingford was at least a quarter of a century earlier, Scarlets in the 1660s and both Maynards Gate and Batsford at least 50 years before then. North Park went out of use in 1776 and gun-founding had probably ceased there two years earlier when Joseph Wright and Thomas Prickett relinquished their 21-year lease after only five years. One other casting pit was excavated by David Crossley, at Rockley Furnace near Barnsley in South Yorkshire between 1978 and 1982.

More pictures of the North Park pit may be found in the Photo Archive on the WIRG website

JSH

DAVID CARRICK: GUN NOWELLER...AND POT FOUNDER?

Diamond, Standen and Rumens are all surnames associated with iron founding in the Weald, so it should, perhaps, come as no surprise that these names and a few others are also associated with the production of domestic metalwares, and in particular skillets, those saucepan-like vessels with legs that were made for standing in the hot embers of the kitchen fire before the days of stoves. Many members of the Diamond family were founders at furnaces where guns were cast, notably at Bedgebury, Horsmonden, Heathfield and Ashburnham, and skillets cast by John and Robert Diamond are in collections in the British Museum and Colonial Williamsburg in the USA. A fireback in Lewes, noted in News-



Figure 1: Detail of a Stuart armorial fireback with a superimposed skillet handle bearing the name James Standen; Anne of Cleves House, Lewes.

letter 61, has the broken handle of a skillet superimposed with name of a James Standen cast into it – see Newsletter 61, Spring 2015 (Fig. 1). The accounts of Heathfield Furnace in the 1720s and 30s record a John Standen making a range of domestic pots of different sizes. A bronze skillet marked 'Standen 1726' is known.

So when, recently, I had the opportunity to look through 'The Butler Hoard', the catalogue of an auction of cooking vessels, candlesticks and other items to be held by the firm of Woolley & Wallis in Salisbury in July, I was on the lookout for anything that could have a Wealden provenance. And my eye lighted on a bronze skillet, stylistically considered to have been made in



south-east England, bearing the name David Carrick. It was dated 1677 and the catalogue description said that the maker's name was regarded as rare (Figs. 2 & 3). The name rang a bell, for I had come across a David Carricke when putting together an article I had written for the WIRG Bulletin in 2023 about probate inventories. His will and inventory of 1680 had attracted my attention because of the unfamiliar occupation with which he had described himself – gun noweller. Presumably this was a person who assembled the core which was inserted into the mould of a cannon to form the barrel when the metal was poured in. The core was formed around a nowell bar.



Figure 3: Detail of skillet handle in Fig. 2.

Carrick lived in Ticehurst, East Sussex, where a decade or so later were recorded members of the

Kemp family, who are also known to have been founders of bronze skillets. One of them, John, son of Henry, is buried beneath an iron head-plate in Wadhurst churchyard. A Laurence Kempe had been a pot founder in Lewes in the 1640s, and a Harry Kemp was to be a founder at Waldron Furnace in the 1750s. Looking through the names of members of these ironworking families it is evident that individuals did not con-

fine themselves to one particular job throughout their careers, so while they might describe themselves as being of one occupation it did not preclude them having knowledge and experience of others. Thus David Carrick could well have done some pot founding alongside his stated occupation as a gun noweller.

JSH

WHY GLASSY BLAST FURNACE SLAG IS AN UNLIKELY FERTILISER: A DISCUSSION PIECE

Many people have noticed that small pieces of blast furnace slag are plentiful in some fields. They clearly form a small but not inconsiderable part of the plough soils of the Weald. That does not permit us to conclude that this material was deliberately spread, either as a fertiliser or as material to improve soil texture.

The greater part of blast furnace slag is glass. To be more specific, such slags are a mixture of complex compounds which contain calcium, aluminium and silicon. By definition glass is non-crystalline. Every batch, we may assume, is different. The calcium part of this is of interest to agriculturists because the Weald is generally calcium-poor. Its soil pH is low in most locations (i.e. it is rather acid). However, the presence of calcium in slag does not mean that this calcium can be used by plants. Even as it becomes available, the aluminium in the slag is also released. Aluminium in solution is toxic for many plants and reduces crop yields. Other elements that are a benefit in plough soil are also (usually) present in slag, but the same caveats apply. Elements in slag include phosphorous and potassium, critically important in modern fertilisers. Magnesium, without which plants cannot photosynthesise, may also be present in measurable quantities.

There is much useful material in slag, so what is the problem? It is that glasses are mostly ex-

tremely stable. They do not dissolve much in water and the hardly react with other materials in their environment. For example, there is not much reaction between oxygen and glass. This is not to assert that blast furnace slag lasts forever. On the contrary, by direct measurement, we may observe the process of its decay. Between spots on the surface of a lump of glassy slag it is possible to measure an electrical potential difference. This may be done using a standard voltmeter and silver contact paint (to make the contacts). The voltage observed is in the range of 5-6 mv. This is evidence of a chemical process of change within the slag. For comparison, the observed voltages across bloomery slag are usually at least an order of magnitude larger. One notes that bloomery slag lasts from the Romano-British period quite comfortably. So blast furnace slag stays in the ground largely unchanging.

Why, then can there be any disagreement about its unsuitability as a fertiliser or soil improver? It is that the other residues of blast furnace operation may be of significant agricultural value. These residues include waste limestone and charcoal. Evidence of these residues is usually plentiful around blast furnace sites and the matrix of associated slagheaps. However, there is, as yet, no evidence that these residues were collected in the trade in ashes and other waste to which Arthur Young refers in his (1813) *General View of the Agriculture of the County of Sussex*.

AN INVENTORY OF GUNS CAST AT NEWBRIDGE FURNACE 1509-10

By Tim Smith

Newbridge Blast Furnace and Forge was set up in 1496, making it the second furnace established in Britain, the first being at Buxted in 1490. Located on Ashdown Forest near Hartfield in East Sussex, there is evidence that a water powered bloomery existed there before the furnace as indicated by slag finds. A bloomery furnace could only produce a solid iron and was thus incapable of producing castings.

Conversion of the site to a blast furnace was made on the instructions of King Henry VII who needed to produce guns and shot for his campaign against Scottish backed Perkin Warbeck who challenged Henry's right to the throne, Perkin claiming to be a relative of Edward IV. Built by Henry Fyner, a London goldsmith, on the instructions of the King, the furnace was leased to a number of ironmasters. Output could reach 160 tons per year. By 1539, the furnace was reported to be in poor repair, but a forge, also built nearby, was still in use⁽¹⁾.

A document⁽²⁾ from the Account Roll of 29 September 1509 to 28 September 1510 PRO Dutchy of Lancaster, Ministers' Accounts, provides information on the weight of guns and chambers cast at Newbridge Furnace by lessee, Pauncelet Symart, between these dates.

The Document

Inventory of the Royal ironworks at Newbridge, Sussex, with weights of cast-iron cannon and their chambers manufactured by the tennant Pauncelet Symart, (tenant between 1498 and 1512)⁽¹⁾ and a note on the erection of a steel forge.

INVENTORY

Theis ben(e) the implement(es) and necessities with other toles of yron belonging to the Kyngs

iron milles wythyn the forest of Asshedonne yn the countye of Sussex.

Translated into modern English:

These be the implements and necessities with other tools of iron belonging to the King's iron mills. An inventory of contents follows (not recorded here) including the weights of guns cast as separate barrels and breeches.

Weight of cannon and of their chambers

This evidently refers to guns where the barrel was cast as a separate piece from the breech (chamber). The term 'cannon' here refers to all gun types – later the Cannon, as cast on the Weald, was a specific size either with a 7 inch (178mm) bore cast as a single piece with barrel and breech integral and would fire a 42 lb ball.

The weights of three cast guns of iron with seven chambers (breeches) of iron are depicted in the original document as below.

The weyght of III caste gonnes of irron with VII chamb(e)r foluyng.
 Item oonne gonne weyng(e) D C I quarterone XXI lb.
 Item the IIde gone weyng(e) DCC di(midium) } MM
 Item the IIIrte gone weyng(e) DCC I quarterone XXI lb.

(The weights are given in fractions of hundredweights [evidently the Imperial 112lb cwt here as sums of weights are provided in pounds] where, M = 10cwt, D = 5cwt & C = 1cwt. A Quarterone is a quarter of a hundredweight (28 lb) and a dimidium is half a hundredweight (56 lb). [M, D & C each represent one hundredth of the Roman Numeral values since the units are hundredweight \(cwt\).](#) [Prior to 1340, the hundredweight consisted of 100 pound \(as is still the case for the US cwt, but in 1340, King Edward III decreed that one stone in weight would weigh 14 pounds \(lbs\). Since a hundredweight was defined as weighing 8 stones, this required the Imperial hundredweight to become 112 lbs which was formalised in the Weights & Measures Act of 1824.](#)

From the Inventory:

Item: One gun weighing DC I quarterone & XXI lb (21) = 5cwt + 1cwt + 28 lb + 21 lb = 6cwt 49 lb (721 lb).

The 'gun' barrel thus weighs 6cwt & 49 lb which, in later times, was often be marked on the barrel, in this example, as 6 -1-21 (6cwt + 1 quarter cwt + 21 lb). Knowing the precise weight of a gun was important as most were destined for warships where the stability of the ship would be compromised if too much weight was added at upper deck level.

Item: the second gun weighing DCC di (midium) = 7cwt & 56 lb (840 lb)

Item: the third gun weighing DCC I quarterone XXI lb = 7cwt & 49lb (833 lb)

Total weight of the three guns is given as (MMCXLII lb) 2394 lb or 1.07 Imp ton

Chambers (breeches) to the same

Chambrys to the same

Item II cambris weyng(e) D C XXXVIII lb.

Item IIII chambres weyng(e) MCC di(midium)

} MDCCC di
(midium)
XXXVIII lb.

Item oonne griete chamb(e)re of yrron contenyng(e) in weyght
CCCC IIII quarterons XXI li

Somme to(ta)l MMMMDXVII lb. weight.

ie

Item: Two chambers weighing (in total) D C (6 cwt) (&) XXXVIII lb = 3 cwt 19 lb each (355 lb)

Item: Four chambers weighing (in total) MC (12cwt) (&) C di(midium) (56 lb) ie 3cwt 14 lb each (350 lb)

Total (6 chambers) MDCCC (18cwt)+(1) di medium (56 lb) & XXXVIII lb (38 lb) – which agrees with the individual above total of



Breech loading cast iron gun with chamber and equipment.

2110 lb.

Item: one great chamber of iron containing in weight CCCC III quarterons XXI li (lb) ie 4cwt 105 lb (553 lb)

Sum Total (of barrels plus chambers) is MMMMD (45 cwt) plus XVII lb = 5057 lb (45.1 cwt) or 2.25 Imperial ton

According to the account roll the price (for guns) was 10 shilling pro centena (ie per hundred-weight). The 'cannon' and chambers were sent to Portsmouth to the Clerk of the Royal Navy for the armament of the battleship 'Le Souvereign'.

The following is translated from the Latin:

For the armament or defence of a certain great ship, the said Lord King, called 'The Sovereign'.

Discussion

Early gun barrels were made from wrought iron staves (or even wood) packed closely together

and held by a series of wrought iron rings with a separate breech cast in iron. Early cast barrels were sometimes reinforced with a wrought iron rim shrunk on at the muzzle, an example being found at Buxted Bridge⁽³⁾.

Guns were manufactured in Ghent from around 1313 following the invention of gunpowder by a German monk. As early as 1314, guns were exported to England. Edward III is thought to be the first English King to use guns in battle against the Scots in 1327, although possibly a later date when Edward used them in France.

This account shows that at Newbridge gun barrels were being cast in iron as early as 1509 or 1510 with separate cast breeches.

The claim that Ralph Hogg was the first to cast a gun some 33 years later, in 1543, (although the exact date is challenged), at Buxted, presumably refers to guns cast with an integrated breech. Possibly his employer, Rev William Levett, Rector of



Buxted, should be credited with overseeing the casting of the first complete gun. He is first associated with 'digging ore' in 1539⁽⁴⁾ and was running Stumblett's Furnace, then in Maresfield Parish, leased to his brother, John, who also leased Steel Forge, a bloomforge near Hartfield⁽¹⁾.

Wm Levett is proposed to have built a furnace at Oldlands in the north of Buxted parish, which is considered to be where the first complete guns were cast. There is evidence that Wm Levett was supplying wrought iron to the Crown in 1539 and 15 tons of shot in 1540⁽¹⁾.

In 1541 Levett was appointed King's Gunstone-maker and is recorded as being paid for supplying shot at this time. He recruited Peter Bawde, who was a French national working in a foundry in Houndsditch, London, casting guns, and employed a local Maresfield man, Ralph Hogge, as the furnace operator, to make complete guns sometime around 1543. This date is recorded in subsequent documents sometime after the event. The finding of a gun, reinforced at the muzzle with a wrought iron ring, at Buxted Bridge, suggests this was an evolutionary process.

Wm Levett died in 1554 bequeathing Hogge 'his servant' four pounds in money and six tons of

(iron) sows. It is thus evident Hogg was in Levett's employment at the time the first integrated guns were cast. In 1559, Hogge was appointed as the 'Queen's Gonnestonemaker of Iron' in the reign of Queen Elizabeth I.

Evidently the well-known Sussex ditty

'Master Hugget and his man John
Did cast the first can-on'

Uses poetic licence with Hugget better rhyming than Hogge and the servant named John brought to Buxted by Peter Baude as his servant.

References

- 1 WIRG database Newbridge Furnace
- 2 Account Roll of 29 September 1509 -28 September 1510 PRO Dutchy of Lancaster , Ministers' Accounts, Bundle 455, No 7331. Reproduced by H R Schubert in 'History of the British Iron and Steel Industry From c 450BC to AD 1775 Appendix VI pp393 & 394
- 3 SAC Vol 46 p17Dawson
- 4 The Queen's Gunstonemaker An Account of Ralph Hogge Elizabethan ironmaster & Gunfounder' by E Teesdale

NEWFOUNDLAND CANNON

Gary Kett has sent some more photographs of Wealden guns in Newfoundland. One in particular, at Castle Hill National Historic Site, Placentia, in the south east of the island, is unusual in hav-

on the left. In the case of Gott, who cast guns at the Gloucester Furnace at Lamberhurst, the G could equally have indicated that location.

JSH



Fig 1: The cannon at Castle hill, Placentia

ing two trunnion marks, a **G** on the left trunnion (looking forward from the back of the gun) and an **H** on the right. It is 9 feet long, measured from the base ring to the muzzle, and was engraved with its weight of 26 hundredweight 2 quarters 2 pounds. Its bore of 4½ inches indicates that it fired a 12 pound shot. It is a Borgard pattern gun, i.e. it dates from between 1716 and 1727. As is usual in such cases, I consulted Charles Trollope. The use of letters on trunnions, he has told me, was introduced in 1703-4, the contractor's initial on the right trunnion and the caster's initial, if different, on the left. This would suggest that the contractor might have been William Harrison, who was new to the gun trade in 1717, and the caster Samuel Gott. Gott cast some guns for Major John Fuller in this period but Charles has no record of him casting guns for Harrison. However, the Ordnance Board records in the National Archives are poor at this time. Gun founders did not adhere strictly to the scheme for markings, with furnaces often being marked on the right trunnion, and occasionally



Fig 2: The G on the left trunnion



Fig 3: The H on the right trunnion

Sadly, we must record the deaths of some long-standing members of WIRG

DR JUDIE ENGLISH (1948-2025)

It is with great sadness that we report the death on 9th May 2025 of WIRG member Dr Judie English following long-term health problems.

Judie was an active field archaeologist in both Sussex and Surrey and published extensively on her findings, most recently in a series of articles in the *Sussex Archaeological Collections* regarding a project she undertook with Dick Tapper and David Lee to investigate Cross-Ridge Dykes on the South Downs. Judie, who was born at Bournemouth, first developed her interest in archaeology by volunteering in Wessex on projects directed by the late Dr Geoffrey Wainwright. In the early 1970s she moved to Surrey, joined the Surrey Archaeological Society, and became involved in medieval archaeology. She also developed an interest in the archaeology of the Weald and joined WIRG. Later Judie undertook a part-time doctorate at the Centre for Continuing Education (CCE) at the University of Sussex which was supervised by the late Professor Peter Drewett and the writer. Her research, an analytical survey of prehistoric fields in southern Britain, was published by BAR in 2013.

Judie was also a popular adult education tutor and taught various archaeology courses for CCE, for the Sussex School of Archaeology and History, for the Rottingdean Whiteway Centre, and many other centres. She was a long-standing Trustee of the Council for British Archaeology South-East and was for many years the editor of its newsletters. She was also a Vice-President of the Surrey Archaeological Society.

Judie will be much missed.

David Rudling

JOHN WALLACE

John died in December 2024 and had been the owner and custodian of the site of Ashburnham Furnace for half a century. He welcomed WIRG members to the site on several occasions, as well as other interested groups, and was instrumental in raising funds for the consolidation of the remains of the spillway and other watercourses. His family have said that they will continue to welcome WIRG's interest in the site.

TIM CORNISH

Tim died in June this year and the Wealden iron industry was among his many interests to the point that he was preparing a book on gun production at Wealden furnaces, particularly in the Elizabethan and Jacobean periods. In 2022 his book, *Medieval Mayfield*, attracted deserved praise. Tim contributed four articles to the Bulletin.

PETER CREW

Peter died on the 7th of August. Although he lived and worked in North Wales, Peter became a member of WIRG because of his and his late wife Susan's wide interest and expertise in the archaeology of early metals technology, both nationally and internationally. A visit by him to the south of England in November 1992 was seized upon as an opportunity to ask him to give a lecture to the group extra to our normal sequence of meetings. He retained an interest in WIRG's activities.

EXCAVATIONS AT GREAT PARK WOOD

Great Park Wood lies on the border of Brede and Udimore in East Sussex. WIRG has been excavating the site since the spring of 2018. At various times work has been delayed by covid, lockdowns, excessive rain which flooded the two trenches on several occasions, and by temperatures approaching 40 degrees Celsius. The location of the site in woodland has restricted the number and lay-out of the trenches. More significantly, we discovered after work had started that the site was covered by more than a metre of hill wash that had accumulated in the centuries since iron production had ceased.

The excavation phase has now finished. Further work will include a drone survey of the site to be conducted after leaf fall and environmental studies of the contents of 20 buckets of soil taken from the two trenches. Over 30 sherds of pottery were recovered during the excavations. Preliminary indications are that the pottery is from the 1st and 2nd centuries and was made locally.

The slag heap shows no signs of being robbed at any time to provide material for road metal-ling or similar purposes. Once the survey is completed, we will be able to calculate its volume and derive an estimate of total iron production at Great Park Wood.

A full report on the excavation will be prepared and published.

Bob Turgoose