The Excavation of Batsford Mill, Warbleton, East Sussex, 1978

By OWEN BEDWIN

THE CHANCE DISCOVERY of a waterlogged wooden beam during the cutting of a drainage ditch led to the excavation of the timber framework of a medieval water-mill. Almost half the water-wheel survived in situ. *A little 14th-century pottery was found in the wheel-pit; its structure was extremely similar to that of the approximately contemporary period I mill at Chingley.*[1] *The mill at Batsford was probably used for grinding grain; no trace of the mill building itself was found.*

INTRODUCTION

During the summer of 1978, work began on the construction of a fish farm in a valley on the border of the parishes of Herstmonceux and Warbleton, East Sussex. The stream running through the valley constitutes the parish boundary (Fig. 1). The tree cover in the valley was first removed, and considerable earth-moving operations were then undertaken in order to build a series of dams across the valley. Members of the Wealden Iron Research Group (hereafter WIRG) maintained a watching brief on this work, as a late 16th-century blast furnace was known to be situated in the valley,[2] although its precise location was uncertain. Blast furnace slag was conspicuous in the soil on the valley floor, and the bay survived to a maximum height of 2.5 m, although there was no pond (Fig. 2).

While preliminary drainage work on a particularly marshy spot was being carried out by machine on the eastern side of the valley, a large, well-preserved wooden beam was unexpectedly revealed, *c.* 2 m below ground level (Fig. 3; this beam, in the SW. corner, was snapped by the machine). Fortunately, Mr Dennis Beeney, a member of WIRG, was on site at the time; he was able to clear by hand some of the soil around the beam and recover a few sherds of pottery. It was initially thought that this beam might be part of the wheel-pit or tail-race of the 16th-century furnace, but the pottery was clearly earlier, belonging to the 14th century. There was, moreover, little sign of blast furnace slag in the vicinity. Subsequent clearance in the area around the exposed beam revealed further substantial timbers, obviously part of a framework, and a little more medieval pottery. At this point, the Sussex Archaeological Field Unit was informed of these findings by Mr C. F. Tebbutt, and it was decided to undertake rescue excavation of the site in October and November

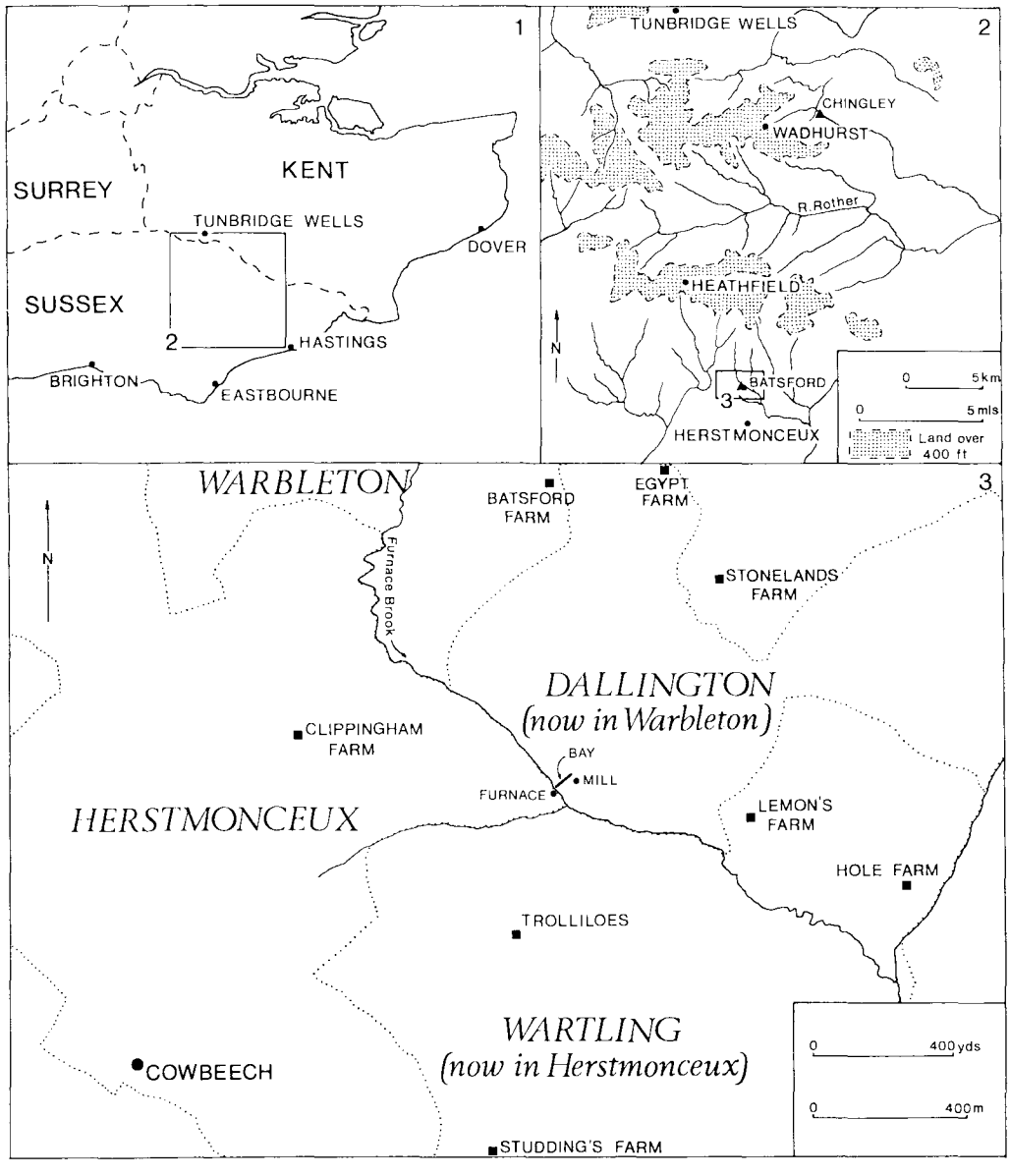

FIG. 1
BATSFORD MILL, 1978
Site location

1978. The excavation brought to light the wheel-pit of a hitherto unrecorded water-mill. (The blast furnace[3] was later found 60 m away on the other side of the valley; Fig. 2.)

The local geology was complex; along the western edge of the valley, where the furnace was found, the subsoil was Ashdown Sand. On the eastern side, where the

mill was built, and over most of the valley floor, it was Wadhurst Clay. In addition, during excavation of the mill, a substantial lens of hard, grey silt was encountered, presumably deposited at a time when the stream ran down the eastern side of the valley.

DOCUMENTARY EVIDENCE. *By* C. WHITTICK[4]

In a feudal economy, the ownership of a mill had both tenurial implications and financial advantages. Tenurially it implied that the owner was sufficiently independent of his feudal superior to resist the use of his mill and sufficiently powerful to have tenants himself whom he could coerce to use his own. A mill provided its owner with a regular income and strengthened the economic interdependence between lord and tenant. For all these reasons, mills were generally attached to manors, the economic units of feudal society.

The piece of land on which the Batsford mill was found was formerly a copyhold of Herstmonceux manor called 'The Pende',[5] but there are several reasons to suggest that this and other more northerly components of the manor consisted of the lands inherited in 1406 by the lord of Herstmonceux, Roger Fiennes, on the death of his grandmother, Margery, widow of William de Batsford. The inquisition found before the escheator on her death shows that she died seised of over 700 acres of land held of several manors including a water-mill held of Herstmonceux.[6] Although the document does not name the tenements, we can identify five of them from a deed enrolled in chancery in 1394;[7] their locations are shown in Fig. 1, along with Batsford and Clippenham, also demonstrable parts of the estate.[8] From this and other evidence, it is clear that the eponymous homestead about half a mile north of the site was the centre of an estate which had been built up gradually by acquisitions of land from various manors. This inherited estate was still in 1484 referred to as the *manor* of Batsford, perhaps to stress that an almost complete independence had been established by the family during the 14th century.[9] Stronger evidence of the connexion of the family with the mill comes from a much later source, a map and survey of Herstmonceux manor in 1681.[10] This describes the field known in the court rolls as 'The Pende' as 'Batsford millpond otherwise Clippenham milldam' and also refers to the modern Furnace Brook as 'Batsford Brook'. Despite the name, a field not a pond is depicted; indeed in 1688 the tenant was granted the timber on his land (including 'The Pende') for boundary repairs.[11] Moreover, the name Batsford Bridge was in use in 1521 to describe what is now called Trollilows Bridge (Fig. 2) and may be the site of the ford itself.[12]

THE EXCAVATION

About 2 m of overburden was removed by machine from the area around the original findspot of the wooden beam. This uncovered a substantial timber framework, *c.* 9 m by 7 m, the upper members of a strongly-built wheel-pit (Fig. 3). These upper members, although 2 m below modern ground level, would have been at about ground level in the medieval period. The excellent condition of the timbers implies that this area became waterlogged soon after abandonment of the mill, as otherwise the beams would not have survived so well.

The fill of the wheel-pit was excavated by hand, revealing about half of the water-wheel still *in situ*. A plan of the wheel-pit base-frame is shown in Fig. 4. A certain amount of clearance around the wheel-pit was also carried out by hand in order to establish the nature of its construction. This can best be appreciated from Pl. X, A; a three-dimensional reconstruction of the framework is shown in Fig. 6. Most of the wheel-pit was filled with a sticky, blue-grey clay layer, containing sandstone fragments (Fig. 5; layer 15). From the bottom of this layer, and also from the

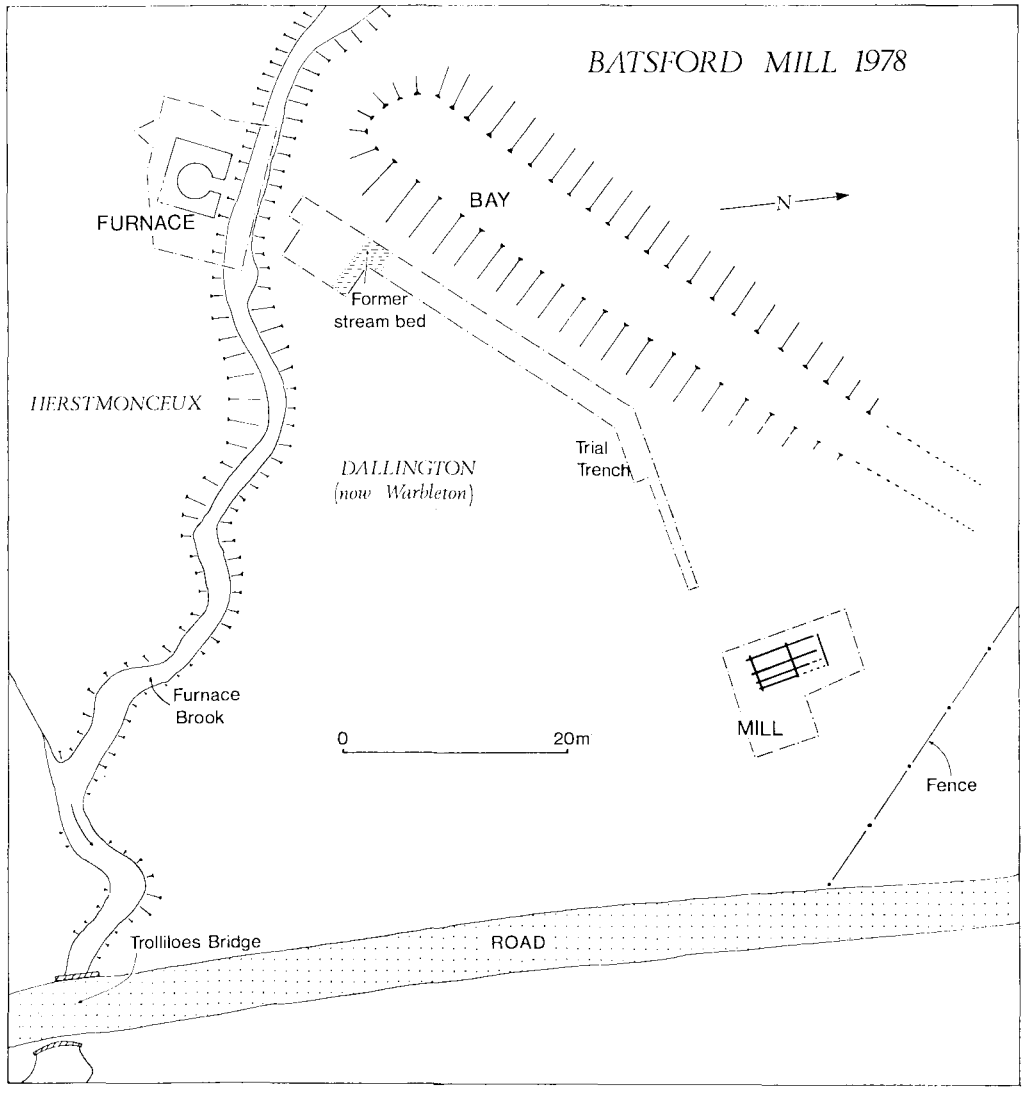

FIG. 2
BATSFORD MILL, 1978
General site plan, based on survey by John Bell and members of HAARG

dark brown layer of rotted vegetation below (Fig. 5; layer 16), came a few sherds of 14th-century pottery. In the absence of *definite* documentary references to this mill, the pottery constitutes the only dating evidence on the site. (An Edward III half-groat, of the Pre-Treaty Period, 1351–61, was found just beyond the southern limit of the trench shortly after excavation had finished.) Other finds were few; these were mainly wooden objects, notably some oak gear-pegs, suggesting the existence of a wooden gear-wheel. (Similar gear-pegs were found in period I contexts at Chingley.)[13] There were also fragments of water-wheel, presumably fallen down from the upper half, a few iron nails derived from the wheel, and a single piece of leather; this last object was found before formal excavation began.

Although a considerable area was cleared on both sides of the wheel-pit (Fig. 3), no sign of a mill building was found. There was little opportunity to investigate the tail-race, either, though sizeable timbers, running N.–S., were briefly revealed by machine; these probably corresponded to the first part of the tail-race.

The wheel-pit

The main timbers were extremely well preserved; the only exceptions were the extremities of some of the upper members, which had suffered slight decay (Fig. 3). The framework represented a single constructional phase; all the wood was oak, including the planking.

The framework had been constructed in a trench which had been dug *c.* 1.20 m into the clay subsoil. This trench was *c.* 3 m across, with two extensions to the W. to accommodate the western ends of the framework (Fig. 3). The base frame consisted of two parallel cross-sleepers, 4.5 m long, and 34 cm by 20 cm in cross-section. The cross-sleepers had been cut and finished with great precision, in contrast to the two parallel longitudinal members, both of which displayed a variable cross-section, *c.* 25 cm wide by *c.* 20 cm deep. Part of this variability may, however, have been the result of erosion by water in the wheel-pit. The ends of the longitudinal members were simply butted against the cross-sleepers (Fig. 7).

In the northern cross-sleeper were five uprights; in the southern one, three uprights (Fig. 6 — top). Each of these eight major uprights was neatly made and finished, with full-width tenons, 10 cm long (Fig. 7). The dimensions are the same for the corresponding timbers at Chingley,[14] though the Batsford tenons differ in not being chamfered. All these uprights were 60 cm long, excluding the top and bottom tenons. There was some variation in cross-section between uprights; a few were almost square in section, whereas others were rectangular. The upper ends of these uprights also had full-width tenons, 10 cm long. In both the longitudinal members, there had been three intermediate uprights; on the W., all three survived *in situ*, but on the E. only the central one remained, the existence of the others being indicated by empty mortices. The joints at the bases of these intermediate uprights had been severely scoured by the action of water, to the point where all three on the western side were slightly loose. As a result, the dimensions of the tenons were difficult to measure with precision, but they did seem to vary from almost full-width to about half-width. The tenons at the upper ends of these uprights were also variable, from threequarter-width to just over a quarter-width.

The sides of the wheel-pit had been formed of planks set on edge behind the intermediate uprights (Fig. 6 — centre). The planks on the western side were still present; the lower ones were *in situ*, but the upper ones had slipped down a little (Fig. 5). No planking remained on the eastern side. Two oak planks behind the major uprights at the northern end formed the head of the wheel-pit (Fig. 6). None of the planking appeared to have been pegged or nailed to any of the uprights; the planks were simply held in position by the

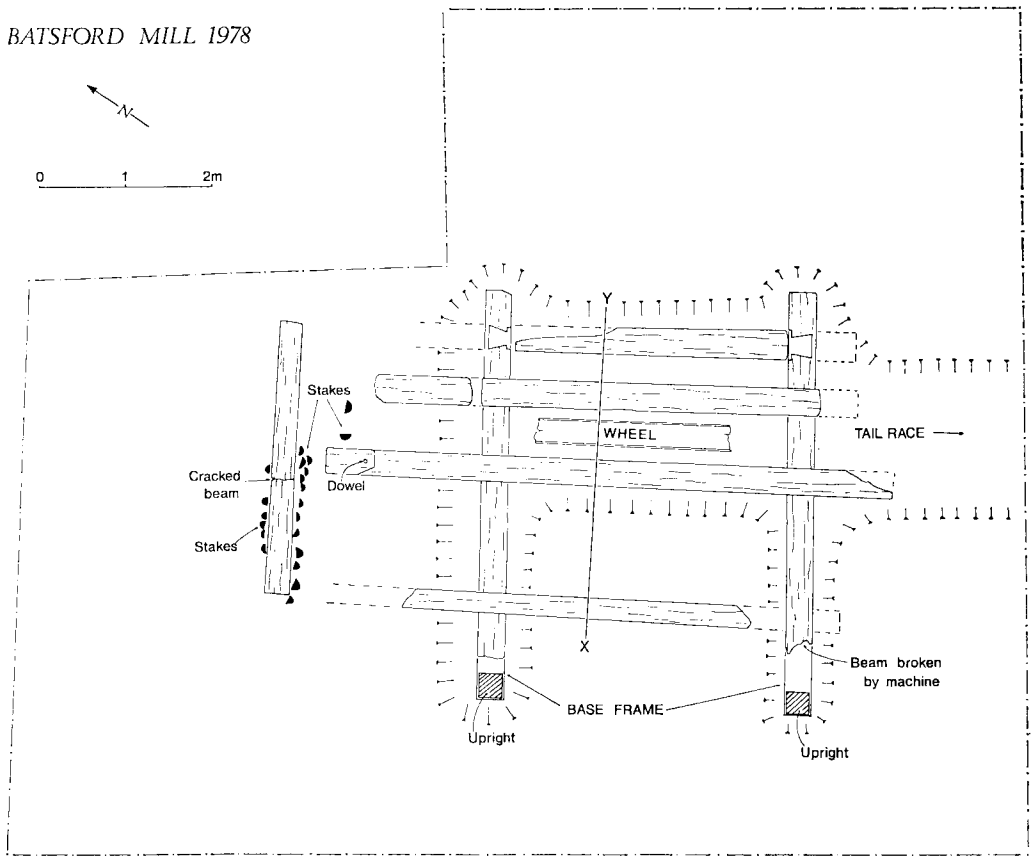

FIG. 3
BATSFORD MILL, 1978
Plan of surviving mill timbers

packing behind them (Fig. 5; layer 13). No artifacts were found in this packing material. There was no sign that the wheel-pit had ever had a planked floor.

The timber framework was completed by six upper members (Fig. 6 — bottom). There were two cross-members and four longitudinal members. Of these four latter, two were vertically above the two longitudinal members of the base frame and correspond to the upper edges of the wheel-pit. Between these two was a third longitudinal beam, which effectively divided the wheel-pit into two unequal sections. The remains of the water-wheel were found in the wider, western section; the evidence provided by the numerous oak peg-teeth found at the bottom of the wheel-pit suggests that a smaller wheel operated in the narrower, eastern section. This smaller wheel, mounted on the same spindle as the water-wheel, would have functioned as a gear-wheel, with teeth in the form of wooden pegs. It is conjectured that this provided a right-angle drive via another similar toothed gear-wheel, an idea which is considered further in the Discussion, below. The fourth, and final, longitudinal member was situated 1.20 m W. of the wheel-pit (Figs. 3 and 6); presumably it helped to lock the framework in position and to reduce the possibility of movement under stress. At the northern end of the longitudinal member forming

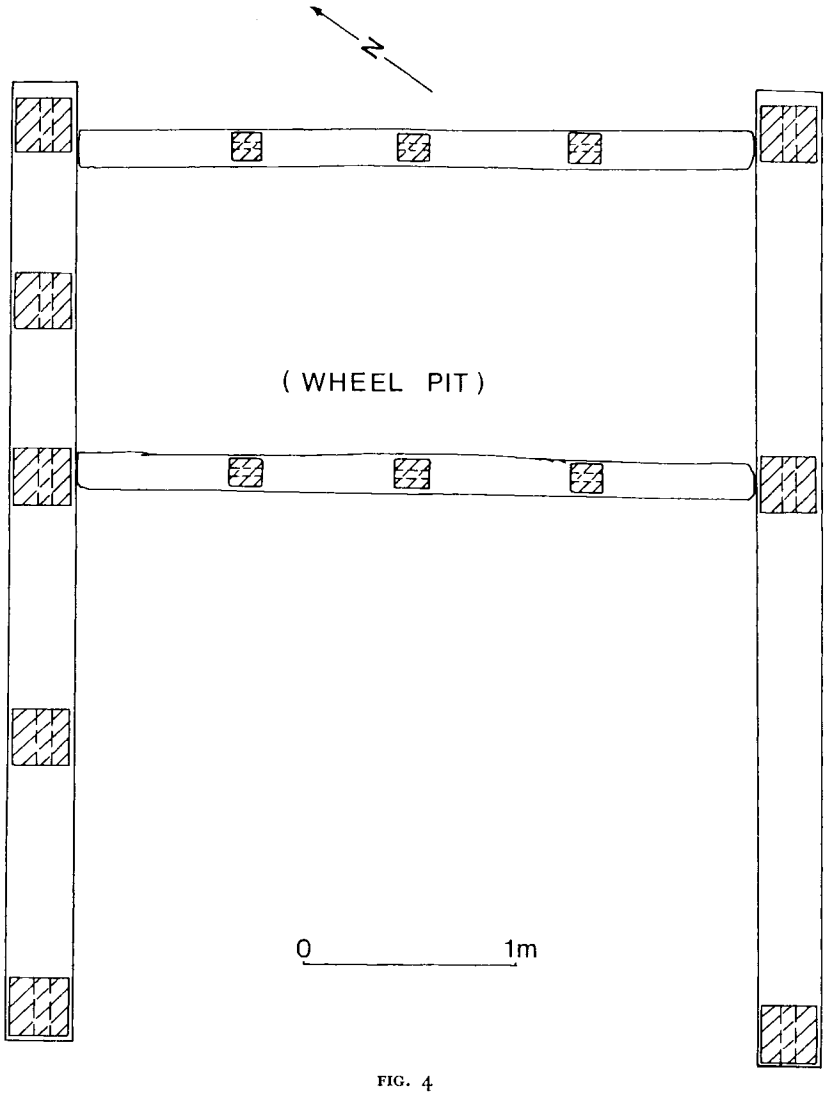

FIG. 4
BATSFORD MILL, 1978
Plan of wheel-pit base frame

the western edge of the wheel-pit, an oak slab had been fixed to the upper surface by means of a round dowel, 4 cm across. Its purpose is not clear; it did not appear to be a repair.

The two easternmost longitudinal members were secured to the cross-members by shouldered dovetails (Pl. x, B), the two westernmost by half-joints, but with no corresponding cut out in the cross-members (Fig. 7).

As well as the planks forming the sides and head of the wheel-pit already described, there was some additional planking, for which it was not easy to discern a purpose. This was at the northern and southern end of the framework, but to the W. of the wheel-pit proper (best seen in Fig. 6 — centre). As revealed by excavation, the planks appear to be

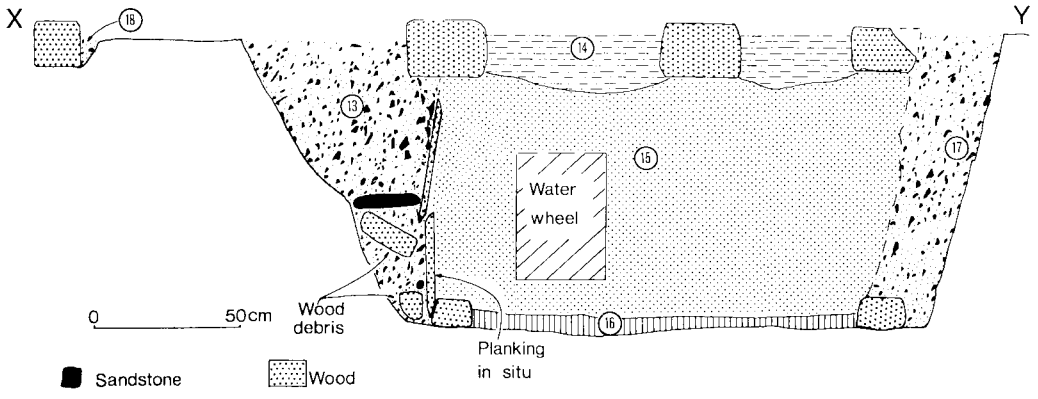

FIG. 5

BATSFORD MILL, 1978

Section across the wheel-pit; for position of this section refer to Fig. 3

Key to layers:

13, 17, 18. Small sandstone rubble in silty clay matrix
14. Fine grey silt
15. Sticky blue-grey clay fill with sandstone fragments
16. Dark brown layer of rotted organic material (?mostly derived from leaves)

in situ; at the southern end, they were positioned between two narrow uprights (Fig. 6 — centre). Initially, it was thought that this additional planking indicated the existence of an alternative, parallel channel into which water could be directed while, for example, the wheel was being repaired or the wheel-pit cleaned out. The section (Fig. 5) demonstrates that this could not have been the case, as most of the area between the two sets of planks consists of undisturbed subsoil (left-hand side of Fig. 5).

Finally, there was a single, isolated oak beam lying a little N. of the wheel-pit framework (Fig. 3). The beam had cracked across its centre; along parts of both edges were a series of small, semi-circular stakes which had been hammered deeply into the subsoil as if to prevent the beam from moving. A plausible purpose for a large beam in such a position would be to support the back edge of a small dam; the cracking of the beam would certainly warrant attempts to shore it up by means of the stakes. The two largest stakes were found about 80 cm S. of this beam. They could have been supports for a penstock delivering water to the overshot wheel; it can be seen in Fig. 3 that they are in the correct alignment.

The wheel

Almost half the wheel survived *in situ*, enough for a plausible reconstruction (Fig. 8). The wheel was overshot; it was 30 cm wide and 2.60 m in external diameter. All components were of oak. Cheek-pieces were secured to the rim by flat-headed iron nails. The bucket boards (2.5 cm thick) were straight; each was held in position by two round dowels, 2 cm in diameter (Fig. 8). The ends of these dowels were flush with the outside of the cheek-pieces. At one point, a slightly curved hazel twig, with its bark still intact, had been inserted as a replacement for one of the dowels; this perhaps represents a hurried repair.

The two surviving spokes (Fig. 8) were of rectangular cross-section, 12 cm by 8 cm; they were held in position by a single wooden peg set in a hole through the tail of the spoke just below the rim of the wheel. Both spokes had been the subject of similar repair work at the point where they were held fast to the rim, an area under considerable strain when the wheel is operating. Solid rectangular slabs of wood had been nailed on at each side of the base of the spoke to make good areas of severe wear (Fig. 8).

DISCUSSION

Batsford is the first medieval water-mill to be excavated in Sussex. The wheel-pit framework shows remarkably close parallels with the period I structure at Chingley, about twelve miles away, just over the border into Kent (Fig. 1). The reconstruction of the period I structure there[15] shows a timber framework in which almost all the details of layout, joints and planking are identical with Batsford. In fact, Chingley, period I, can be seen as a 'doubling up' of the Batsford structure. The similarity between the two sites would suggest that they were contemporary, that is both operating in the 14th century. The limited amount of pottery found at Batsford, although difficult to date closely, would support this view. (It is worth pointing out here that samples were taken from various timbers at Batsford for dendrochronological examination, but they all proved unsuitable for dating purposes.)

In the absence of evidence for a mill building at Batsford, it is not easy to be certain of its function. Given its date, however, three possibilities may be considered; these are the grinding of grain, the fulling of cloth, or the operation of a forge. The last possibility may be firmly ruled out by the complete absence of tapslag and other ironworking debris. Fulling seems unlikely because of the lack of artifacts associated with the handling of cloth, such as pins, scissors, etc., which might be expected (cf. Ardingly fulling mill).[16] This leaves as the most likely possibility the milling of grain. Supporting evidence for this comes from the numerous wooden pegs, some considerably worn, found at the bottom of the wheel-pit. A likely origin for these pegs, as already mentioned in the section on excavation above, would be wooden gear-wheels in which these pegs act as teeth. One gear-wheel, driven directly by the water-wheel, would transfer its drive at right angles to another similar gear-wheel, turning in a horizontal plane. This second wheel would then power the mill stones. It may be noted here that the period I wheel-race at Chingley was only cautiously associated with forging.[17] No anvil structure corresponding to this phase was identified, and little tapslag was found in period I contexts. Moreover, a fragment of wooden gear-wheel suggested the operation of some form of right-angled drive, and worn peg-teeth, similar to the Batsford ones, were also found. The period I wheel-race at Chingley may therefore have belonged to a flour mill for part of its existence.

There was no opportunity to section the dam at Batsford because of building operations connected with the fish farm. It was consequently not possible to determine how water was delivered to the mill, that is whether there was a dam, or whether water was brought via a leat from the stream further up the valley. The top of the dam was certainly surfaced with blast-furnace slag, but this could have been in the nature of a repair, or to increase the height of an already existing dam. The historical evidence[18] would suggest that a dam was built for the mill. Moreover, the isolated beam, cracked in the centre, lying to the N. of the wheel-pit, could be interpreted as a sill-beam at the back of a dam. If a dam had been built for the 14th-century mill, it is a little puzzling that the 16th-century furnace was constructed on the other side of the valley. It may be that the site of the mill was already lost, or perhaps that the area around the wheel-pit had become marshy, and it would therefore have been easier to build the furnace in a drier spot.

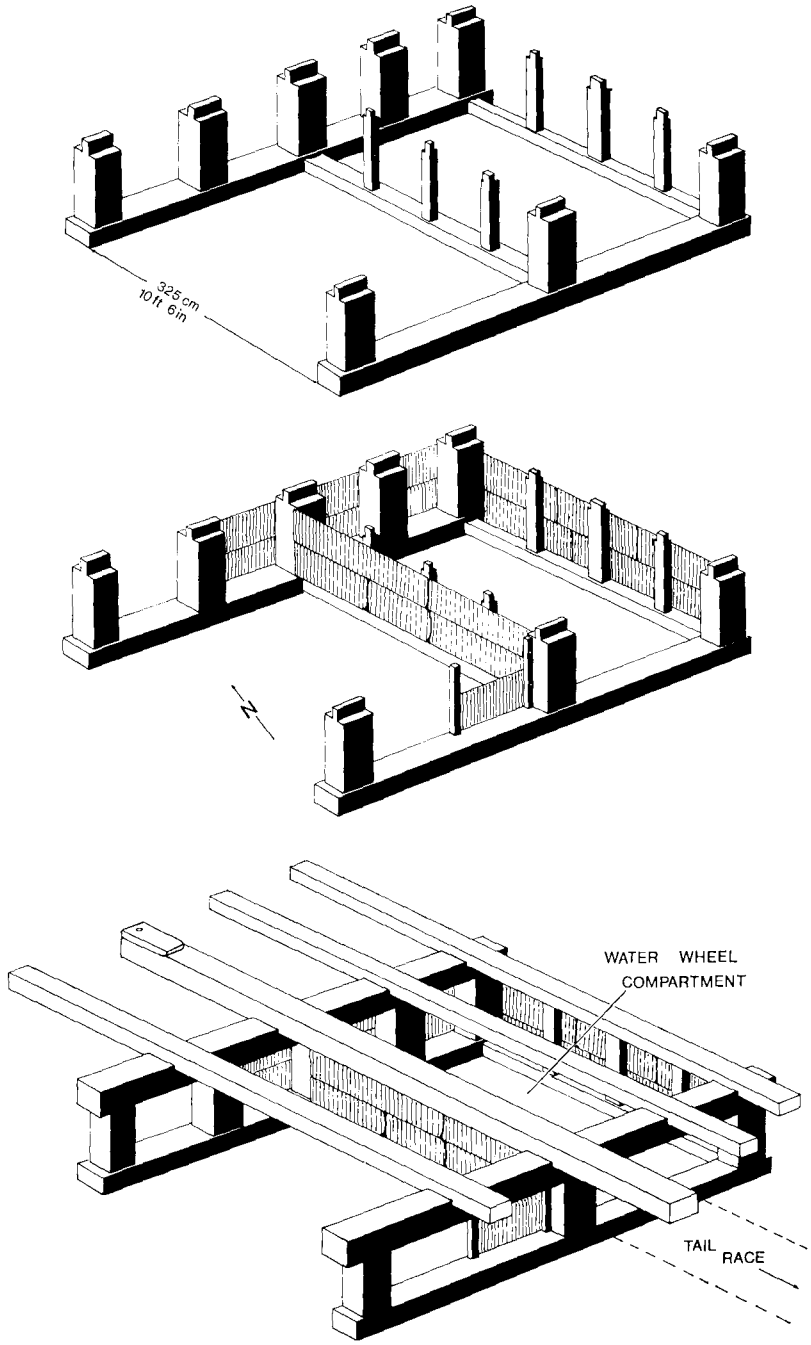

FIG. 6

BATSFORD MILL, 1978
Reconstruction of the wheel-pit frame

Top — base frame plus verticals
Centre — base frame, verticals and planking
Bottom — with upper members

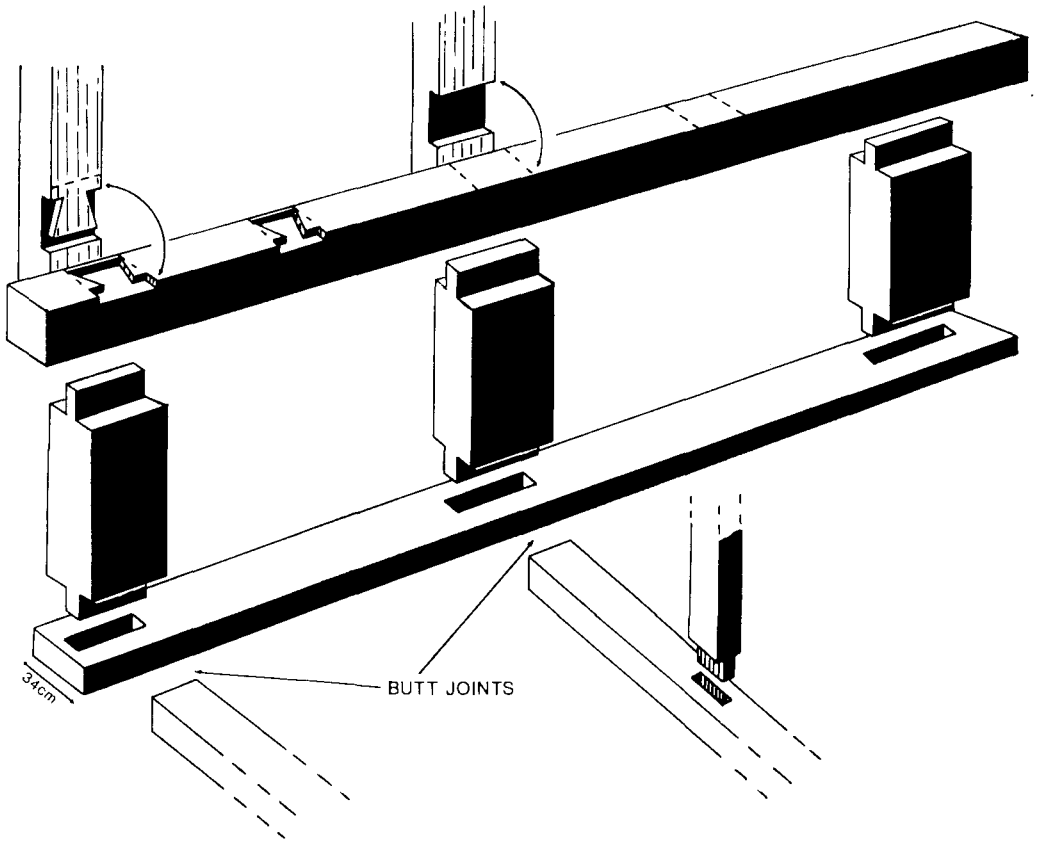

FIG. 7
BATSFORD MILL, 1978
Details of jointing at the southern end of the wheel-pit

Finally, there is no evidence of any contemporary settlement close to the mill. Most of the surrounding fields are now used as permanent pasture but no abandoned house platforms are known. This should not be considered surprising; the best situation for a Wealden mill, at the bottom of a damp, wooded valley, is unlikely to be an attractive location for a settlement.

SPECIALIST REPORTS

The pottery. By ANTHONY STREETEN

A small number of medieval sherds (Fabrics B ii, B iii and C i) from the filling of the wheel-pit (Fig. 5; layer 16) can be associated with the operation of the mill, and two further sherds (Fabrics A and C i), found during preliminary work by Mr C. F. Tebbutt, were recovered from between the timbers. Other types are represented among the unstratified material salvaged when the site was first discovered, and two sherds (Fabric B i) came from excavation of the upper clay fill (upper part of layer 15 in Fig. 5) probably deposited soon after the mill went out of use. Few of the finds are diagnostic, but, with the

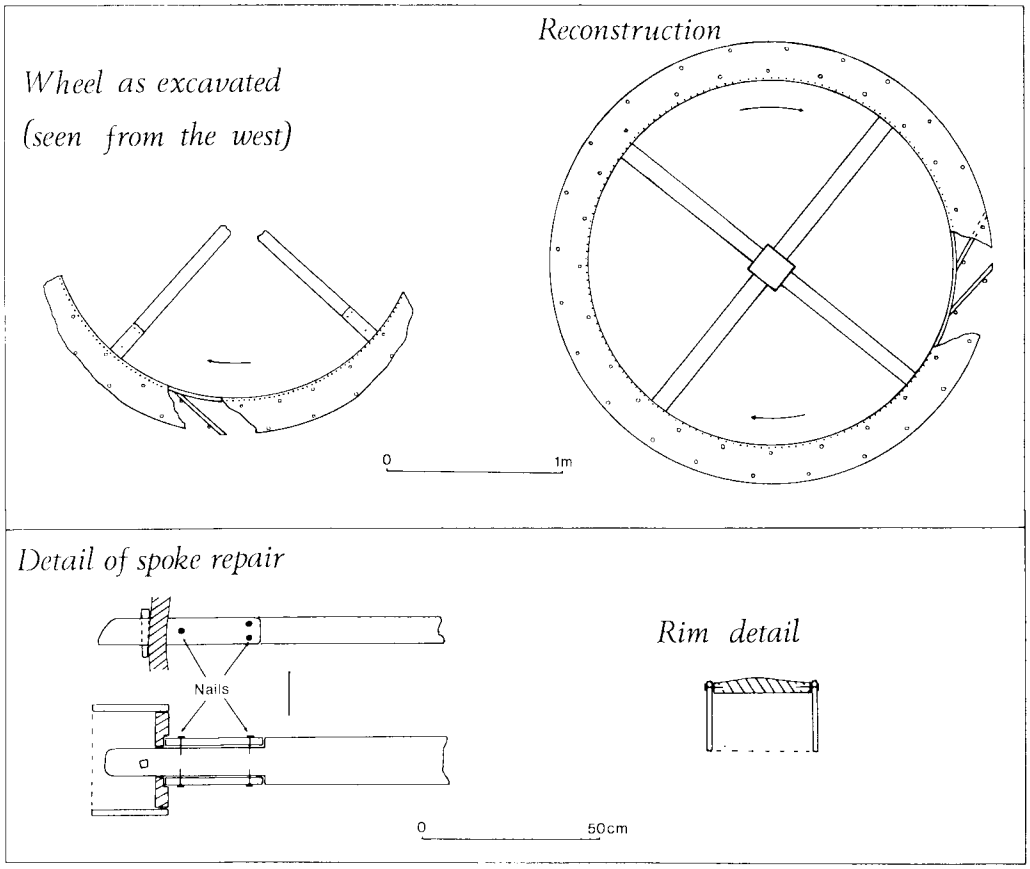

FIG. 8
BATSFORD MILL, 1978
Water-wheel; reconstruction and repair detail

exception of an ?early shell-tempered sherd (Fabric A), the types, in particular the jug with white slip decoration (Fabric C i), are typical of the 14th century. The only example of a later, possibly 15th or 16th-century, vessel was unstratified (Fabric D).

Fabric descriptions[19]

A. *Shell-tempered ware*

Grey core and surfaces. Hard, fairly smooth surface with rough fracture. Abundant inclusions of medium-fine quartz and sparse plate-like voids on the surfaces.

B. *Flint/sand-tempered wares*

i. Pale grey core and surfaces. Hard fairly smooth texture with rough fracture. Moderate inclusions of fine quartz and sparse ill-sorted medium/fine angular flint fragments. Moderate inclusions of red iron ore and sparse mica dust visible on the surface.

ii. Similar texture and composition to B i, but slightly smoother with red surfaces.

iii. Grey core with red-brown surfaces. Hard, harsh surface texture with rough fracture. Abundant inclusions of medium-coarse quartz and very sparse ill-sorted medium/coarse angular flint fragments.

C. *Sand-tempered wares*

i. Pale grey core and surfaces, shading to pink in patches. Hard, harsh texture with rough fracture. Abundant medium-sized quartz inclusions, appearing dark against the pale surfaces. Very sparse fragments of siltstone.

ii. Grey core with red margin and brown surfaces. Hard, fairly smooth texture with rough fracture. Abundant inclusions of medium/fine quartz.

iii. Cream-buff core and surfaces. Hard, harsh surface texture with rough fracture. Abundant inclusions of medium/coarse quartz sand.

iv. Grey core with red-brown surfaces. Soft, fairly smooth surface texture with rough fracture. Surface texture with rough fracture. Sparse inclusions of coarse quartz and moderate pellets of red iron ore.

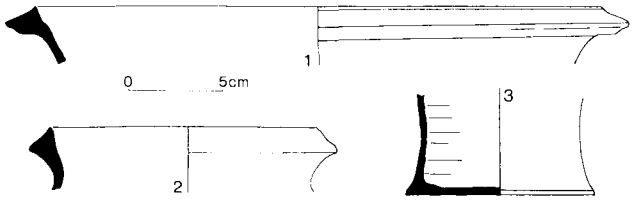

FIG. 9
BATSFORD MILL, 1978
Pottery. Scale 1:4

Late or post-medieval earthenwares

D. Red core and surfaces. Fairly hard smooth surface texture with rough fracture. Moderate inclusions of fine quartz and sparse small fragments of iron ore.

Illustrated (Fig. 9):

1. Rim of cooking pot or storage jar. Fabric B iii.
2. Rim of jug. Fabric B iii.
3. Base of jug. Fabric D.

The range of sand- and flint-tempered wares is comparable with the assemblage from Michelham Priory[20] and comparison of the quartz grain size-frequency shown in thin section[21] has confirmed visual classification of the fabric groups. One of these (Fabric B i) is paralleled at Gassons Farm, Hailsham,[22] and other vessels are similar to wasters from Delves Field, Ringmer (Fabric B iii and C i).

Wooden objects

About twenty oak peg-teeth, fragmentary or complete, were recovered from the lower fill of the wheel-pit. Five representative examples are shown in Fig. 10 (nos. 5, 6, 8–10). Many were worn or broken; they are similar in size and shape to peg-teeth found at Chingley.[23] The octagonal object (Fig, 10, 7) may also be part of such a peg, without its head.[24] Other wooden objects found included several dowels and fragments of cheek-piece, derived from the wheel, plus a wedge (Fig. 10, 11) and what was probably the upper part of another wedge, with a circular hole drilled in it (Fig. 10, 4).

Iron nails

Three flat-headed iron nails (derived from the wheel) were found at the bottom of the wheel-pit. The heads were *c.* 21 mm across; lengths were 60–65 mm. The shafts were square (4 mm across just below the head) tapering to a point (Fig. 10, 12).

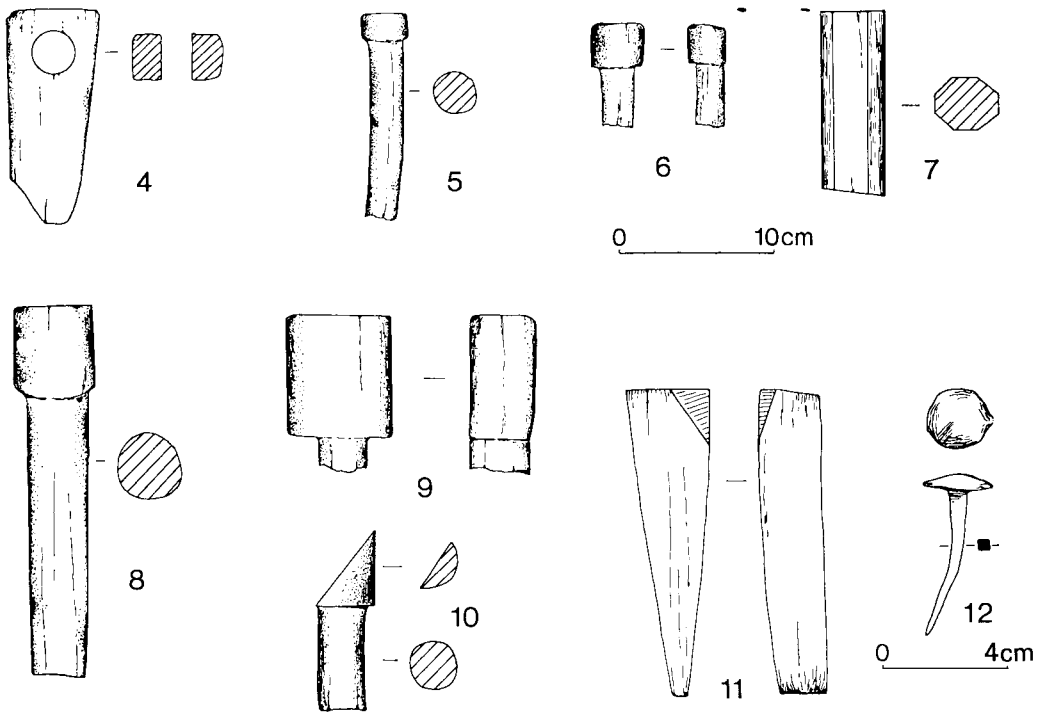

FIG. 10
BATSFORD MILL, 1978
Wooden objects and iron nail. Note different scales

Coin. By D. R. RUDLING

Edward III, half-groat, London. Fourth Coinage, Pre-Treaty Period (1351–61), Series C. Ref. North 1148. Condition: very slightly clipped and some signs of wear on the raised surfaces. This is a coin that has had little circulation and was probably lost by the end of the 14th century. (Found in the topsoil close to the southern edge of the excavated area soon after archaeological work on the site had finished.)

Leather. By J. M. SWANN

Piece of leather, pointed one end, oval the other. No stitch marks apart from three (or possibly four) notches on one edge, i.e nothing to indicate its purpose. If it were part of an intermediate layer of a patten forepart, its style would be consistent with the date of the associated pottery. (Found in the top of the wheel-pit fill, layer 15 in Fig. 5, before formal excavation began.)

Dendrochronological examination of the mill timbers

Eight samples from different mill timbers were submitted to the dendrochronological laboratory at Sheffield University, via the Ancient Monuments Laboratory. JENNIFER HILLAM reports as follows:

A mean curve, made by averaging the ring widths of four matching samples, was compared with absolutely dated tree-ring chronologies. A computer program was employed for this purpose, but no acceptable matches were obtained. However, it seems probable that all the timber used in the wheel-pit structure was felled at the same time.

ACKNOWLEDGEMENTS

I am most grateful to the landowner, Mr R. Preston, for permission to excavate, and to his agent, Mr A. Harrison-Smith for his kind co-operation.

I should like to thank also those who helped on site; Dennis Beeney, Steve Randall, David Rudling, Arthur Sayers, Mr and Mrs Tebbutt, the many members of WIRG, John Bell, Paul Garwood and members of HAARG, Mr W. Beswick for undertaking to remove and conserve the water-wheel, and David Crossley, Stuart Rigold and Frank Gregory for visiting the site and giving me valuable advice. I am also grateful to those who contributed to this report; Chris Whittick, Anthony Streeten, June Swann, Jennifer Hillam, Caroline Cartwright (for identifying wood samples) and Lys Drewett for Fig. 10, 12.

The finds have been retained by the landowner.

A Department of the Environment publication grant for this paper is gratefully acknowledged.

NOTES

[1] D. W. Crossley, *The Bewl Valley Ironworks* (Royal Archaeological Institute Monograph, 1975).
[2] E. Straker, *Wealden Iron* (1931), 360.
[3] O. Bedwin, 'The excavation of a late sixteenth-century blast furnace at Batsford, Herstmonceux, E. Sussex 1978', *Post-Medieval Archaeology*, 14 (1980), forthcoming.
[4] Assistant Archivist, East Sussex Record Office (hereafter ESRO). I should like to thank my colleagues for their many helpful suggestions and the solicitors of Smith's charity for their unsuccessful attempt to locate the the records of Warbleston manor.
[5] A guide to the present location of the court rolls (which were dispersed in the 1890s) is at ESRO.
[6] Public Record Office (hereafter PRO), C137/58/24.
[7] Lymmauneslonde, atte Hole, Tholileslonde and Stodennyslonde in Wartling, and Stonlonde in Warbleton; PRO C54/235 m 5v.
[8] Sussex Archaeological Society (hereafter SAS), C250.
[9] I.P.M. of Richard Lord Dacre; PRO C141/6/30.
[10] ESRO AMS 4459.
[11] SAS box 17, unlisted.
[12] SAS box 16, unlisted.
[13] Crossley, op. cit. note 1, 15.
[14] Ibid., 7.
[15] Ibid., fig. 7.
[16] O. Bedwin, 'The excavation of Ardingly Fulling Mill and Forge 1975–76', *Post-Medieval Archaeology*, 10 (1976), 34–64.
[17] Crossley, op. cit. note 1, 14.
[18] C. Whittick, in Bedwin, op. cit. note 3.
[19] These use the conventions suggested by D. P. S. Peacock, 'Ceramics in Roman and Medieval Archaeology', *Pottery and Early Commerce*, ed. D. P. S. Peacock (London, 1977), 21–33.
[20] K. J. Barton and E. W. Holden, 'Excavations at Michelham Priory', *Sussex Archaeol. Collect.*, 105 (1967), 1–12.
[21] A. D. F. Streeten, 'Potters, kilns and markets in medieval Sussex', *The Archaeology of Sussex Pottery*, ed. D. Freke, forthcoming.
[22] K. J. Barton, *Medieval Sussex Pottery* (Chichester, 1979), 152–54.
[23] Crossley, op. cit. note 1, fig. 9C.
[24] Ibid., fig. 9C.1.