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WEALDEN IRON RESEARCH GROUP

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The Domesday Ferraraia

Domesday Book (1086 A.D.) mentions 'una ferraria' under the hundred of East Grinstead. This is the sole reference to ironmaking in the Weald at that time.¹ In the Victoria County History for Sussex Dr L. F. Salzman translated ferraria as 'mine' but Straker acceptably suggested 'ironworks', i.e. bloomery.² Dr Salzman added that the site was no doubt the same as that which was in the hands of Isabel de la Haye in 1263. He based his conclusion on an Assize Roll which recorded a lawsuit of that date; the ironworks was then showing no profit.¹

Dr Salzman did not identify the Domesday site: by a strange quirk it was in the only unnamed tenement in the whole of the East Grinstead entry. Straker thought it was 'highly probable' that it was Walesbeech. This has a large bloomery site which has yielded Roman pottery, but none of any other date.² In Domesday Book 'Waslebie' is a separate tenement; the entry obviously makes no reference to a ferraria. In fact, Ansfrid held the ferraria tenement of c.170 acres and Ralph de Dene the Waslebie tenement of c.100 acres. Both tenements were outliers of Ditchling Manor and the men somehow related,¹ but there is no basis for the Straker conjecture.

Unfortunately Schubert accepted Straker's tentative identification, dating Walesbeech as 2nd century Roman, as Norman (1086) and as medieval (1263). He called the Domesday ferraria a 'forge'; if he meant 'bloomsmithy' this is acceptable. Later he refers to Ditchling Manor near East Grinstead as having an ironworks. The Manor is 15 miles from East Grinstead where the appurtenant outliers were.³

Tylecote was more cautious: he did not mention Walesbeech in his list of Roman sites, though nearby Ridge Hill was put in. In his Dark Age and Early Medieval List he silently rejected Straker's conjecture and Schubert's confident acceptance of the conjecture as fact.⁴

Where indeed was the ferraria? Walesbeech site now lives amphibiously by and in the waters of Weir Wood Reservoir at TQ 395 345. East Grinstead hundred included the modern parish of Forest Row and thus stretched to the Hartfield boundary where the Roman industrial site of Blacklands has kept its secret till recently.⁵ Field investigation can never prove any bloomery in the area known-or-found to be the Domesday ferraria. A letter to Dr Salzman from the writer of this note reached him about the day when he was ordered to rest from his voluminous labours and perhaps the secret died with him. However, scattered in volumes of Sussex Archaeological Collections are references to Ansfrid and family, to Ralph de Dene and family and to Isabel of the Montacute family; her surname was that of her first and deceased husband, she having impropriated another by surname de Audeham; she later took a third. Should one look for her estate among the Montacutes or de la Haye or de Audeham or (William) de Pevensey?

Mrs Judith Brent, the senior assistant Archivist at East Sussex Record Office says that Assize Rolls are formidable. But we need a medievalist who will follow up the clues. Until the relevant entry in the Assize document has been re-studied, we do not know if Dr Salzman's 'no doubt' is doubtful.

Perhaps there is a consoling feature: one need not bother with the named tenements in the Domesday entries. But who knows the extents of these? Indeed some have not been identified. Is there a Ditchling Manor document which holds the clue?

JOE PETTITT

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1. L. F. SALZMAN, "Domesday Book" in Victoria County History for Sussex, Vol. 1:

East Grinstead entry	418-419
comment	367
Ansfrid and Ralph	380 and 407
Isabel de la Haye	418 and Vol. 2, 241-2
Assize Roll	ditto

The roll is in the Public Record Office/Assize Roll 912.
2. ERNEST STRAKER, Wealden Iron (1931):

conjecture	31-2 and 240
Ridge Hill	235
3. H. R. SCHUBERT, History of the British Iron and Steel Industry (1957):

Walesbeech, Roman, etc.	37
Anglo-Saxon list	80
Ditchling Manor	82 and 84
4. R. F. TYLECOTE, Metallurgy in Archaeology (1962):

Roman list	218-9
Ridge Hill	219
Dark Age and Early medieval list	270-1
5. C. F. TEBBUTT, "Blacklands, Cansiron Bloomery" in WIRG Bulletin No. 2 (issued July 1971);
C. F. TEBBUTT, "A Roman Bloomery at Great Cansiron, near Holtye" in Sussex Archaeological Collections, **110** (1972) 10.

Medieval Bloomeries: a comment

The Chairman's note in the last Bulletin raises a number of problems about the occurrence of late bloomeries in the Weald, over which the Group has made little progress. Compared with the satisfactory recording of Romano-British bloomeries, and the rather unexpected growth in the number of recorded sites for the blast-furnace period, progress for the medieval industry has been limited. There are several reasons why this should be so.

To take the earlier, unpowered bloomeries first. Mr Money's excavations at Minepit Wood, Rotherfield, have indicated the scale and form of 13th-14th-century sites, and it is clear from his report how easily these could be destroyed by woodland clearance and ploughing. Further, as little pottery seems likely to be encountered even under conditions of controlled excavation, how much less will be found in field-walking, even on plough-soil. Those sites which have not been cleared are hard to find, and it is important for those who have access to woodland to watch for cinder and tap-slag in rabbit scrapes, where trees are uprooted, and in stream cuttings.

The powered bloomeries are an even greater problem. So far the fifteenth century is a blank, from both the historical and the archaeological record, yet while the industry may have been concentrated on fewer sites at this time, there is no reason why it should have collapsed totally. For although some aspects of economic activity did contract in the century after the Black Death, demand for iron would be maintained to some extent. The campaigns of the Hundred Years' War, and, to a lesser extent those of the Wars of the Roses, with an arming of

feudal retainers, would require supplies, even though the better quality materials would be imported. But further, there is evidence that by the middle of the fifteenth century London's activity was having a growing effect on the agricultural prosperity of West Kent at least, with, in turn, rising demand for the iron required for the building and equipment needs of farmers.

On the ground, the problem is that the water-powered bloomery was constructed in surroundings suitable for re-use by the finery forges of the next two centuries. Chingley, Lamberhurst, goes some way to make the point. Here a powered site of about 1300, certainly a hammer forge and probably a bloomery, went out of use during the fourteenth century. Although there was a long period of disuse conditions were satisfactory for the finery forge of the 1580s, and all traces of the early operations were obscured until excavation took place in 1970-71. This may not be uncommon, and a parallel offering greater continuity may occur near Frant, at Brooklands. Here John Barham operated a forge in 1524, and it is most unlikely in this district that this would be a finery rather than bloomery forge. The nearest blast furnace of the early period, the Abergavenny works in Eridge Park, was not built until 1538, and it is most unlikely that Barham would have been refining pig from Newbridge or Parrock, 15 miles away. Brooklands was, however, in use as a finery later, but when it was reconstructed is not known. The point to emphasise is that the equipment required was very similar: the bloom hearth needed rebuilding as a finery, the string hearth as a chafery, and the hammer had to be given a greater capacity. The latter would require more power, but the hearths probably would not. We cannot

hope to see more than the smallest proportion of these sites excavated, and the field observer is hampered not only by this probability of multi-period use but by the similarity of many of the cinders and hearth-bottoms from the successive processes. Thus further progress may require a search of the documentary material to focus activity on the most likely sites.

The time has come for a systematic examination of the likely potential of certain classes of documents in the Public Record Office. Many members of the Group, particularly those who attend Local History classes, will be aware that from time to time during the Middle Ages and later, estates came for short – and sometimes not so short – periods into the hands of the Crown. This could happen when the headship of a religious house fell vacant, or in the case of inheritance of a lay estate by a minor, in Wardship. These and other occasions meant that the Crown administered an estate, taking a Survey at the start, keeping accounts (Ministers' Accounts), and maintaining lists of rents. The Rolls of the manor courts also often came into Crown hands. These groups have remained in the Public Records, and, in order of usefulness for our purposes, the Ministers' Accounts, Rentals and Surveys and Court Rolls are classes whose lists and indexes (printed and published by the P.R.O.) need systematic examination.

By and large, the best prospects are monastic houses with estates in the Weald. Boxley Abbey, near Maidstone, for example, had estates in the Goudhurst area, and in Ministers' Accounts for the 1340s for the manor of Chingley there occur references to payments to smiths, and other indications of an ironworks on the demesne. What references such as this can probably never do is to physically identify a site on the

ground, but they clearly narrow the area of search. The immediate need, then, is to prepare a list of estates, particularly those of religious houses, with lands in the Weald. A good starting point is the Valor Ecclesiasticus, the list made by Henry VIII's government in 1535 on the eve of the Dissolution of the monasteries. This was published early in the last century, and is relatively simple to use, at least for the more consolidated estates, though there are sometimes problems with outliers of unexpectedly distant houses. The next step is to consult the printed lists and indexes for the groups mentioned above, searching for indications that the lands in question were in Crown hands at the right period. There are of course other classes of documents in which references appear: the oft-quoted accounts for Tudeley, near Tonbridge, for the years just before and just after the Black Death are in the records of the Exchequer. They have been dealt with in Archaeologia, Vol. 64, pp.145-164. However, this is probably a unique instance.

These are the essential preparations. They may well draw a blank, and show the Chingley references to be a fortunate exception. However the search must be done if the Group claims to be making a thorough study of the industry. This stage is a task well within the capabilities of local history evening classes, and once a short-list of likely estates and documents within the key periods, c.1300 or perhaps slightly before, to about 1530, has been drawn up, the task can be taken further by those members with some experience in reading medieval sources.

Comments, and volunteers would be welcome.

EDITOR

References

1. J. H. MONEY, "Medieval Ironworking in Minepit Wood, Rotherfield, Sussex", Medieval Archaeology, LV, 1971, 86-111

Bloomery Slag at Lenham Heath, Kent

At Chapel Farm, Lenham Heath, Kent, on the Folkestone Beds of the Lower Greensand, a considerable spread of bloomery slag can be seen east of the farm at TQ 908 503. The field is under fairly extensive cultivation which although allowing close examination of the area, has possibly destroyed the actual bloomery site. Dating is difficult, a few nondescript sherds of possibly medieval date have been found, although these may belong to the medieval Chapel Farmhouse or the lost site of the Royton Chapel, which is nearby.

The most likely source of ore is the Folkestone Beds, the surface of the fields locally abound in ferruginous 'boxstones' and also carstone has been noticed, but not in any quantity. In the vicinity of the Bull Inn, just to the east, is a large sand quarry showing well developed iron-pan layers. It is probable that the ore in the form of iron-pan, 'boxstones' and carstone was a by-product of the sandpits which must have been dug here since medieval times.

If the Folkestone Beds at Lenham Heath were successfully worked for iron, we should perhaps find further indications throughout the Vale of Holmesdale. Field-workers of the Maidstone Area Archaeological Group have had no luck searching in likely areas to date. As Chapel Farm is now threatened by the M20 motorway extension, it is hoped more fieldwork can be attempted in the Autumn of 1974.

ALEC MILES

Brian Scott of Belfast University is at present working on the problem of ore/slag/metal correlation, and trace element partition during smelting.

He hopes eventually to be able to show the place of origin of iron artefacts from early sites.

In order to assist in this obviously important work, members are requested to collect samples of ore, roasted ore (pink), slag, and if possible iron (or iron residue) from their local bloomery sites (not more than 50 grams of each) and send them with the site name, map reference, and period if known, to

Brian G. Scott,
c/o Conservation Laboratory,
Department of Archaeology,
University of Belfast,
13 University Square,
BELFAST BT7 INN

The results of Mr Scott's work when completed will be made available to W.I.R.G.

Inventory of Sites

Bloomeries

COOMBESWELL, HASLEMERE. SU 9015 3535.

There is no clear evidence on the ground for this site but slag and charcoal were revealed during clearing operations. Subsequent ploughing showed a semi-circular patch of dark earth and slag. The site is at the head of the coombe and some 2½ miles from the nearest clay ironstone. The old coach road runs nearby. Romano-British and Medieval pottery has been found at three separate sites in the coombe. Earlier type bloomery slag, burnt sandstone, and roasted ore were found in the ditch forming the W. boundary of the site. Plan provided. See WIRG Bulletin No. 5.

LURGASHALL BLOOMERY. SU 942 261. Wealden Iron p.431.

This interesting site is rather ambiguously described by Straker. The site is on a tributary stream of the later existing millpond outflow. The pond is no longer in water but has a bay 65 yards (60m) long and 13 feet (4m) high. The road past Old Mill Farm (called Rowhook Farm on the 25-inch Ordnance Map) crosses the bay. Evidence for the bloomery is mainly confined to typical slag lying on the steep bank, and in the hedge E of the stream. There is also an ill-defined area of black earth and small slag lying at the SE corner of the bay and slightly raised above the level of the surrounding silt. In the bank, referred to above, and in line with the raised area, is a significant amount of roasted ore. Slag was also found under a large tree in the banks and in the bed of the stream for 100 feet. This may be material used in the mill works. There is always the interesting possibility of a water powered bloomery here. Plan supplied.

EAST WOOD, PIPPINGFORD: NUTLEY. TQ 448 301.

This site consists of an artificially levelled platform, about 30 feet by 18 feet, on the top of a steep bank in a ghyll with a small stream just below. Immediately to the S, uphill, and away from the stream, is a low slag heap about 66 feet across. At stream level, below the site, a semi-circular quarry has been dug on the S side. Another interesting feature is an old trackway, of single cart width, and slightly hollow, which descends the slope to the stream immediately E of the platform. It has a surface of large stones where it crosses the marshy ground at the bottom of the above-mentioned quarry. Two small trenches dug into the N. side of the slag heap produced several sherds of Romano-British pottery. On the platform parts of the subsoil surface were found to be reddened by fire. The whole site much resembles that at Pippingford Bloomery (TQ 4457 3126, See Bulletin No. 6, p.18) about $\frac{3}{4}$ mile away to the N. Samples taken.

UPPER PARROCK: HARTFIELD. TQ 4515 3442.

There is a concentration of bloomery slag on the N end of this arable field, and all over it much cyrena limestone. Next to it on the N is a large deep pit in a plantation. It is all on the Wadhurst Clay. Samples taken.

UPPER PARROCK: HARTFIELD. TQ 452 347.

Bloomery slag is widely and thickly spread on this arable field on the Wadhurst Clay. There are two pits lower down on the E side of the field. Samples taken.

VREEDINGS FARM: MARESFIELD. TQ 469 251.

There is a considerable quantity of bloomery and forge slag scattered on this arable field on the slope to a small tributary stream running into the main Hendall brook. Samples were taken. The site is on the Wadhurst Clay at the Hendall Wood Fault.

FURNACE WOOD: BUXTED. TQ 474 264.

There is an extensive slag heap, cut into by the stream on its E bank, about 16 yards above the public footbridge. It lies under about three feet of silt, and contains furnace bottoms, tap slag, cinder, and cyrena limestone. Some can be found in the stream bed. On the bank above there appears to be a now disused hollow way running N, and following the course of the stream. Furnace Wood is on Wadhurst Clay. Samples taken.

BINGLES FARM: LYE GREEN: WITHYHAM. TQ 507 340.

Here, where a short V stream from a spring joins a larger stream (both now made into ditches), there is much bloomery slag, both in the bed and the left bank of the small stream, at its junction. There is a fairly level area in the grass field adjoining which might be the hearth site. The site is on the Wadhurst Clay. Samples of slag taken.

ROSE HILL: CROWBOROUGH. TQ 534 302.

Downstream from the above reference, in the bed of Crowborough Ghyll, can be found bloomery slag, as far down as Forest Rise road bridge (TQ 535 301). This would appear to be the site found by H. Fitt of Jarvis Brook, about 1935, and about which he corresponded with E. Straker. Pottery he found here was sent to the British Museum and identified as late Iron Age (probably Romano-British). Samples were taken. The site is on Ashdown Sand.

COX MILL: DALLINGTON. TQ 653 203.

Some very large pieces of bloomery cinder were unearthed when the roadside ditch was recut on the E. side, about 50 yards N. of the entrance to Cox Mill. There is a large pit here on the same side of the road.

Water-powered sites

ROGATE or RABIN FORGE. SU 800 224. Wealden Iron p.432.

Here the bay is 108 yards (100m) long and only 6¹/₂ feet (2m) high, and largely silted up on both sides. The silt depth below the bay is estimated at 9 feet. Two marshy hollows through the bay at the N end may represent the wheel pit and spillway. No cinder was seen.

COOMBE FURNACE. SU 815 268. Not in Wealden Iron.

Here there is still a pond in water, but the present bay may not be the original, which may have been on the site of the present road. There is a quantity of slag at the SE corner of the bridge, in the stream below the bridge, and on the old track, close to the road, to the S. Plan supplied.

CHITHURST FORGE: SU 846 236. Wealden Iron p.430.

Here not much remains but a high bay across a strong tributary of the Rother and a pond. The bay is 108 yards (100m) long and 19 feet (6m) high. A small amount of forge cinder can be found in a bank of black earth between the present spillway and a hollow, probably the wheel-pit site. Plan supplied.

INHOLMES COPSE. SU 855 263. Not in Wealden Iron.

Here there is a bay 108 yards (100m) long and 45 feet (14m) high with a prominent pond. It suffered damage in the 1968 floods and has been somewhat landscaped. The furnace site below the bay has been extensively disturbed and much slag carted away. Further W of the flatter area a steep slope is covered by roasted ore and charcoal. Nodules of clay ironstone occur in the stream gravel but the ironstone band is not exposed. A lenticular piece of cast iron was found in the stream bed, midway between the outfall and the track. The slag varies from bottle green to dark brown and is sometimes streaky. The brown often contains unusual amounts of charcoal.

FERNHURST or NORTH PARK FURNACE. SU 878 283. Wealden Iron p.424.

Here the pond is still in water and the restored bay is 97 yards (90m) long and 13 feet (4m) high. Below the plunge pools is a very large slag heap rising to the level of the bay. At the N end of the bay there is much recent flood damage. More slag (greenish opaque) lies along the S bank as far as the footbridge, and is c.10 feet thick at the downstream end of the brickwork. Tradition places miners' cottages along Furnace Lane. Plan supplied.

VERDLEY WOOD FURNACE: SURNEY HATCH. SU 906 264. Not in Wealden Iron.

Here is a dry pond, but a high bay remains. It is 108 yards (100m) long and 39 feet (12m) high on both sides, only broken in the centre to drain the pond. The spillway is indicated by a dip in the level of the bay and a deep cleft N of the present track. On the N bank, where the stream emerges, are some large sandstone slabs which may indicate the position of the wheel pit. The position of the furnace is certain since a semi-circular section of the throat and a portion of the boshes remain above ground. Some dressed sandstone blocks possibly indicate the position of the tuyere. On a steep bank immediately W roasted ore and charcoal occur. The triangle formed by the E bank of the stream, the bay, and the present track, is covered by slag, some of which is green. Plan supplied. See also WIRG Bulletin No 2.

IMBRAMS FURNACE and BORING MILL: CHIDDINGFOLD. SU 9317 3290 and 9285 3348. Wealden Iron p.420.

Here the bay is 108 yards (100m) long and 16 feet (5m) high and the road to Furnace Place passes over it. A level area below to the SE may be the site of the furnace as the level ground in front of the house called "Furness" revealed abundant charcoal

and roasted ore. The present house may be part of, or the site of, the furnace master's house. There is only a scattering of green glassy slag to be found downstream. The boring mill pond to the NW is still in water, but much altered in recent times. Plan supplied.

FRITH FURNACE: NORTHCHAPEL. SU 955 309. Wealden Iron p.428.

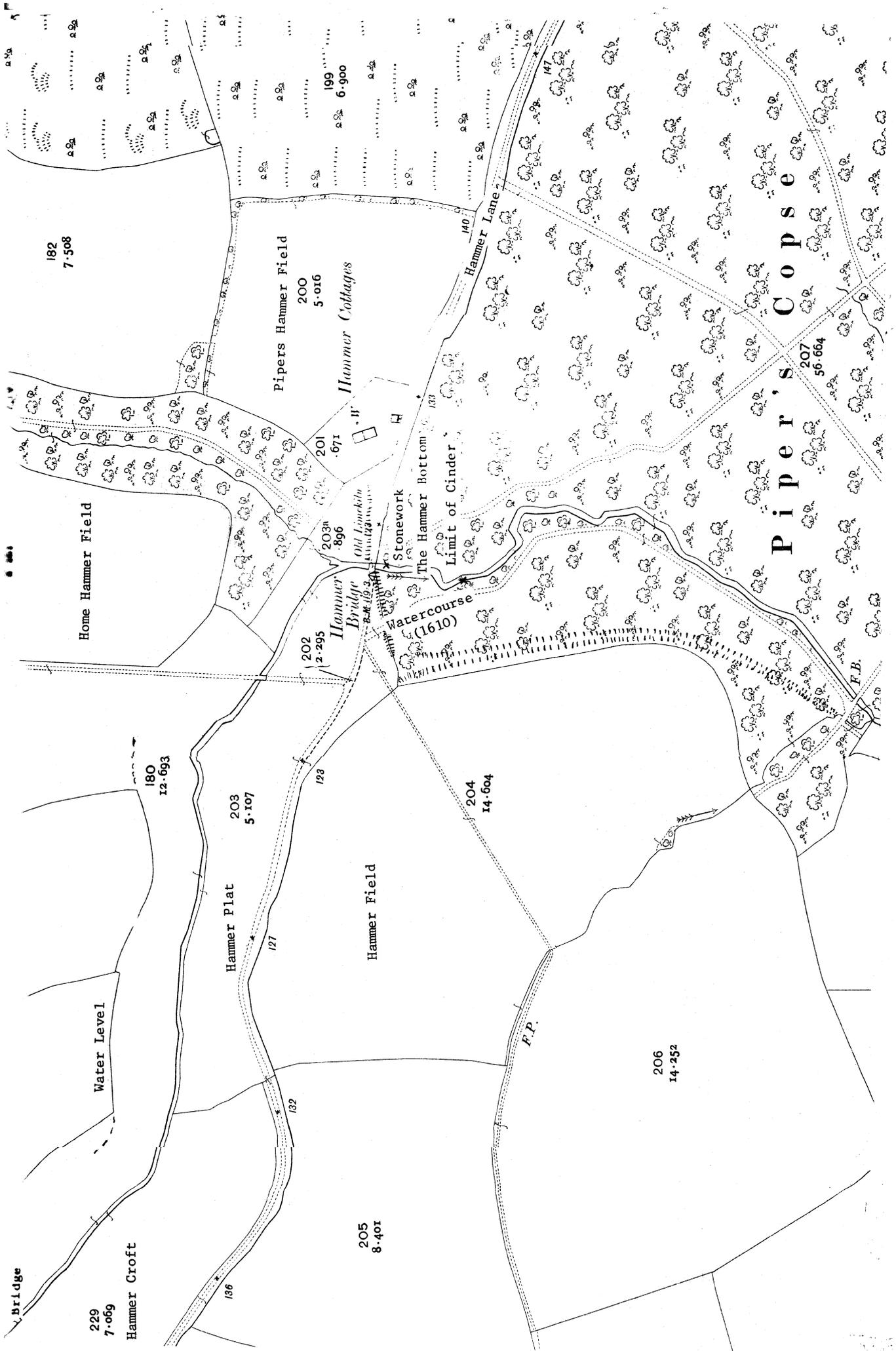
Here the pond is now dry and the high bay is 130 yards (120m) long and 13 feet (4m) high, complete but for a gap at the W end where attempts have been made to repair it with sandstone blocks, perhaps from local furnaces. A notable feature is a deep hollow on the E side of the track and slightly N of the line of the bay. On the N end of the runnel, at the bottom, is a large "bear" of soft malleable metal, noticeably corroded. A circular brick culvert extends from the bottom of Pond Field, under the track, and into the hollow. The runnel extends along the boundaries of Furnace Field for some 800 yards until it meets the stream. There are heaps of green glassy slag and some charcoal below the bay. Plan supplied.

SHILLINGLEE FURNACE: KIRDFORD. SU 972 309. Wealden Iron p.429.

This site, with a large lake, has been greatly altered in later times, when a flour mill was there. In the stream bed, below the plunge pool, there is slag, and also in both banks downstream from the modern bridge. Plan supplied.

EBERNOE FURNACE: KIRDFORD. SU 976 277. Wealden Iron p.423.

This furnace site has a bay 76 yards (70m) long and 16 feet (5m) high, and a pond still in water. Below the bay is impenetrable marsh but there is some black glassy slag in the stream by the present bridge. The sluices have probably been altered from the original layout.



"Mitchellpark Forge (Taken from 25" County Series, West Sussex Sheet X1, 12, Ordnance Survey, 1912)."

MITCHELL PARK FARM FORGE: NORTHCHAPEL. SU 977 297. Wealden Iron p.429

Here Straker's longitude is incorrect, and his bearings appear to refer to the farm. Contrary to Straker's findings P. Ovenden has found many features belonging to the bay just below Hammer Bridge, and the probability of a pen pond higher up. A full description and plan has been supplied.

BURTON FORGE. SU 979 181. Wealden Iron p.430.

This site is now represented by a large pond in Burton Park, and is much overlaid by a later (1792) corn mill. The present bay is 380 yards (350m) long and 13 feet (4m) high, but is not the original. Actually there are two ponds here and local tradition suggests a furnace using local "iron rag". Iron rag that had been heated was found below the bay. Plan supplied.

WASSELL FORGE. SU 981 281. Not in Wealden Iron.

This site was later converted for use as a corn mill and the present sluices, spillway, and tail race are of this period, probably late 18th or early 19th century. Large pieces of forge cinder occur on the E side of the plunge pool, in a hollow in the bank, and at the water's edge at the outlet of the pool. The forge bay may have been higher than that of the mill.

ROUNDWICK, or ROUNDWYCK, FURNACE: KIRDFORD. SU 992 287. Wealden Iron p.423.

Here the bay is in open parkland, 141 yards (130m) long with a slight outward curve, and 16 feet (5m) high. The pond is extensive, with three arms. At the base of the bay, about midway along is a hollow, at the SE corner of which is a large "bear". At the W bank, below the bay, is a bed of rubble and green glassy slag continuously visible for 60 yards. Plan supplied.

BARKFOLD FURNACE and FORGE: KIRDFORD. SU 030 269 and 030 259.

Wealden Iron pp.424-5. Here the bay is 65 yards (60m) long and 13 feet (4m) high. There is green-brown slag in the stream and forge cinder 7 feet deep in the stream bank. Plan supplied.

PALLINGHAM FURNACE: WISBOROUGH GREEN. SU 041 227. Wealden Iron p.425.

Straker's bearings are incorrect here. Permission to survey the site was refused but a recent aerial survey shows that it has remained virtually unaltered since the 1912 25-inch Ordnance Survey.

GOSDEN FURNACE and FORGE: LOWER BEEDING. TQ 227 258. Wealden, Iron pp.433,43.

This site, part of the St. Leonards complex, has a bay 100 yards long, with a pond in water. It is 20 feet high on the downstream side, to water level, and is in good condition but overgrown. In marshy conditions downstream are slag heaps with blast furnace slag and cinder containing sandstone.

SLAUGHAM FURNACE. TQ 249 280. Wealden Iron p.404.

This site has a bay 200 yards long and 20 feet high on the downstream side. The pond is still in water. Below the bay there are piles of cinder and black glassy slag, and some furnace bottoms. Associated is a chalybate spring coming from the centre of a stone basin. There are mine pits in Holes Wood, $\frac{1}{4}$ mile away.

HOLMSTED FORGE: CUCKFIELD. TQ 282 274. Wealden Iron p.405.

The bay here was destroyed in 1928, but forge cinder is still visible in the stream and on the adjoining ploughland.

WORTH FOREST FURNACE. TQ 289 335. Wealden Iron pp.460-4.

This site was almost obliterated by the building of the railway in 1839-41, and its subsequent enlargement. It is now almost impossible to assess the length of the bay but it was probably up to 75 yards or more. No blast furnace slag could be found but some heaps of slag, looking like forge cinder, might have been brought there by the railway.

CUCKFIELD FURNACE and FORGE. TQ 302 231. Wealden Iron p.416.

Here there are two bays, about 200 yards apart. Both are breached and the ponds are dry. The forge was at the upper one. At the lower bay are large quantities of greenish-grey glassy slag. Forge cinder occurs in the stream below the upper bay.

STRUDGATE FURNACE: ARDINGLY. TQ 329 323. Wealden Iron p.407.

This site was much altered in the late 19th or early 20th century for use to drive turbines. The bay is now c.100 yards long and has been raised from the original. There is much highly glazed green and streaked pale blue slag in the E bank of the stream, extending 50 yards below the bay.

ARDINGLY FORGE. TQ 335 287. Wealden Iron, pp.408-9.

Contrary to what Straker stated there is a well-preserved bay, 45 yards long, and partly revetted on the downstream side by a stone facing. The pond is dry. A very large and heavy mass of smooth metallic slag lies on the downstream slope of the bay. Below the bay the ground is irregular with mounds and swampy areas. There is a wide scatter of forge cinder just below the surface, and in the stream bed. The top of the bay now acts as a causeway to take a farm road across the valley, and is surfaced with slag, including some bloomery slag of unknown origin. The track leading up to Townhouse Farm has a similar surface.

Following its use as a forge the site was used by a Fulling Mill, and Fulling Mill Cottage stood on the N side of the stream opposite the bay until about 1950. A Roman road crosses the valley at the site of the bay, and might have used the same course.

The whole area is now threatened by the proposed Ardingly Reservoir and discussions have taken place with the Department of the Environment with a view to its excavation before its destruction and flooding.

HORSTED KEYNES FURNACE. TQ 382 288. Wealden Iron pp.410-11.

This site is now rather complex as there is a chain of artificial lakes and ponds in the valleys above the furnace. Only the one immediately above the furnace is known to have been original, and is still in water. If there were once pen ponds they are now submerged, in the more recently constructed lakes and ponds formed as landscape features by the owners of Broadhurst Manor. The largest of these served the corn mill near the furnace site by means of a long mill stream. The furnace bay is 70 yards long and 6 feet high on the downstream side. Below it are heaps of black glassy slag.

Recent clearing of Paines Wood (TQ 379 293) has revealed many bell pits and there is a large quarry in Oaken Wood (TQ 382 296).

STONE FURNACE: EAST GRINSTEAD. TQ 382 343. Wealden Iron p.238.

This site was described in Bulletin No. 6 p.23, but since then, owing to the abnormally low water level in Weir Wood reservoir, it has been possible to visit on foot. The bay was found to be c.145 yards long with a present height of from 3 to 3¹/₂ feet on each side. Both ends are in good condition but the Medway flows through at about the middle. There are several heaps

of slag below the bay. At the N end they are mainly blast furnace, varying from light green to black. Nearer the middle they appear to be of forge cinder, and there are some pieces of forge or furnace bottoms. Much cyrena limestone is scattered around and 1 sherd of pottery was found, probably 16th century. Samples of slag were taken.

BOUGH BEECH FURNACE: HEVER. TQ 477 473. Wealden Iron p.218.

This site seems to be just N of the public road where it crosses a bridge; Straker says nothing about any earthworks. Here for some hundreds of yards upstream the stream is flanked by high artificial banks and just above the road bridge there is what appears to be a short bay, about 30 yards long breached by the stream at its SE end. Could the embanked stream have served as a pond? Some rather dark and streaky blast furnace slag was found and samples taken.

PAINES PLACE FURNACE: FRAMFIELD. TQ 518 196. No record in Wealden Iron.

This probable furnace site lies just W of the A265 road and the road bank would seem to be the bay. The above name, from the farm just to the E, and going back at least as far as last century, is suggested for the site, unless contemporary documents give it another. It appears to be a new discovery.

Unfortunately most of the land below the bay (road bank) is covered by impenetrable undergrowth, except for a strip along the stream. About 50 yards below the bay both cinder and blast furnace slag occur in some quantity both in the stream bank and on the land to the S up to the depth of at least a foot. There is also slag near the top of the bay, by the roadside on the W side. This latter may be from road foundations, but the other slag area seems unlikely to have been from that source.

About 100 yards below the bay is a large circular mine pit, almost certainly in the Wadhurst clay and cyrena limestone is scattered about. Samples of slag were taken.

MAYNARDS GATE FURNACE: ROTHERFIELD. TQ 5395 2980. Wealden Iron p.254.

Straker does not seem to have gone quite far enough up the stream to find this site, of which he states that there is little trace.

Upstream, above the Waterworks, there is a fine bay 116 yards long and 2¹/₂ to 3¹/₂ feet high on the upstream side and 12 feet high on the downstream. It is widely breached by the stream and again towards the N end. Along the W side, N of the stream is a section exposed showing a repaired breach filled with soil containing burnt clay furnace lining and slag. There is also much slag in the stream and on top of the bay at its S end. The slag tends to be black and dull, and sometimes porous and light in weight. There is a pen pond about 12 a mile upstream at TQ 533 302.

Also in the stream below the bay, and as far as the road ford, there is much forge cinder and some bloomery slag. There thus remains the possibility that there was here either a forge as well as a furnace, a medieval forge, or even a water-powered bloomery.

BUNGEHURST FURNACE: HEATHFIELD. TQ 600 239 and 601 241. Wealden Iron p.287.

This furnace site has a bay c.45 yards long, c.8 feet high on the upstream side and 12 feet on the downstream side. Below the bay there is much cinder and blast furnace slag both on the land and in the stream. The slag is mainly dark in colour and some of it unusually porous and light in weight. Samples were taken. At c.24 yards below the bay and 5 yards from the stream was found what appeared to be a circular laid stone foundation which may be the furnace site. Between it and the bay is a boggy hollow that suggests the site of the wheel pit.

About 210 yards higher up the stream is a second bay, about 30 yards long and 9 feet high on each side. At its E end a short bank runs from it at right angles downstream, containing what was probably once a weir. No slag could be found and the bay almost certainly contained a pen pond for the furnace. The Wadhurst clay occurs about $\frac{1}{4}$ mile to the W.

BENHALL FORGE: FRANT. TQ 608 376. Wealden Iron p.264-5.

This site is on a tributary of the Teise and the present road is on the bay, which must have been c.100 yards long. On the downstream side it is c.12 feet high. Subsequently it was used as a mill and a broken millstone stands against the bay near where the mill wheelpit can still be seen, at the SE end. Some brickwork, no doubt connected with the mill, still stands there. Just below the wheelpit, on the NW side of the mill stream, forge cinder occurs in the bank. At the NE end of the bay, separating the present stream, as it emerges from a culvert under the road, from the mill (and presumably forge) area, is an artificial bank, about 35 yards long, running SE, downstream at right angles to the bay. This must have been designed to keep water flowing over the weir from the working area. Samples of forge cinder taken.

BROWNS WOOD FORGE: FRANT. c.TQ 611 380. Wealden Iron p.265 and map after p.272.

Straker seems rather confused here as he marks "Browns Wood Forge" on the map at the above grid reference but in the text it seems to be called "Melhill", which is not marked on the map. The writer walked downstream along the Teise for $\frac{3}{4}$ mile from the bridge at TQ 610380, but not sign of a bay was seen.

CRALLE or COWBEECH FURNACE and FORCE: WARBLETON. TQ 613 152. Wealden Iron p.380.

Here the bay now stands on dry pasture land beside the river Cuckmere. It is now c.115 yards long with a gap between it and the river, and must originally have extended at least another 25 yards N, to take it across the stream to high ground. The height varies from 5 to 9 feet being about equal on each side. The height [provides] some evidence that the course of the river has altered in modern times and once ran along the upstream face of the bay. There is disturbance of the ground at the S end of the bay where perhaps the forge or furnace were sited. There is dark green glassy slag and forge cinder on and around the bay and some large pieces at the S end. Being near the main road much slag would have been carted away. The Wadhurst Clay is found very near.

VERREDGE FORGE. TQ 621 352. Wealden Iron p.278.

This site is almost immediately next to the main road, which is presumably on the bay, where it crosses the stream. The stream, after passing under the road runs parallel to it for a short distance and then turns E. At the corner there is a great mass of forge cinder in the stream bed and forming a layer in the N bank under some 3 feet of silt. There are many pieces of forge bottoms and in the stream what is probably a nearly complete finery or chafery bottom. It is roughly oblong, 4 $\frac{1}{2}$ feet by 2 $\frac{1}{4}$ feet, with one rounded side and the other slightly concave; rusty knobs on the concave side were noticeably metallic. A flat site above the stream corner on the left bank might be the hammer site, as there were a few roofing tiles there. On the opposite bank, near the water level, are what appear to be laid worked stone blocks.

It is assumed that this is the site of Verredge Forge which Straker put about $\frac{1}{2}$ mile further downstream, where, however, he found little evidence.

MARKLY, or RUSHLAKE GREEN, FURNACE. TQ 6235 1825. Wealden Iron p.379.

This site seems to be further S than recorded by Straker. It had a bay 92 yards long now cut through by the Cuckmere stream at its E end. It is now c.16 feet high on both sides and 20 feet to the stream bed. The breach has a good section where its construction can be seen. Only a small amount of black furnace slag can be found on the bay, with some more confined to a small area in the stream sides just below the bay. This is variable in colour being dark green, light green, and light brown. In the stream is a piece of a "bear", 4 feet x 2 feet x $1\frac{1}{2}$ feet. On the E side of the stream are some furnace lining bricks and several masonry blocks. There are also timbers set on edge across the stream, and a metal plate.

A $\frac{1}{2}$ mile upstream at TQ 62351870 is a complex system of bays and sluices; these provide a head of water to feed a corn mill below the furnace site, by-passing the latter. The Wadhurst Clay is exposed at Kingsley Hill, about $\frac{1}{2}$ mile away.

BATSFORD FURNACE: HERSTMONCEUX-WARBLETON. TQ 629 154. Wealden Iron p.360.

This furnace site is in a thick wood. The bay is c.92 yards long and 13 feet high on both sides. At the lower (NE) end is a boggy area, although parts of it have solid base, which may be the wheelpit site. On high ground at the SW end is a black area with charcoal, ore, bricks, and burnt clay. Blast furnace slag is plentiful in the stream and is light green and streaky in colour. Samples were taken. A small amount of cinder and parts of forge or furnace bottoms were also found. The Wadhurst Clay is near, to the E.

Another bay occurs c.250 yards upstream. It is c.87 yards long and 8 feet high on each side. No slag could be found here. The site is probably a pen pond.

DUNDLE FORGE: PEMBURY. TQ 629 385. Wealden Iron p.267.

This site, on the Teise, seems to be still much as Straker saw it except that the orchard, where he thought the hammer had once stood, [is] now a hard tennis court. The bay below the present road was probably c.160 yards long. There appears to be a large lump of cinder in the stream just below the bridge.

BAYHAM FORGE. TQ 642 366. Wealden Iron p.268.

This site is situated in the Teise valley in the beautiful setting of Bayham Abbey ruins and the Elizabethan mansion and its lake. The road to the mansion passes over the bay. Below the bay, in Straker's day, were ornamental gardens. These are now derelict and among them, wherever the soil is exposed, forge cinder can be found, together with a small quantity of blast furnace slag. The presence of this material is puzzling. Tollslye furnace is nearly a mile away upstream and slag washed down would have to pass through the lake, furthermore it occurs some way up from the stream. Was there once a blast furnace here or does a small amount of slag come down with the sows to be forged?

The bay is 100 yards long and 10 feet high on the downstream side.

WARBLETON PRIORY FURNACE. TQ 644 174; and FORGE TQ 644 177. Wealden Iron p.359.

Here there are 3 bays.

A. 70 yards long, 25 feet high to ground level and 30 feet to stream bed.

B. Next upstream, 60 yards long and 15 feet high.

C. Highest upstream, 50 yards long and 15 feet high.

All are breached. Some small black blast furnace slag, and ore have been found, but no forge cinder.

LAMBERHURST FORGE and FURNACE. TQ 662 362. Wealden Iron p.269.

This famous and complex site is very difficult to understand, as it was followed by a corn mill which is itself now derelict. The famous canal is still in fairly good condition, although dry, and the former pond is a dump for rubbish. If the same system of watercourses for running the mill followed those of the forge, and/or the furnace, they must have been situated under the existing mill building. Water from the canal and pond reached the mill by a tunnel under the bay and road, and part of the mill house garden. Here it emerged on the W side of the mill building, passed round to the SE side, apparently over an overshot wheel, and then under the farm road. Re-appearing on the E side of the road it runs S, along the E side of the road towards the river at the end of the field. The weir and spillway for the mill started at its SW corner and ran between straight banks parallel to the farm road on its W side. A part of one of these banks on dry land, has been cut away exposing a section which shows that it contains much forge cinder, including parts of forge bottoms, mainly at the top, but no blast furnace slag. From this it might be argued that this system belonged to the later blast furnace period.

Beyond where these banks end, at their S end, the road bank rises steeply up to the field on its W side. Here the soil is black with charcoal and also contains pieces of cyrena limestone and burnt clay. The same conditions obtain in the adjoining field surface and this would seem to have been a dumping area for the furnace. Blast furnace slag and forge cinder are scattered all round the mill.

HORSMONDEN FURNACE: HORSMONDEN and BRENCHLEY. TQ 695 412. Wealden Iron p.28.

Here there is a fine pond still in existence with a bay c.145 yards long. It is 12-13 feet high on the lower side and c.312 feet above the pond level. The present spillway looks modern and is in good condition. Below it, in the stream, is a very large "bear". There is much irregular ground below the middle of the bay, and much slag there. It is mostly very dark in colour but some pieces are light blue. Samples were taken. There is a public footpath over the bay, which is very near the public road.

DARVEL (DARIELL) FURNACE: MOUNTFIELD. TQ 708 207. Wealden Iron p.308.

This site, usually submerged by the Hastings Corporation Darwell reservoir, exposed and visited by Mr W. R. Beswick during abnormally dry summer of 1973. The bay, running N. and S, although breached, was found to be c.18 feet high, and had a large slag bank at its S end. The foundations of a cottage or stables could be seen S of the slag bank. Also adjacent to the slag bank is a half-circle of bricks, 3¹/₂ feet in diameter showing at ground level. This seems to resemble a circular brick tank found during the excavations at Pippingford Furnace in 1973, which may have been associated with cannon boring. Nearby, at Darvel, were many large sandstone blocks and scattered lining bricks.

A much deeper bay, across which ran an old E to W slag-paved track, could be seen at TQ 716 204. This can scarcely have been a feeder for the blast furnace and may relate to an earlier operation or an unknown forge.