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Contents

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The Lists of Furnaces and Forges of 1664

Straker's table of furnaces and forges in 1653 and 1664, (Wealden Iron, p.61) is derived from documents published by M. A. Lower in Sx. A. C. XVIII (1866) pp.15-16, and J. L. Parsons in Sx. A. C. XXXII (1882) — not XXXI, as cited by Straker — pp.21-23.

Lower states that the list had once been in the Dyke papers; his copy was in fact a transcript. Parsons, however, cites to source, noting merely that copies of this and the other contemporary documents which he published had come into his possession. Therefore it is not clear whether the discrepancies in the two printed texts derive from mistakes in copying from one and the same source, or whether there had been two distinct versions of the list. Neither list came with that part of the Dyke MSS deposited in the East Sussex Record Office.

Parsons also published the three contemporary petitions referred to by Straker, only one of which was reproduced in Wealden Iron.

It may be of value to print Lower's list, with additions and annotations derived from Parsons and Straker.

In the yeare 1653 did blow these 27 furnaces in Sussex viz:
(All those marked with an m made guns or shotte in the late warrs for supply of his majesties stores)

m	Waldron	
m	Bread	[Brede]
m	Robertsbridge	
m	Crowhurst	
m	Barvil	[Darvel]
m	Custraplea	[Coushopley]
m	Streame	
m	Horsted Kaines	
	Pullingham	[Pallingham]
	Frith	

These 10 were continued in repair and found partly stored at the beginning of 1664.
[See note 1 below]

m	Mayfield	
m	Millplace	
m	Ewhurst	[See note 2]
m	Norsham (Northiam)	
m	Conster	
m	Ashburnham	
m	Beach	
m	Pounslow	[Pounsley]
m	Tilgatt	
	Socknesse	[Socknersh] [See note 3]

These 10 were discontinued before 1664, and partly ruined, but repaired and stocked on account of the warr and hopes of encouragement.

Cobeach [Cowbeech]

Snape

Riverhall

Maynards Gate

Warnham

Northparke

Baybush [Bewbush]

These 7 were ruined before and so remain.

In all 27 in Sussex, 1653 reduced to 11 before 1664.

[The following groups, for Kent and Surrey, are taken from Parson's edition, not appearing in Lower's text].

Blowing Anno, 7 in Kent viz:

m Hosmonden

Biddenden or Cissinghurst

m Scarlets

These 3 were found stocked in the yeare 1664.

m Hawkhurst

m Bedgebury

These 2 were discontinued before 1664, but repaired stocked upon account of the warre.

m Barden

Cowden the lower

Ruined before 1664 and so remain.

Blowing Anno 1653 in Surrey.

m Imbhams

which Mr Brown stocked to make Gunns and is aside.

In the year 1653 were 42 forges or Ironmills working in Sussex viz:

Ashburnham		Kinians	[note 5]
Bugshill	(Bugsell)	Freshfield	
Constance		Holmsted	
Hoodshall	(Hodesdale)	St. Leonards	
Ashburnham minor	(Kitchenham)	St. Leonards minor	
Cobeech		Pounslow	
Steele	(note 4)	Rowfant Supra	[note 6]
Rivershall		Bower	
Hoboorne,		Conserne	[Cansiron]
Tickridge			

These 19 were ruined before 1664, and so remain [note 7]

Itchingham	
Sheffield	
Buckhall	[Benhall]
Rowfant	
Crowhurst	

These 5 are laid aside and not used only Buckhall is sometimes used [note 8]

Westfield		Ardingly	
Robertsbridge		Tenseley	(Tinsley)
Glaziers		Birchden	
Bibleham		Pophole	
Hawksden		Dunsfold	
Bayham		Burton	
Eridge		Burwash	
Hordley	(Hoathly)	Maresfield	
Streame		Buxsted	

These 18 as yet continue in hope of encouragement.

[The following is taken from Parson's text]

In all 42 forges reduced now in 167 to 18 only.

In Kent:

Horsfield near Cissinghurst [? Hammer Mill, Biddenden]

In Surry on the edge of Sussex:

Woodcock forge

Sheer forge further in Surry.

Notes

1. Parsons' version of the list adds Hamsell (m), so his total is 11, to include Hamsell.
2. Parsons reads this Ewhurst at Norjam. It is possible that Lower could have mistaken at for in, for he prints on one line: 'in Ewhurst — in Norsham — in Conster'. However his total of furnaces under this heading is 10, Parsons' being 9. How far Lower, Parsons, or whoever transcribed the lists before them took liberties with the totals to suit their readings is an open question. However there would seem some justification for re-examining the Ewhurst — Northiam area for a furnace additional to the one definitely identified (Straker p.320).
3. Parsons annotates Socknersh m.
4. Lower suggests Steel-bridge, Frant; it is more likely that this refers back to the Steel Forge upstream from Newbridge, working up to 1555. 'Steel-Forge River' was still the name given to the Pippingford stream in the seventeenth century.
5. This has not been identified.
6. Straker is doubtful about the location of an upper forge (Wealden Iron p.467.).
7. Parsons uses this total, but there are 20 entries in his section. 'Bur' is included after Bugshill.
8. Parsons spells Buckhall 'Budhall'.

D. W. C.

Inventory of Sites Visited by W.I.R.G.

Bloomeries

CHILLIES FARM: CROWBOROUGH. TQ 449 279. Not in Wealden Iron.

The field on the opposite side of the road to Chillies farmhouse has a deep steep ghyll and stream on its N. side. About half way along the field, a quarry has been dug into the S. bank of the stream, from stream level. It is now partly refilled. The Geological Survey map shows, this area to be on the Ashdown Bed, but iron ore lies scattered over the adjacent field. Also on the same area is a scatter of bloomery tap slag and cinder, and the soil here is plainly darker than its surroundings. A similar dark area with bloomery slag occurs near the S. boundary of the field.

NEWNHAM PARK: CROWBOROUGH. TQ 4935 2845. Not in Wealden Iron

This site is mainly on a cultivated field, part of which is a little enclave surrounded on 3 sides by Newnham Park Wood, and was discovered Garry Llewellen, whose father farms the land. It extends slightly into the wood on the W. side. There is also a slight scatter of slag on the same field at TQ 4945 2850. A large part of the slag is tap slag and among it are pieces of sandstone from a furnace glazed from exposure to heat, also raw and roasted ore. Although the site is on an area marked as Ashdown Beds on the Geological Map (Sheet 303) there is a consistent scatter of iron ore over much of the field. Unfortunately in spite of intensive searching, no pottery could be found, but the slag has the appearance of belonging to the Roman Period.

SPAULINES: ETCHINGWOOD: BUXTED.

The stream that crosses under the road at TQ 502 227 seems to have

attracted a succession of bloomeries along its banks, starting above the bridge. In the field below the bridge, on the right bank, there is a scatter of slag, but the first defined site that can be seen is at TQ 500 226. Here there is a small bay in a stream-side shaw that once protruded into the neighbouring arable field. It would have been 44 yards long and is now breached by the stream at its SE. end. Its top is 6½ feet high on both upstream and downstream sides and 12 feet above the stream. Several small trenches just below it failed to reveal slag of any kind and there must remain the possibility, that it was made as a causeway leading to a bridge over the stream. However 40 yards downstream is an extensive scatter of bloomery slag, both in the shaw and on the adjoining arable. Among this was found a small sherd of Medieval pottery, probably of the 13th century. A water-powered bloomery seems a possibility here. Further down the stream at TQ 498225, in the right bank, a filled-in ditch or pit can be seen in section, containing bloomery waste. Among this was found, in a small excavation, 13th century pottery. (see Sussex Notes and Queries, **17** (1970), pp.167-8.) Etchingwood is almost entirely on Wadhurst Clay and there are many ore pits, large and small, in the vicinity of the above sites. In 1974 a pipe line trench was dug from a new house, southward to the stream, just below the bridge, at TQ 502 227. Along the trench, at 50 yards from the stream, and near the roadside hedge, a shallow ditch or hollow was cut through, a foot below the present surface. It was a foot deep with a filling of burnt material including bloomery slag, clay, and much roasted ore. At one place it seemed to have a red burnt clay floor. It seems likely that this was an ore-roasting site for one of the many bloomeries along this stream.

HODGES WOOD: CROWBOROUGH. TQ 526 324 and TQ 527 326 Not in Wealden Iron.

Here, in Hodges Wood, and spaced along about 300 yards of the right bank of a small stream, are 3 concentrations of bloomery slag and cinder in low banks. Much of it is unusually light in colour and small in size, almost granular. At the edge of the concentration most to the S., but away from the stream, is a shallow depression that could represent a mine pit. There are similar depressions near the other slag banks. All are in an area of Wadhurst Clay, and cyrena limestone occurs in the stream bed. The site was discovered by Mr R. Batchelor, of Crowborough.

SANDYDEN GILL: WADHURST/MAYFIELD. TQ 586 308. Wealden Iron p.288.

Here there is an extensive tip of slag, on the S. bank of the Tidebrook, which has been eroded to expose a good section containing tap slag, sooty earth and charcoal. A flat platform above was searched for signs of furnaces but no trace could be seen. A sherd of possible Romano-British pottery was found in the stream below the slag tip. About 30 yards downstream is a bay with a well-constructed spillway of undressed sandstone, with some mortar work. It has no apparent purpose in relation to water power.

WET WOOD: MOUSEHALL TQ 602 229.

In this wood can be found large quantities of tap slag in the stream, and there appears to be a tip in the wood. In the wood are several dozen small shallow hollows, 6-12 feet across, probably representing ‘bell pits’.

FOREWOOD BLOOMERY: CROWHURST. TQ 751 130. Wealden Iron p.352

This remarkable site is some distance from the place marked on Straker’s map, being about 250 yards SW. of the railway footpath crossing. Here a small stream, after passing under the railway, continues through Fore

Wood for some 200 yards, and rather suddenly enters a deep gorge after falling about 20 feet over a waterfall. On the N. bank, where the steep sides of the gorge begin to flatten out, are a maze of ‘bell pits’ surrounded by a heavy scatter of bloomery slag of all kinds, some of which has fallen down to the steeper slopes below. The ‘bell pits’ and slag continue along the top of the gorge for nearly 100 yards, but in the disturbed area are a number of artificially levelled platforms that look like furnace sites. Unfortunately neither Straker nor the writer were able to find any pottery, or other datable evidence, but the slag resembles that from Roman-period sites. This seems to be a site that should be preserved for future excavation.

Water-powered sites

CONEYHURST GILL FORGE: EWHURST. TQ 083 404. Not in Wealden Iron.

This new site is in a steep narrow valley with a bay only 25-30 yards, long and 15-18 feet high on each side. A fair amount of what appeared to the finders to be forge cinder occurs below the bay, but very similar to bloomery cinder. There is a dry leat on the E. side. A Roman road, marked on the Ordnance Survey, runs exactly through the site (cf. Ardingly Forge). The possibility of a powered bloomery or Medieval forge should not be ruled out here.

DEDISHAM (or RUDGWICK) FURNACE: RUDGWICK. TQ107 333. Wealden Iron p.443

When visited the dry pond was being restored. Mechanical diggers were taking silt from the pond and piling it on the front of the bay while a length on each side of the stream had been entirely removed.

The bay was 155 yards long and 7½ feet high on the upstream, and 11 feet high on the downstream side. The stream had breached the extreme E. end and there was much glassy slag in the stream bed. There seemed to have been a weir at the extreme W. end and leading from it is a banked channel now dry. One of the most interesting features was a large heap of lumps of raw chalk behind the bay, at its extreme E. end, unearthed during the present operations. It lay under about 2 feet of top soil, and had perhaps been imported for use as flux.

Furnace House, at the E. end of the bay, shows several periods of building additions. The S. end appears to be the oldest part and could well date back to the 17th century.

WARNHAM FURNACE: HORSHAM. TQ 167323. Wealden Iron p.441

With its large pond still in water, and ancient corn mill, the Warnham

site shows few traces of its connection with iron smelting, although there is still a little furnace slag behind the bay, E. of the disused mill. Much was apparently removed when the nearby main road was widened. The present bay is 200 yards long with a fine weir at its W. end. The bay stands 15 feet over the ground downstream.

EWOOD FURNACE: NEWDIGATE. TQ 201 447. Wealden Iron pp.451-4.

This site has an unusually long bay of 250 yards, and is 10 feet high over the upstream side and 12 feet over the downstream. In the 18th century a corn mill was established here, probably at this period three brick culverts were made and the bay reinforced with brick. The culvert on the W. has now collapsed, and may be on the site of a spillway. The centre one was probably at the mill race of the furnace and the wheel pit is visible behind it. The 3rd, at the E. end is probably modern. Straker's description still fits almost exactly today. There are still large quantities of dark green-black glassy slag.

LEIGH HAMMER: LEIGH, SURREY. TQ 222 461. Wealden Iron pp.455-6

As recorded by Straker signs of a bay are very uncertain, but there are still many large forge-cinder lumps in the stream. The sluice under the bridge has masonry copings which might belong to an earlier period.

BEWBUSH FURNACE. TQ 238 357. Wealden Iron pp.458-9

As at Ifield this site is within the Crawley development area, and is to be preserved. There is a complete bay c.220 yards long and 5 feet high on the upstream side and 10 feet on the downstream. The top of the bay, part of which is a bridle way, is surfaced with slag. There

is also much glassy slag in the stream, mainly greeny grey or with grey streaks. One forge or furnace bottom was noticed. The pond, still there in Straker's time, is now dry; it was probably drained c.1939-45

IFIELD MILL FORGE. TQ 245 365 Wealden Iron p.460.

This site has been overtaken by Crawley development but is to be preserved. There is now little to be seen relating to its iron working period, and most of what remains belongs to the succeeding corn mill, which is being restored by local effort. There is still a pond in water held by a bay c.150 yards long and 15 feet high on the downstream side. No cinder has been noticed.

TINSLEY FORGE: WORTH. TQ 291 395. Wealden Iron p.468.

Here little remains. The bay was bulldozed away some years ago and only a little cinder can now be found.

BLACKWATER GREEN FORGE: WORTH. TQ 292 363. Wealden Iron p.466.

This forge site is on the River Mole, which now breaches a bay 170 yards long and in height 5 feet to the upstream side and 8 feet down. Behind the bay is a pond, perhaps the site of the wheel pit, and much black soil. A wall still visible at ground level is probably all that remains of a building shown on the Tithe Award Map, perhaps connected with the forge. There are other irregularities on the ground and plenty of forge cinder.

ROWFANT FORGE: WORTH TQ 316 377 Wealden Iron p.467.

All features of this forge appear to have been lost in the later Corn mill complex. Even the stream below the mill has now been culverted, making cinder difficult to find.

GRAVETYE FURNACE: WEST HOATHLY. TQ 3365 3415. Wealden Iron p.236.

This site is difficult to understand at first glance, until one realises that the present pond, although occupying part of the area of the former furnace pond, is held by an entirely new bay 50 yards upstream from the original. Furthermore, the furnace-pond bay, which was 120 yards long, is now rather low, very much damaged and intermittent. Once it has been located it is evident that the working area was below the E. end where a probable wheel pit and the course of a leat or mill race can be seen, leading into Straker's "sump hole". In what seems to be a modern ditch, coming from this, rather greenish glassy slag can be found. Much information concerning the owners and occupiers of this furnace can be found in Ursula Ridley: Story of a Forest Village, West Hoathly.

WARREN FURNACE: WORTH TQ 3480 3925. Wealden Iron pp.214-6

From Straker's account the bay here has been reconstructed several times, the last occasion being about 1919. At present it is 85 yards long and 16 feet high on the downstream side, and the pond is in water. Embankments have at some time been added to each end of the bay, running downstream. There is a modern spillway at the W. end and a public footpath runs along the top of the bay. At the E. end, there is a pipe through the bay, and what appears to be stonework round a wheel pit. Behind the bay, and near the right bank of the leat from the present spillway, can be found some dark coloured glassy slag and also coal, as recorded by Straker. There are also some wooden beams sunk in the stream.

WIRE MILL (WOODCOCK HAMMER) FORGE: GODSTONE. TQ 3690 4185. Wealden Iron p.217.

This site still has a large pond in water and has been adapted as a

country club. Most of the original features seem to have been superseded by those of the corn mill, and there is no recorded evidence, documentary, or otherwise, of its use as a wire mill. The bay is now 180 yards long and 10 feet high on the downstream side, with the remains of the mill buildings about midway along it. What looks like a modern spillway is at the E. end, and between it and the mill house is a small house (Toad Hall). In the garden to the E. of this house is what looks like a wheel pit and the remains of a tail race leat. A fair amount of forge cinder occurs in the bay and as surfacing on nearby roads.

MILL PLACE FURNACE: EAST GRINSTEAD. TQ 374 349 Wealden Iron pp.236-7.
In spite of Straker's comment there does appear to be a bay here, running N. across the valley from the bridge across the Medway, and now surfaced with stone and slag to make a farm road. It is c.120 yards long and while in the centre it has been almost totally removed, or eroded by floods, it is still appreciable at both ends. Near the N. end it is 2½ feet high on the downstream side, and 1½ feet on the upstream. At its extreme S. end, S. of the Medway, where it no longer serves as a farm roadway, there appears to be a little slag just below the surface. The present brick bridge is built on an older stone structure, and round it seems to be concentrated most of the black earth and slag not obviously from road making. From the N. side of the bridge another farm road, made of slag, runs E. across a swampy area and incorporated in it, about 80 yards from the bridge, is what appears to be a 'bear'. Slightly N. of the centre of the bay a silted stream runs E. to join the Medway some 250 yards away. This must once have come from a weir or race. At its point of origin there is a line of large

stones which appear to be a low stone wall about 17 feet long, now only just above ground level. The slag is mainly light blue, but some is brown or black. Samples were taken of the slag and from the 'bear'.

FRESHFIELD FORGE: HORSTED KEYNES. TQ 385 245. Wealden Iron p.411.

This forge is on the Ouse; since its time as part of the Upper Ouse Navigation, a separate navigation channel has been made, together with the necessary weirs and sluices, all rather complicating the site. However a careful inspection suggests that the present road across the valley must be on the line of the bay. Indeed there is no other sign of a bay except a very slight bank that runs close and parallel to the road along part of its W. side. Although Straker could find no cinder, there is now plenty falling out of the road embankment on its W. side, N. of the Ouse bridge. This could of course come from the road foundation if not the bay surface. Also there is more cinder and a large forge bottom in the river on the W. side of the Ouse bridge. In the grass field just SE. of the same bridge there survives a length of embanked channel, now dry, that curves towards the river downstream and may well have had connections with the forge. In the same field moles bring up black soil in some places.

STOMLETT, STUMBLETT, or STUBLETT FURNACE: MARESFIELD. TQ 3995 3065. Not in Wealden Iron but see Sussex Notes & Queries 6, pp.217-8.

This furnace was discovered by Straker after the publication of Wealden Iron. It is situated in a steep narrow valley and consequently has a high short bay, 73 yards long, 11 feet high on the downstream side and 10 feet on the upstream. It is breached by the present stream, and

again towards the N. end by earth removal. At the extreme N. end it appears that the weir may have given way while the pond (now dry) was in water as there is a large washed-out hole on the downstream side. As in many other furnace sites a bank, about 50 yards long, runs at right angles to the bay, slightly S. of its centre, but N. of the stream. This was presumably to protect the working area from flooding from the weir spillway stream. There is a hollow, with scattered large stone, immediately below the bay just S. of the stream, and this may be the furnace site. Glassy black blast-furnace slag occurs on the top surface of the bay at the S. end, but not in it, and there were larger pieces in the stream about 60 yards downstream from the bay.

SHEFFIELD FORGE: FLETCHING. TQ 404 238. Wealden Iron pp.412-14.

The pond (now dry) and bay lie in the flood plain of the Ouse, with its present artificial channel, dug about 1790, flowing close by on the SW. side. Behind the bay, in the meadow to the SE., can be seen the meanders of an old Ouse channel. The bay, 100 yards long, stretches from the high ground of Coleham Farm to the N. to within c.40 yards of the present Ouse. At this point, separated by a gap at the corner, another bank runs NW. at right angles parallel to the Ouse for another 70 yards, and along it, on the pond side, is a shallow dry channel that passes through the gap to finish in a shallow pond-like hollow. The hammer appears to have been at the NE. end where there is a concentration of cinder, both on and behind the bay, which is here 4 feet high upstream and 5 feet on the down-stream side. A small stream or ditch, forming the field boundary at this end, is called Hammer Ditch. It breaches the bay near its

NE. end. The site needs further study as it is complicated by the right-angled bay and the changed course of the Ouse.

SHEFFIELD FURNACE: FLETCHING. TQ 416 257. Wealden Iron pp.412-14

This site was succeeded by a corn mill and has a pond still in water, situated in magnificent scenery in Sheffield Forest. The present bay is 90 yards long, including the weir, and 11½ feet high on the downstream side. When a pipe was put through it recently no slag was found in its make-up, but it appeared to have a stone core. The corn mill and mill stream, although not used, are still intact. 32 yards from the foot of the bay, on the E. bank of the mill stream, and just appearing above the surface, is a square stone foundation, its sides about 21 feet long, believed to be the furnace. The S. end of the mill house is built on slag but the N. end might possibly date back to the 16th century. Between the spillway stream and the house is a very large heap of glassy slag, varying from black to light in colour, and containing ore (some roasted) and cyrena limestone.

FLETCHING FORGE. TQ 4244 2292. Wealden Iron p.415

Since Straker's time this site has become even less clear as the mill itself has been pulled down and the site grassed over. There is no sign of a bay or pond and it is unlikely they ever existed, as the Ouse here is a considerable stream at all times of the year. There is still a sluice and a weir. What could possibly be a relic of the forge is now used as a well cover at the back door at Mill Farm house; it is a massive but rather rough iron slab measuring 3 feet x 3 feet x 2 inches, unnecessarily heavy for its present purpose.

CANSIRON FORGE & FURNACE(?): HARTFIELD. TQ 453 383. Wealden Iron pp.229-30

This site has a bay in good condition 137 yards long, 8 feet high on the upstream side and, surprisingly, only 5-6 feet on the downstream side, which is mainly swamp. Forge cinder and forge bottoms can be found in the stream and along the bay, but not apparently in its make-up. Also on and behind the N. half of the bay there is much glassy black and streaky black slag. This raises the question whether there was at some time a furnace here, as well as a forge. When the large electricity grid pylon was put down, just behind the bay at the S. end, a forge hammer and shaft was found. This is now the property of the Sussex Arch. Soc. The site is on Ashdown Sand with Grinstead Clay and Wadhurst Clay about mile away to the S. and E.

COWDEN FURNACE. TQ 454 400. Wealden Iron p.226

This picturesque site on the Kent Water has a pond still in water, although probably not as large as it once was, because of the large area of swamp at the upper end. The bay, over which the present road runs, is c.142 yards long and c.18 feet high on the downstream side. The site was afterwards converted into a corn mill and the present house, immediately below the bay, was probably connected with that period, as were the cottages further down on the S. bank of the Eden. There is plenty of rather dull and dark slag scattered over the bay and in the house grounds below it. This valley is subject to periodic heavy flooding, last on September 15th 1968, when part of the bay, and the road at its N. end, was washed away when the bay burst at Scarlets Furnace pond, ¾ mile further up the valley. The present weir is at the N. end of the bay and below it is a bank separating it from the working area.

MARESFIELD FORGE (POWDER MILLS). TQ 4602 2277. Wealden Iron pp.400-403.

Straker seems to have been rather confused about the Maresfield Forge and Furnace sites (see Maresfield Furnace). This was possibly due to the probably spurious map by Charles Dawson, which he uses as an illustration, and which places the forge site at about TQ 467 232, as does Budgen on his map. Recent field work has shown that no forge had ever existed here. This error may have led Straker to refer to the Upper and Lower Forges, but if there ever was an Upper Forge it could only have been on the site of Maresfield Mill (TQ 470 235), below which a few pieces of cinder have been found in the stream. As Straker records, the pond was re-flooded in 1931, but we do not know if the former area and bay were used. It seems probable that they were then and also in the time of the Gunpowder Mills. The present bay is c.190 yards long, which includes 2 wing bays, and is 12 feet high on the downstream side. The present weir is on the W. wing and it seems probable that the forge, like the Powder Mill, was also on this side. A small deep channel leads from the downstream side of the bay, just N. of the weir, and turns to join the weir stream. It could have been the mill race. Just below the weir, where the weir stream turns abruptly S., its banks and bed are a solid mass of forge cinder and bottoms. It is very noticeable that the greater proportion of the cinder superficially closely resembles bloomery tap slag. The writer (C.F.T.) has not seen so much of this at any other forge site visited. There is more cinder on top of the bay and a small concentration at the N. end of the E. wing where at some time water has flowed over from the pond to form a small stream on the lower side.

An unexplained feature is a long, narrow, deep, pond (now dry), 200 yards x 10 yards, running SW. from near the N. end of the weir stream and parallel to the public footpath. It does not appear to have any inlet or outlet and resembles a medieval fish pond.

MARESFIELD FURNACE. TQ 462 232. Wealden Iron pp.401-4.

The position of this furnace differs from that given on Straker's map, and he seems to have been misled by the probably spurious map reproduced on p.401 whose original has never been seen by anyone but Charles Dawson! The bay here is in almost perfect condition, c.80 yards long, 3½-4 feet high on the upstream side and 5 feet high on the downstream. Behind the bay dark green and black glassy blast furnace slag is widely scattered. Also behind the bay is a short parallel bank running from high ground on the W. side, which could be a loading ramp. There is brick rubble at the E. end. There may be a small pen pond at TQ 4625 2344, but it is difficult now to see where the main pond was filled, unless it was from a spring near Park Farm. From the above grid reference a flat but sunken roadway leads N. to Park Farm, with a hard level surface about 9 inches below the present grass.

BOUGH BEECH FURNACE: HEVER. TQ 4815 4760. Wealden Iron p.218

This has already been described in Bulletin 7, but a subsequent visit by Mr B.K. Herbert has shown that this site, although on the spot shown by Straker, is not the main one, although water seems to have been held up here, perhaps for a corn mill, The undoubted furnace site was some 750 yards upstream, at the above Grid Reference. Here there is a bay about 180 yards long of which Mr Herbert has made a

detailed plan. The stream runs through the middle of it. There is an appreciable amount of slag in both stream banks and in the field on the NW. side. The slag is greyer than is usual, with some brown.

PRINKHAM FARM FORGE: COWDEN, KENT. TQ 4940 4085. Not in Wealden Iron

This site was discovered by the Ordnance Survey and appears to have been unknown to Straker. The bay, which straddled the Kent Water (here the Kent/Sussex county boundary), must have been c.200 yards long but only survives on the N., that is on the Kent side of the stream. Here it is 6 feet high on the upstream side and 8 feet on the downstream. It is suspected that the working area was on the Kent side and here there are three gaps in the bay which may relate to two wheel pits and a weir. A small amount of forge cinder was found on the surface below the bay, and on the bay itself; more was indicated below the surface by the use of an instrument. No glassy blast furnace slag was seen. A fuller description of this new site, with sketch plans by Brian Herbert, have been placed with the Group's records.

WITHYHAM FORGE. TQ 4998 3530. Wealden Iron p.253

This forge site, tucked away in woodland, seems to have escaped Straker's notice. He believed that it had been situated in the main valley, further S, and had been swept away in later landscaping to make the present lake. The forge was actually in a side valley with the bay designed to hold up the tributary just before it enters the main stream. The pond was in water until about 1941. The bay itself is about 90 yards long, with a gap where the stream has breached it. It is 6½ feet high on the upstream side and 8½ feet downstream. Almost at the NE. end is a very small brick and stone-built weir, where previously there was the entrance to the mill race. Below it is a wheel pit for

the later corn mill. A decaying water wheel was found here, and below in the stream is one section of a French Burr millstone. Little can be seen or found relating to its previous use as a forge except a small amount of forge cinder in the stream below the bay. However further proof of the origin of the site is the house which now stands literally at the SW. end of the bay, in older deeds described as “Forge Cottage”.

ASHURST FURNACE. TQ 505 290 (approx.) Wealden Iron pp.301-2

This furnace was succeeded by a corn mill, which was in use in Straker’s day, but was burnt down and cottages built on its site by 1934 (Mill Place). From an examination on the ground it appears that the large flow of water in the Medway made little in the way of a pond necessary, and the same probably held good for the furnace. South of the main road there are remains of a sluice across the river, and just above it a silted channel on the E. bank which becomes wider as it passes under the railway and approaches the main road, under which it must have flowed. Below the mill site it narrows and runs for nearly ¾ mile before joining the Medway. There is blast furnace slag in the ‘Mill Place’ back gardens. Straker says that the furnace was below the mill and refers to a vanished bay. This seems impossible, unless the present main road is on the bay. About 150 yards along the mill race from the main road is an obvious forge site which may account for the slag he found.

ASHURST FORGE. TQ 507 391. Not in Wealden Iron

Along the mill race, about 150 yards N. of the main road, is a bank, c.100 yards long, along the W. side of the stream; parallel to this bank runs a wide hollow, like a small pond, c.20 yards wide and 13 yards along the bank. At this place a bay-like bank runs across it. North of this the hollow continues but with a second flat-topped bank

running down the middle of it, parallel to the mill race bank. In the latter, where this earthwork occurs, there are large concentrations of forge cinder and forge bottoms, mixed with a few very small pieces of dull dark green glassy blast furnace slag that could have washed down the stream. This forge seems to have been using water from the mill race stream, below the furnace.

NEW PLACE FURNACE: FRAMFIELD. TQ 509 192. Wealden Iron p.393

This whole site has been heavily landscaped, leaving the pond and bay intact, but possibly making great changes behind the bay. This is at present 122 yards long, and 5 feet high downstream. The main spillway is now over the N. half of the bay, but what may be the original goes under the bay at its S. end, passing water into a large water-filled mine or marl pit behind the bay. From this emerge two streams which join the main stream lower down. The smaller, the southerly of these, joins the main stream near the main road, and has much black glassy slag in its bed at its lower end. There is no sign of slag heaps in the usual places below the bay, where most landscaping has taken place. There are mine pits in the woods just E. of the site, on the Wadhurst clay.

ASHURST FORGE 2. TQ 512 398. Wealden Iron pp.231-2

This is undoubtedly the forge site recorded by Straker, but his map symbol is in the wrong place and bearings incorrect.Contrary to what he records there is a good bay here, 175 yards long, and 3½ to 4½ feet high on both sides.It is breached by the Kent Water at its N. end, and twice on the grass field S. of the stream. In the stream bed can be seen forge cinder and a forge bottom. Below the bay, at its N. end, and N. of the stream, moles are bringing up black soil.

LITTLE FORGE: BUXTED. TQ 513 260. Wealden Iron p.388

This is an interesting but difficult site that Straker does not appear to have examined closely. Two streams once fed the now dry pond and one of them now probably follows the course of the artificially-dug leat, as they now do not meet and join until well below the site. They breach both ends of the bay. The bay is now a low one, only 2 feet high on the upstream side and 5-6 feet on the downstream, and 90 yards long. Perhaps the most interesting feature is provided by the E. stream which curves round behind the bay, about 25 yards from it. Here it cuts through several (or one large) pits, ponds or hollows, filled with iron-smelting waste in well-defined layers, all below some 3 feet or so of silt. The upper filling, representing the last phase on the site, consists of forge debris, but the lowest contains glassy slag in some quantity, representing an earlier blast-furnace period. From the lowest layers of this came numerous pottery sherds of the 16th century, including Raeren Ware, with contemporary iron and bronze sewing pins. A possible earlier period for the site is indicated by cinder, forge bottoms, etc. in the left bank of the W. stream 20 yards above the bay, and 10 yards below an existing weir. From this place cinder and forge bottoms are strewn along the stream bed below. This site would have been below the pond level and is, indeed, below several feet of silt. It may belong to a bloomery. About ⅓ mile upstream is a pen pond now restored as a fish pond.

HOWBOURNE FORGE: BUXTED. TQ 2145 2505. Wealden Iron pp.389-90

This is a difficult site to understand as the “large bay”, to which Straker refers is non-existent. We can only surmise, from external evidence, that it ran along, or just NE. of, the farm track that runs

NW. from the direction of Howbourne farmhouse, past the farm buildings, leaving the oasthouses to the NE., to the bridge over the stream. Three reasons support this site. It is the narrowest part of the valley after the confluence of streams, there is a probable leat running W. from its SE. end, and there are quantities of forge cinder and forge bottoms in the stream bank, just below the bridge. This would be just behind the NW. end of the presumed bay.

POUNSLEY FURNACE: FRAMFIELD. TQ 529 219. Wealden Iron p.391

This interesting site has a bay 150 yards long with a height of 12 feet downstream and 7 feet upstream. It is breached at the SE. end by the stream, and in 2 other places. There appears to be an artificially raised and levelled area behind the NW. end of the bay, and under part of this runs what appears to be an original stone culvert. To the NE. this points to a probable wheel pit and to one breach in the bay. In the same area is a 'bear', near the bay. On the bay is scattered dark-coloured glassy slag. Behind the bay, at its SE. end, next to the stream, are extensive slag heaps containing mainly bloomery slag but with a little glassy slag on the top. Without excavation it is impossible to determine if these belong to a separate bloomery (perhaps Roman), or from a previous powered bloomery.

BIRCHDEN FORGE: ROTHERFIELD. TQ 533 353. Wealden Iron p.260

This site is situated below the well-known Harrison's Rocks, and the modern road across the railway appears to be on top of the bay. Its estimated length is about 170 yards with a probable height of 3 feet on the upstream side and 7 feet on the downstream. There is a modern weir and the stream has a considerable flow. At the N. end of the bay a stone tunnel, now dry and overgrown, once passed under it. Near this, on the downstream side of the bay, near a holly bush, is partly embedded

a large piece of metallic slag, probably from a forge plate. Adjacent to the farm buildings, behind the bay, is lying a fair quantity of forge slag including a number of forge bottoms, and the soil in the garden round the house is very black. The house was examined by Mr K.W.E. Gravett, who considers that it does not date back to the period of the forge.

HAMSELL FURNACE: ROTHERFIELD. TQ 538 344. Wealden Iron p.262

Here there is now a fine lake, no doubt landscaped in recent years. The bay is c.80 yards long and 8 feet high on the downstream side. Below the bay the ground is irregular and now planted with trees, and a modern weir has been built at its NW. end. Below the weir, in the stream and in its right bank, are considerable quantities of glassy slag, amongst which are iron fragments. There is also some slag and charcoal at the SE. end of the bay.

BARDEN FURNACE: TONBRIDGE. TQ 548 425. Wealden Iron p.219

This site was turned into a corn mill, which was out of use in Straker's day, and the pond is now dry. The main road is on the site of the bay, which was probably c.144 yards long, 6 feet high upstream and 10 feet downstream. The stream now passes under the road in two concrete culverts, and just downstream there is much glassy slag, varying from very light colour to streaky and black. Nearby was found roasted ore, cyrena limestone, and broken plain tiles with square nail holes.

STREAM FURNACE AND FORGE: CHIDDINGLY. TQ 555 155. Wealden Iron p.384

This site was last used as a corn mill, and since Straker's time the pond has finally gone. The bay, along which a public bridle road runs, is 170 yards long, with a weir in good condition, almost at its W. end.

It is only 5 feet high on the upstream side and 10 feet on the downstream. The working area seems to have been at the E. end, where the present mill house and its garden are. There is plenty of black soil and black glassy slag about there, and some pieces of clay mould were found. Raw material for the furnace seems to have been brought along the bridle road from the W. Just E. of the bridge over the weir a ramp was built leading down from the top of the bay to the low ground below. The mill stream is now mainly dry but about 100 yards below the mill house its right bank is revetted with forge bottoms. The occupiers of Mill House have made a notable find in their garden. This consists of a thick iron rod, 9½ feet long, which appears to be for boring cannon. One end is square and tapered, and at the other is a cylinder of about 5 inches diameter in which are set what appear to be boring bits. The finders have generously offered this to W.I.R.G. on their undertaking to have it treated for preservation and placed in an appropriate museum, preferably in Sussex.

ERIDGE FORGE: ROTHERFIELD/FRANT. TQ 560 350. Wealden Iron p.257

Here the pond is dry and the bay is 160 yards long with a height upstream of about 7 feet and downstream of about 8 feet. It is breached by the stream and by a farm track. In the stream below there is much forge cinder and a few bottoms. Just below the bay, lying parallel to the stream and in its bed, is a large balk of timber, at least 14 feet long, 16 inches wide, and 12 inches thick. On its upper surface there are two 16-inch long mortice slots near each end. Opposite its middle another balk, over 12 inches wide, protrudes from the stream bank at right angles. These would seem to have been part of the hammer supports. A sketch plan and drawn section of the stream bank have

been placed with the Group's records. There is considerable ground irregularity below the bay at the S. end.

ERIDGE FURNACE: ROTHERFIELD/FRANT. TQ 564 350. Wealden Iron p.257

Here a large lake still exists. The bay, along which is a public footpath, is said to have been raised considerably in the mid-19th century and the position of the weir moved from the centre of the bay to its present position at the S. end. This enlarged the lake which has several pen ponds above it. The present bay is about 25 feet high on the downstream side and on its lower slopes a small amount of glassy slag can be found.

OLD MILL FURNACE: MAYFIELD. TQ 588 245. Wealden Iron pp.285-6

As suggested by Straker the bay here appears to have been on the site of the present main road. Just E. of the road 2 streams join after passing close together under the road. At their junction the ground between them appears to be high, and may have been a bank to prevent flooding of the working area, or a loading ramp. In the swampy area of the grass field, just N. of the stream and E. of the road, is a large amount of glassy blast furnace slag, exposed by a new ditch. It also occurs in the roadside ditch, and varies in colour from black to light and streaky. The name suggests that a corn mill may also have been here at some time. A bank with a right-angled corner, SW. of the farmhouse, might possibly have been part of a mill pond. There are mine pits in Furnace Wood nearby.

MOAT MILL FORGE: MAYFIELD. TQ 5915 2511. Wealden Iron p.286

This site is not well defined by Straker, and at the streams' junction no cinder was found, although the tributary had been recently cleaned

out: spoil lay on the bank. However about 150 yards up the main stream, where it is crossed by a public footpath from Moat Farm, a very rusty forge bottom lies in the stream bed. The footpath itself, N. of the stream, follows the line of the top of a low bay, 55 yards long, with an upstream height of 1½ feet, and downstream 2½ feet. South of the stream what appears to be a continuation of the bay turns SW. as an. embankment of the stream on its right bank.

HEATHFIELD FURNACE. TQ 599 186. Wealden Iron pp.374-6

This important furnace site has recently suffered deliberate damage, in spite of having been submitted for scheduling. The previous narrow gap through the bay has been widened to about 27 yards by removing the bank. The bay S. of the stream was originally 157 yards long, 142 yards of which was built on a slight curve, concave to the pond. It is now 7½ feet high on the upstream side and 10½ feet on the downstream. North of the stream the land is arable and the surface shows hardly any sign of the bay having once extended there, but it must have run 50-80 yards on that side of the stream. There appear to be two working areas behind the bay, the most definite being at the S. end. Here natural high ground falls steeply to pond level providing a natural loading ramp which is served by a hollow way. Below and to the E. of this a semi-circular bank half surrounds a low area where a deep depression probably represents the wheel pit, and close to it, just below the turf, are burnt stones and clay, probably from the furnace. Some 50 yards or so further E. a ditch starts that follows the valley edge and appears to be fed by a spring. This “spring” is probably the outlet of a culvert from the millrace, passing under the working area of the furnace. There appears to be another working area, marked by irregular ground surface, near the stream. Here there is a straight length of material

that resembled the turnings from the boring mill at Pippingford Furnace. The slag found was mainly light coloured and streaky and with it were several pieces of clay moulds, probably for cannon. The pond was a very small one, but a number of small contributory streams have several pen ponds each on them. Indeed an estate map of 1795 shows about 12 pen ponds serving the main stream. At the head of the main pond, and just across the main road (at TQ 597 186) is a wood containing a large quarry in the Wadhurst clay. Traditionally this is said to have been used for cannon proving, and pigs rooting, in the wood in more recent times are said to have unearthed part of a cannon. Its position is now lost but an eye witness describes it as having bands round it. These must be the cast rings and give some credibility to the story.

HENLY LOWER FURNACE: FRANT. TQ 6015 3355. Wealden Iron p.275

At Henly Furnace Straker refers to two bays, but as it has now been found that a furnace was present at each they are being treated separately as Upper and Lower Henly. Lower Henly has recently been cleared of undergrowth and the area below the bay is now scheduled as an Ancient Monument. It shows much disturbed ground, especially at the S. end. About 10 yards behind the bay can be seen a large ‘bear’ exhibiting surfaces of pure iron. Also from this area came a thick roughly square slab of iron, perhaps an imperfect casting. This has been removed for preservation. Just N. of the ‘bear’ is a swampy hollow which may represent the wheel pit. The bay itself is 53 yards long and in addition probably about 20 yards has been washed away by the stream at the N. end. There is glassy slag scattered around the bay. A hollow way leads to the site from the S.

HENLY UPPER FURNACE: FRANT. TQ 601 338. Wealden Iron p.275

Straker treats Upper and Lower Henly together and rather suggests that one was a furnace and the other a forge. It now seems certain that there was at least a furnace at each site (see Henly Lower at TQ 6015 3355). At the Upper site there is a short high bay originally 42 yards long but now breached by the stream at about the middle. It is 10 feet high on the upstream side and 15 feet (to stream level) on the downstream. Just behind the bay, on the right bank of the stream, is a flat area, perhaps the furnace site. There is a fair quantity of green to dark green, and very bubbly, glassy slag. No forge cinder was seen.

COUSHOPLEY FURNACE: MAYFIELD-WADHURST. TQ 604 302. Wealden Iron p.288

The name given by Straker for this site seems now to have gone out of use. Although much slag has been removed from just below the S. end of the bay it is in good condition and only breached by the stream towards its N. end. It is 110 yards long and 8 and 7 feet high at its down and upstream sides.The main quantity of slag is concentrated at the S. end, S. of the stream, and it is probable that ground irregularities there represent the working area. An old track from the N. crosses the stream just below the bay. The slag is mainly black but contains a small amount of light, streaky and even blue. About 260 yards upstream, at a point which must have been the head of the furnace pond, and just below the entrance of a tributary, is the first of the pen-pond bays. Only about 10 yards of it is S. of the stream and the remainder, about 110 yards, follows the bend of the stream north-ward. It is 8 feet high upstream and 9 feet down, with signs of a weir at its N. end. In the stream bed, at the point where the bay is breached, is a quantity of bloomery tap slag in a shingle

bank, probably washed down from Sandyden bloomery, upstream (Wealden Iron p.288). Three more pen-pond bays occur upstream at intervals of about 260 yards, 150 yards and 225 yards.

RIVERHALL FURNACE & FORGE: WADHURST TQ 608 335. Wealden Iron pp.275-6

This site has been extensively landscaped and adapted for use as a corn mill. When visited it was difficult to agree with Straker's conclusions as to its use. The stream is a small one and a furnace and forge would obviously need pen ponds. No sign of a furnace site could be found to the S. (i.e. above) the house, although about 100 yards away, in this direction, is a high and well-preserved bay. A very few small pieces of glassy slag were found on the top of this bay but none in the area downstream nor in the stream bed or banks. Nor was there any sign of black soil. This bay clearly supported a pen pond. Further down the valley, NW. of the house is another bay, now nearly obliterated by dumped soil. Once again careful search revealed no sign of slag and this bay almost certainly belonged to another pen pond. Still further down, and N. of the house, is the third bay, which until recently held a pond in water, and has a stone sluice weir at its E. end. This served the now abandoned corn mill. It is clear that this was the site of the furnace and forge. Much glassy slag was found all over the irregular area below the bay, and in the small stream that crosses it on the W. side was found forge slag and a circular forge bottom. The bay is 60 yards long and about 2 feet high on the upstream side and 7 feet on the downstream. From about its centre a tongue-shaped bank projects at right angles into the working area below the bay, perhaps for use as a furnace loading ramp. The W. end of the bay reached to the main road, and across the road an apparent

continuation curves round to the N. to meet a small tributary stream. Possibly this was designed to divert more water to the main pond. Riverhall House, built in 1591, is a fine example of an ironmaster's house.

BROOKLANDS FORGE: FRANT/WADHURST TQ 6175 3487. Wealden Iron p.278

This most interesting site is about 300 yards upstream from the Verredge site at Sewers Bridge (TQ 620 352). The valley seems naturally narrow where a spur of land comes almost to the stream on the N. side, and here the bay is built. It is only 70 yards long and 5-6 feet high on the upstream side. Part of this height, except quite near the stream, may be the natural spur. The most striking feature is the shallow stream bed which is covered by masses of forge slag, which includes numerous forge bottoms, both round and square. Also lying along the stream bed is a 24 foot length of hollowed-out wooden trough or chute, the actual trough being c.12 inches across. A further 14 foot length is lying almost in line with it, and the two may once have been spliced together to convey water to an overshot wheel. A cross-section of the bay on the N. bank of the stream shows two periods of construction, with a turf line between. On the grass field surface downstream from the bay, mole hills with black(charcoal) soil containing much bloomery slag finish on a line along the back of the bay, those higher up being of natural silt soil. This may indicate the junction of the two bay constructions. The presence of tap slag raises the possibility of an earlier use of the site, before it became a forge.

HAWKSDEN FORGE: MAYFIELD. TQ 623 266. Wealden Iron pp.294-5

This site has a fine bay 96 yards long and is only breached by the stream at its NE. end. It has an upstream height of 7½ feet and

downstream 5 feet. This is probably due to the old road running just behind the bay and the subsequent use of the area as a farmyard. At the SW. end the bay turns slightly W. to meet the high ground and contain the pond. At this turn a culvert passes under it to drain into a long marshy pit which itself drains at its far end into what looks like the original stream. This may well have been the original spillway. At the other end of the bay the present stream passes through and under a stone bridge, to enter an obviously artificial straight channel, 125 yards long, which turns at right angles to join the former stream course referred to above. There is much forge cinder and parts of forge bottoms on and around the bay, but not incorporated into it. Just below the bay, at its S. end, is a timber-framed house which may well be contemporary.

BROADHURST FURNACE: BURWASH. TQ 631 242. Wealden Iron p.287

This site is in a narrow steep valley, reminiscent of Hendalls Furnace. The bay, only cut through by the stream, is c.60 yards long and 12-15 feet high from each side. There are clear indications of a leat coming from the extreme N. end of the bay and running as a terrace for about 100 yards before joining the stream. There is a great deal of glassy slag below the bay, both in the stream and on the N. side of the valley. The other two bays mentioned by Straker may exist, but above the main bay the valley naturally closes in in several places almost to a gorge, and it is difficult to be certain what is natural and what artificial.

SCRAG OAK FURNACE: WADHURST. TQ 637 297. Wealden Iron pp.289-90

Although much ploughed down and spread the bay can still be plainly seen, especially from the lower side, where it is 3 feet high, although only 1 foot on the upstream side. The length is about 112 yards with a small section cut off by the stream on the E. end. The working area appears

to have been behind the W. end of the bay, to which a hollow way leads from the farm. Here is much black soil, and about 60 yards behind the bay, on the bank of a small tributary stream, is a mound of glassy slag, with more in the stream bed. There are also signs of a leat or mill stream here. Scrag Oak farmhouse may well be contemporary with the iron works; opposite to it, on the far side of the road, are platforms for a terrace as well as a number of separate houses. Local tradition is that this is the site of miners' cottages. Recent ploughing revealed sandstone foundations here, and a track can be seen (other than the above-mentioned hollow way) leading to the furnace.

BIBLEHAM FORGE: near WITHERENDEN, MAYFIELD. TQ 641 266 Wealden Iron p.295

This site is in the wide valley of the Rother, N. of the river. The pond appears to have been fed by an artificial channel coming from the main stream ½ mile higher up, but which now passes through the bay at its N. end. The river is now in a fairly deep channel at this spot and it may have been necessary, in order to fill the pond, to erect a sluice and take water from higher up. There is also the possibility of using the Rother for navigation. Both these aspects need further investigation, The bay is 107 yards long but it is only 3 feet high on the upstream side and 6½ feet on the downstream, probably having a large but shallow pond. It has been damaged at its S. end, near the Rother, where there must have been some protection to prevent the pond water from escaping into the river, There is much forge cinder and some forge bottoms, some 14 inches across, along and below the bay, and coming from a newly re-dug ditch on the NE. side of the meadow between Forge Farm and the N. end of the bay. From here came a flattish piece, 21 feet square, while another had rounded parallel ridges across it. Also found was a 16th century pewter spoon.

BURWASH FORGE: BURWASH. TQ 663 231. Wealden Iron p.303

Burwash Forge was situated in the valley of the Dudwell, and the dry pond is now a hop field. The slight bay is 70 yards long and 3 feet high on the upstream, and 4 feet on the downstream side. It is breached by the stream at the N. end, while at the S. end, where presumably the weir was, it disappears into swamp. From this end a stream flows towards Batemans Mill. There is a scatter of forge cinder on and behind the bay, and also in the stream, where some forge bottoms occur. The area downstream from the bay is featureless. Air photographs reveal that another bay was 112 yards W. of the present one, supporting a pond about $^{2}/_{3}$ the size of its successor. In the flat hop field, the dry pond area this former bay can be faintly seen. Immediately behind it is a similar scatter of forge cinder and glassy blast furnace slag. As most remains of the older working area must now be covered by silt from the later enlarged pond only excavation could decide the significance of the furnace slag. Within living memory cottages connected with the forge stood on higher ground to the E., at about TQ 664 232.

EAST LIMDEN FURNACE: WEDDS VALLEY: TICEHURST. TQ 677 291. Wealden Iron p.296

This site has an impressive bay, although much overgrown. It is 117 yards long, 10 feet high on the upstream side and 11-15 feet on the downstream. It is breached by the stream at its S. end and lowered at the N. end by a cart track. Behind the bay the ground is very irregular. A small amount of black glassy slag was found in the left bank of the stream below the bay and in the wood, at the extreme S. end, S. of the stream, is a considerable amount of ore and cyrena limestone.

THE ASHBURNHAM FURNACE COMPLEX. TQ 686 171. Wealden Iron pp.364-72

Straker goes into great detail on the documentary evidence to these important ironworks, the last that were worked in the Weald, but says little regarding what remains, which is still impressive. The main pond, at TQ 686 171, is now dry but it had one and possibly two pen-ponds, and has a massive bay 75 yards long still in good condition. Its long use is probably indicated by its upstream height of only 6½ feet and downstream of 12 feet, where it is revetted by masonry to half its height. Nearer the SE. end is a stone and brick tunnel or culvert through the bay into a wheel pit, still in fair condition. Much glassy slag is built into the bay. Near the NW. end is a weir with a sluice, at present derelict, and the wooden sluice-gate lies in the bottom of the stream, which now flows through the opening. Between the weir and the NW. end of the bay can be seen the dry course of a leat which comes from the pond, passes under the bay by a culvert, and then goes in a straight line to the lower working area, about 120 yards below. The main stream, passing through the weir and sluice, crosses to the opposite side of the valley just below what must have been the working area, here it has to be forded by the track leading to the furnace area. In the E. bank of this track, immediately adjoining the right bank of the stream, lies a very metallic ‘bear’. About 115 yards, below the bay a branch of the track which approaches the furnace from the S. crosses the valley bottom on a stone-revetted causeway leading to the “Pay Cottage”. Through this, at its W. end, is culverted the leat referred to above. As it emerges from under the causeway it enters a mill race with a wheel pit related to the lower or second working area. Here can be seen the remains of brick floors and there are two apparently contemporary industrial buildings recently made into cottages. Under the most westerly of these the tail

race passes in a culvert finally to join the main stream some distance below. A clue to what went on here is the scatter of glassy slag and broken pieces of clay casting moulds. About 100 yards below the causeway mentioned above, and before the main stream and the leat meet, is the former top end of the very long pond, now dry, that served the Upper Forge, half a mile away. To prevent water from this flooding the working area a bank was put across the end of the pond and along the two streams. This bank contains a mass of broken clay moulds. The Pay Cottage remains as illustrated by Straker and the whole site had been scheduled as an Ancient Monument.

ASHBURNHAM UPPER FORGE. TQ 687 161.

This forge is situated on the same stream that served the furnaces described above but half a mile below, and the present main road passes over and along the bay. Behind the bay, at its W. end, and almost immediately below it, is a much rebuilt cottage named “Ammerbrook”. Here, in the garden, a well preserved culvert through the bay leads to a stone and brick wheel pit and mill race in which, at the bottom of the stream, lies a wooden trough or flume for an undershot wheel. It is 27 inches across and 12 inches deep. The mill race passes through the garden into a culvert at the end of the house. This appears to have a floor of timber laid across its width, and emerges, after passing under the access road, into a ditch to join the main stream some way further down. The bay as it is at present (forming the main road) is 150 yards long and the stream passes under a bridge at its E. end. It is 8-21 feet high at the upstream side and 12 feet at the downstream. On the downstream side much of it is revetted with lumps of forge cinder and forge bottoms. Towards the E. end of, and below, the bay a long low building,

now made into a cottage, lies along its foot. It could once have been a contemporary industrial building. Under it, running at right angles to the bay is a silted culvert leading to the stream further below. There is no sign of it extending under the bay on either side. A number of objects have been found in and near "Ammerbrook" garden (which is of dense black soil). The occupier has some cannon balls of 1, 1½ and 3 inches diameter, and flanking the gate to the house are two solid cylinders of iron 15 inches in diameter and 14 inches long. It has been suggested that they might be 'gun heads'. Just across the access road are two 'bears' of highly metallic iron. Also scattered everywhere with the forge cinder is much glassy furnace slag, much lighter in colour than that at Ashburnham Furnace. One wonders if there could once have been a furnace here also.

ASHBURNHAM LOWER FORGE. TQ 685 142.

Over a mile below the Upper Forge, and quite near the main road a bay 130 yards long crosses the valley, finishing up in woodland at its E. end. The bay is only 4½ feet high on both its sides, suggesting little silting on the pond side and therefore a short life. The stream cuts through it near the E. end, and here and on the woodland rides nearby are forge cinder and parts of forge bottoms. There is also glassy slag on top of the bay, which forms a track into the wood. Below this point Straker suggests that the stream was navigable to Boreham Bridge.

POTMANS FORGE: CATSFIELD. TQ 725 117. Wealden Iron pp.354-6

This site has a well preserved bay, only breached by the stream. A small amount of cinder and some forge bottoms lie on and around it and in the stream. Much of the area behind the bay on the NW. side of the

stream has subsequently been dug away, as a large pit.

BEECH FURNACE: BATTLE. TQ 728 165. Wealden Iron pp.325-6

This impressive site, later a corn mill, has a bay 140 yards long and 10-12 feet high on the downstream side and 5-6 feet on the upstream The present main stream cuts through the bay near its NE. end and then curves SW. to join a weir stream that comes from the extreme SW. end of the bay, and then flows SE. After passing under the farm road bridge, it has, on its NE. bank, a very large slag heap, cut through by the stream. Another stream, or leat, its upper reaches filled in or culverted, comes from the main stream near where it breaches the bay and joins it again much lower down. On the way it crosses what may be Straker's 2nd bay, now only about a foot high. On top of the bay, on each side of where it is breached by the stream, is a large 'bear', probably the one Straker records, which was moved to this position by the present owner. Both are very hard to break and fragments show a bright iron content. At the top of the lane is a house that could date from the time of the furnace.

BEDGEBURY FURNACE: CRANBROOK. TQ 739 347. Wealden Iron p.282

Here there is a fine bay, 135 yards long, 12 feet high on the downstream and 10 feet on the upstream side. It is only breached by the stream at its SW. end, near which a ramp leads from the top of the bay down to a level area; here can be seen the outline of the brick floor of a building, c.36 x 16 feet. Beside it lies a squared stone. C.30 x 16 x 6 inches, obviously used as a sharpening stone. This area, enclosing the building, is defined by a small boundary bank and hedge on its NE. side, and the steep stream bank to the SW. About three-quarters of the way along the bay, to the NE., is a similar ramp, of glassy slag. Beyond it is a

scatter of bricks and plain tiles with square nail holes. Everywhere behind the bay are large quantities of glassy slag varying in colour from black to streaky light blue and light grey. There is also some iron ore and cyrena limestone. Behind the bay there are a number of mainly shallow holes and trenches of varying widths and sizes, dug by a local archaeological society.

BUCKHOLT FURNACE and FORGE: BEXHILL TQ 746 113. Wealden Iron pp.356-7

Here there is a fine bay in good condition, only breached by the stream. It is c.93 feet long and, unusually, 12 feet high on the upstream and 9 feet on the downstream side. An artificially banked leat runs from the extreme W. end of the bay for c.240 yards before joining the stream. There is a great amount of forge cinder including forge bottoms on, around and behind the bay and in the stream banks. Just behind the bay, W. of the stream, are many broken roof tiles and thin Tudor bricks. In spite of particular searching only one small piece of glassy blast furnace slag was found. An interesting find from just W. of the stream and 12 yards behind the bay was a large number of nails, rusted together to form a solid mass. This seemed to show that manufacturing was going on there. The mass was too heavy to carry but samples were taken. Buckholt farm is Elizabethan and behind it is a large mine pit.

CROWHURST FURNACE and FORGE: TQ 757 122. Wealden Iron p.352

This site is almost in the village near a main road, and only 200 yards S. of the church. As a result the middle section of the bay has been levelled to make way for houses and gardens. The N. end is low, only about 2 feet high, but at the S. end, S. of where it is breached by the stream, it still stands some 8-10 feet above stream level. Here there is both forge cinder and black glassy slag on and around the bay, but

not in its make-up, which appears to be homogeneous. In the stream are several forge bottoms. What remains seems to be threatened by further housing development.

Possible water-powered sites

FRIDAY STREET: WOOTTON. TQ 128 457

Here is a largish pond with a bay formed by the road. After a careful search no sign of slag or cinder could be found.

TQ 127 451

This site is about ½ mile upstream from the above. There is no existing pond but a bay 25 yards long with a gap in the middle. In spite of a careful search no trace of slag or cinder can be found.

Miscellaneous

SNAPE MINE: WADHURST. TQ 634 302. Wealden Iron pp.290-91

The shafts of this abandoned 19th century iron mine now have all their entrances filled in. On the S. side of the railway, just E. of the footpath that crosses the line, can be seen the trench along which the trolley rails to enter one of the galleries ran. The “Miners Arms” is now a private house.

SUSSEX CANNON IN EAST AFRICA.

In 1970, while on a holiday in Kenya, I visited the 16th century Portuguese Fort Jesus on Mombasa island. The fort is now a museum and I was shown round by James Kirkman, F.S.A., the curator, who pointed out three early cannon, believed to be English. This year his book on Fort Jesus has been published and it includes an account of these cannon (p.152), as under:

"No. 14 English 24 pdr. mark on left trunnion 'H' for Harrison of Robertsbridge (1760-80).
No. 19 English 24 pdr. mark on right trunnion 'B' for William Bower of Bankside, Southwark (1742-63).
No. 23 English 18 pdr. mark on right trunnion 'B' (as No. 19 above)."

While there I also noted some unusual balls. They were half spheres with a shallow dowel on one half which fitted into a socket in the other to make a complete ball. The two halves presumably were intended to separate after firing.

C.F.T.

James Kirkman: Fort Jesus, (Clarendon Press, 1974).

THE MYSTERY OF THE WITHYHAM OR STONELAND FURNACE.

A great deal of intensive fieldwork by the writer, following on visits by the Buxted Branch of W.I.R.G., have failed to find any trace of Withyham Furnace. Straker could only surmise that the now existing large lake in Buckhurst Park (TQ 497 348) had covered all relics of the furnace and forge, and refers to a lease of 1676 when he thought that the site had been converted to a corn mill (see Wealden Iron p.253) Lower refers to the Bakers of Stoneland Park (afterwards incorporated into Buckhurst Park) having ironworks powered "by a chain of ponds still

existing below the house" (see Sussex Arch. Coll. Vol.**2** (1849) p.220).

Buxted Branch did succeed in finding the Forge, not on the main stream coming from the large lake, but on a tributary, a few yards before it joined the main stream at TQ 499 353. This site had at some time been a corn mill, and there appears to have been another just north of the main Tunbridge Wells road at TQ 4963 3575.

The writer has now walked all the streams running through Buckhurst Park to their junction with the Medway, without finding any sign of a furnace site. Particular attention was paid to the two most likely valleys which now have lakes or ponds, that is those descending from TQ 511 348 and 499 337. Every shingle bed in the streams was looked at but not a single piece of glassy slag was seen, nor was any to be found among the metalling of the numerous estate roads about the lakes.

Although we have found the Forge it would appear, as Straker surmised, that the Furnace is indeed somewhere under the middle of the large lake.

C.F.T.

Haxted Mill – Exhibition

An exhibition of wealden Iron is now on show at the Haxted Water Mill museum, near Edenbridge, Kent (TQ 418 455). The first two floors are devoted to corn-milling, with the water-wheel operating most of the gearing mechanism. On the top floor the wealden Iron exhibit consists of a display case which shows in words, pictures and samples the processes necessary for making wrought iron in a bloomery furnace. This theme is repeated for the blast furnace period, when cast iron was produced. The difference between these two processes is emphasised.

There are boxes of slags and ores so that visitors may actually feel the exhibits, this follows the informal nature of the corn-milling exhibits. A few photographs are included of the "trip hammer" at Sticklepath, North Devon (SX 642 940).

Finally there has this year been added a 1-inch O.S. map of the Weald, showing the iron-working sites listed in Straker's "WEALDEN IRON". Each site is located by a flag indicating bloomery/blast furnace/hammer forge, and bears a number in the order of entry in Straker's book. This number can be checked on a list of site names and map references.

It is hoped to bring the map up to date by next year and also produce a commentary with slides on the wealden Iron industry for the 1975 season.

The curator of Haxted Mill, Mr Woodrow, kindly allows members of the W.I.R.G. to visit the Mill free on showing membership card. The Mill is open to the public from 12 noon until 6 p.m. on Saturdays and Sundays, from Easter to September, including Good Friday and Bank Holidays; and on Wednesdays from August until mid September.

Brian K. Herbert.

Broadfields: Crawley. TQ 258 353

Broadfields is the first major Iron Age and Romano-British industrial settlement to be discovered on Weald clay. The site covers about 12 hectares (30 acres), with the main area of occupation spanning a shallow valley between a limestone ridge to the northeast and sandstone hills to the south.

A limited rescue excavation has been undertaken on the Iron Age settlement, locating a series of ditches. Aerial photography showed two circular features, but these remain unexcavated as they were not in the threatened area. The pottery is of Hawkes' South Eastern Third B type, and tap slag indicated that iron was being produced. This was exploited more thoroughly during the Roman period. The site provided all the necessary materials, iron ore close to the surface with easy accessibility, wood in abundance for charcoal, clay for the furnaces and water from a stream which ran through the valley. Communications were also good, with local trackways and London-Lewes and London-Brighton roads supplying the markets.

The settlements are surrounded by ore workings and industrial areas, which illustrate various stages in producing iron. These include a puddling pit, water reservoir, ore roasting facilities, 36 shaft type smelting furnaces, three slag dumps and a blacksmith's workshop fitted with a stone-built forge.

No ore-roasting furnaces, like those discovered at Holbeanwood by Mr H. Cleere, have yet been found. However, beneath one of the slag dumps was a large area of burnt clay covered with roasted ore. The shaft furnaces generally comply with Cleere's classification BI.i, in that they are all equipped for slag-tapping, were blown with forced draught and had cylindrical superstructures, but there are many local variations. At least 10 of the shaft furnaces are similar to those at Holbeanwood, while a further 6 are like those found at Ashwicken, Norfolk, by Dr Tylecote. Forced draught was introduced via a double tuyere, which is peculiar to the Weald.

The 1st and 2nd century settlement (Site II) seems to be bounded

on four sides by a shallow ditch and bank. The area enclosed is approximately 76 metres by 63 metres and within this has been discovered a building. Another, located to the south of the settlement, is thought to be part of the workmen's accommodation. This building is represented by post-holes and a floor made up of burnt clay and successive layers of unburnt beaten clay, the remains of which measure approximately 11 metres by 5 metres. In the southwest corner is a horseshoe-shaped clay oven.

In the northeast corner of Site II was discovered a thin, levelled area of slag, which was thought possibly to be a hard-standing for light wagons, etc. The full extent of this was revealed during a recently completed watching brief on the area, whilst construction of a pavilion 121 feet by 60 feet was in progress.

At present a geophysical survey is being carried out on two large areas being prepared for this coming season's excavations. One of these is a possible settlement to the extreme south of the site, the finds suggest a 3rd/4th century date.

Broadfields is significant in that it is the largest of the early wealden sites to be excavated. It is the most north-westerly of this group and the first Roman settlement to be discovered on Weald Clay. Similarities in furnace design and equipment (tuyeres) etc., imply some influence from the group that was operated in East Sussex by the Classis Britannica. However, the general layout, method of operation and situation suggests that another organisation was exploiting iron in the Weald.

1974/5 will be the last year of practical work on Broadfields. The Institute of Archaeology, University of London, now administering this

area for the Department of the Environment, have granted £1,000 towards the estimated budget of £3,505, and have also co-opted the resident staff into their regional organisation. The local and county authorities have once more come to our aid with a joint grant of £1,000 leaving £1,505 to be raised from private sources.

The Science Museum have recently acquired the bloomery shaft furnace base which was lifted from Broadfields (Site I) in July 1972. It was put into storage at the Sussex Archaeological Society's museum at Lewes, but is now being prepared for exhibition, with other artifacts from the site, in the Science Museum's new historical metallurgy gallery. A paper on the methods used in the lifting operation is to be published shortly. A series of papers is so be written on the conservation problems encountered at Broadfields.

Eileen Horne

John Gibson-Hill.

Publications

The Iron Industry in the Weald and its Connections With the Classis Britannica by H. F. Cleere, B.A., F.S.A.

Copies of this article published in Archaeological Journal are available price 60p + 12p postage from the Hon. Sec., D. S. Butler, 63, Mackie Avenue, Hassocks, Sussex.

Back numbers of the Bulletin are also available price 35p + 12 postage.