

**SITE OF THE BARLING WINDMILL
LAND ADJACENT TO 47 CHURCH ROAD
BARLING MAGNA
ESSEX**

ARCHAEOLOGICAL EXCAVATION



Essex County Council

Field Archaeology Unit

February 2008

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As part of our desire to provide a quality service, we would welcome any comments you may have on the content or the presentation of this report.

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**SITE OF BARLING WINDMILL
LAND ADJACENT TO MILL HOUSE, 47 CHURCH ROAD
BARLING MAGNA
ESSEX**

ARCHAEOLOGICAL EXCAVATION

Client: Mr Graham Cole

Planning Reference: ROC/0249/06

NGR: TQ 9306 8979

Site Code: BMCR 07

ECC FAU Project Number: 1794

OASIS Index Number: essexcou1-28922

Dates of Fieldwork: 6-7 June 2007

SUMMARY

An excavation was carried out on the site of the Barling windmill, demolished in 1946, before construction of a new house in the garden of Mill House, 47 Church Road, Barling Magna. The windmill site had already been partially excavated in 1991 and the results have been published (Byford et al. 1992), but further investigation was required to locate the windmill more accurately and to resolve several questions about its structural development. The present report integrates the results of the 1991 and 2007 excavations and interprets the windmill in relation to its historical background, as described in the definitive survey of Essex windmills, millers and millwrights (Farries 1984).

Documentary evidence, old photographs and the 1991 excavation results have established that the mill demolished in 1946 was a smock mill, built in 1759-60 in place of an earlier post-mill built some time before 1724. The 2007 excavation successfully located and surveyed both phases of the windmill, and recorded the northernmost two-thirds of its ground plan. The combined results of both the 1991 and 2007 excavations enable the windmill's structural development to be reconstructed in some detail.

The recorded remains of the post mill comprise a large central post-pit and the brick footings of a roundhouse built around it. The roundhouse was not substantially built and the main load of the post mill would have been supported on the massive central post. Lines of post-

holes aligned on the central post-setting may represent small timber piles inserted to stabilise the ground beneath the cross-trees and braces supporting the post.

The remains of the later smock mill survived very poorly, with an area of brickwork at its western edge recorded only in the 1991 excavation, and the outline of the brick roundhouse is mainly reconstructed from surviving mortar impressions. The extent of the brickwork and mortar patches suggests the smock mill had a much more substantial roundhouse, which is logical considering this would have formed a load-bearing brick base for the timber superstructure. The brickwork of the smock mill roundhouse appears to have been built up against the outer face of the earlier post mill roundhouse. Four regularly spaced mortar pads were recorded within the roundhouses in the 1991 excavation, of which two were re-excavated in 2007. The 1991 excavation report suggests these were supports for the timber cross-trees of the post-mill. A more likely interpretation, however, is that they were part of the internal structure of the smock mill, providing bases for the large timber posts of the 'hurst', a substantial timber frame that supported the stone or grinding floor that held the heavy millstones and machinery.

1.0 INTRODUCTION

This report describes the results of an excavation on the site of the Barling windmill, now demolished, before construction of a new house in the garden of Mill House, 47 Church Road, Barling Magna, Essex. The Essex County Council Field Archaeology Unit (ECC FAU) carried out the excavation on behalf of the house builder, Mr Graham Cole. The windmill site was partially excavated in 1991 by the then owner of Mill House, and the results of this earlier work have been published (Byford *et al.* 1992). Although the publication report includes a detailed plan of the windmill remains, this was not surveyed in to Ordnance Survey. Further excavation was therefore required to locate the windmill more accurately and to resolve several questions about its structural development.

The archaeological work was carried out under the terms of a condition placed on planning consent by Rochford District Council (ROC/0249/06), following advice from the Essex CC Historic Environment Management team (ECC HEM) in accordance with Planning Policy Guidance note 16 on Archaeology and Planning (DoE 1990). The work followed the Brief issued by ECC HEM (2007) and the Written Scheme of Investigation prepared by ECC FAU (2007).

Copies of this report have been supplied to Mr Graham Cole (including a copy to forward to Rochford District Council Planning Department) ECC HEM, the Essex Historic Environment Record, and Southend Museum. A digital copy of this report has been uploaded onto the Online Access to Index of Archaeological Investigations (OASIS) (<http://ads.ahds.ac.uk/project/oasis>). The site archive will be curated at Southend Museum.

2.0 BACKGROUND

2.1 Location and Site Description

The site lies on the northern edge of the medieval village of Barling Magna, 300m north-west of All Saints' Church (Fig. 1; NGR TQ 9306 8979). The new house is located on the site of the Barling windmill, demolished in 1946, immediately to the west of Mill House, 47 Church Road. The new house plot was formerly part of the garden of Mill House and was created by sub-division of the original plot. The house measures 14 x 7m, with a small conservatory at its western end and a driveway to its north. The location of the windmill was broadly

known from Ordnance Survey maps, but the report on the 1991 excavation lacked a location plan, so the windmill's precise position in relation to the new house was not known before the 2007 excavation took place. The local drift geology consists of brickearth above Barling terrace gravels.

2.2 Historical Background

This historical background is based on a detailed review of the historical sources by Kenneth Farries (1984) in his survey of Essex windmills, millers and millwrights. The summary of windmill development is based on the Shire book on windmills (Watts 2006), and the illustration of different mill types in Fig. 2 is taken from the Essex CC Historic Environment Branch booklet on the Aythorpe Roding mill (Wood 2006).

2.2.1 Chronology of the Barling Windmill

The latest windmill on site was a smock mill, so-called because of the apparent resemblance of the flared timber superstructure to a countryman's smock. A smock mill is known to have stood on the site from 1759-60, as a notice to let or sell in the *Ipswich Journal* of 16 April 1763 refers to a "New Smock Windmill, built about three years". The context for the building of the smock mill is provided by a lease of 6 February 1759 (ERO Southend, D/DS/83/28), granted on condition that the new leaseholders, Duncin Gow, millwright and miller, and John Gow, staymaker, of Maldon, "pull down the old mill and build new".

The earliest evidence for the "old mill" is Warburton, Bland and Smyth's map of c. 1724. This shows a windmill symbol with no detail, although a post mill is shown on the map of the manor of Barling of 1766 (ERO D/DU 23/139/1). Although documents clearly state that a smock mill existed by that date, the most likely explanation is that the "old mill" was a post mill and was shown on the 1766 map in error for the newly built smock mill.

The windmill is clearly shown as a smock mill on Chapman and André's map of 1777. There are records of the windmill being leased throughout the late 18th and 19th centuries, and it continued to be worked until 1903. The latest state of the smock mill in working order is shown in a photograph taken in c. 1898 (Plate 1). The sails were removed in c. 1907 (Plate 2) and the mill was finally demolished in 1946.

2.2.2 Windmill Development (Fig. 2)

The main developments in windmill construction and technology are summarised below to provide a background against which the development of the Barling Mill can be understood.

Post Mills

Post mills are known to have existed in England since the 12th century. The main body of the post mill, the 'buck' or housing, which carries the sails and contains the millstones and machinery, rotates about the head of a massive vertical post. The housing is timber-framed-and-clad, and is carried on a crown tree, a heavy horizontal beam at the top of the post. The base of the post is secured by a timber trestle comprising a pair of horizontal cross-trees braced to the post by quarterbars. The body of the mill can be rotated through 360° to turn the sails into the wind (winding) by moving a braced tailpole extending from the base of the housing.

Medieval post mills were relatively small structures, with small sails and simple machinery driving a single pair of millstones. In the post-medieval period, however, the post mill developed in size and efficiency through improvements in construction methods and in the design of the sails, gearing and other machinery, in some cases including the provision of two pairs of millstones. By the 18th century the timber trestle at the base of the post mill was generally enclosed by a brick roundhouse, which not only protected the major structural timbers, but also provided a covered working area and storage space. In Essex, post mills continued to be built or improved throughout the 18th and 19th centuries.

Tower Mills

By the 17th and 18th centuries, however, tower and smock mills were increasingly being built instead of the traditional post mill. The tower mill is a brick- or stone-built conical structure, with the sails carried by a cap that rotates on a curb at the top of the tower. Although more expensive to build, the tower mill has several advantages over the post mill. It is taller and more strongly constructed, more spacious internally, and can carry heavier machinery, while the rotating cap enables the sails to be turned into the wind independently of the main body of the mill. The taller mills made turning the cap by a braced tailpole more difficult, and increasingly windlasses or chain-and-winch mechanisms were used instead. A major advance in winding technology was the fantail, patented in 1745; a fantail positioned at the rear of the cap and at right angles to the sails automatically brings them into the wind.

Smock Mills

The smock mill is thought to have been introduced from the Netherlands in the late 16th century. It is a variant of the tower mill, in which a tapered timber-framed-and-clad superstructure rests on a brick base, which forms a roundhouse at ground-floor level. The timber superstructure is usually octagonal and, like the tower mill, supports a cap carrying the sails and, in many cases, a fantail as well. Smock mills share the same advantages as

tower mills, but were cheaper to build, and are found in south-east England, especially Kent, Sussex, the Chilterns and East Anglia, areas which have a strong timber-building tradition. Unfortunately, the only surviving smock mills in Essex and its immediate surrounds are those at Upminster (Greater London) and Fulbourn (Cambridgeshire).

2.2.3 Structural Character of the Barling Windmill

Nothing is known historically of the structural character of the “old mill”, except that it was apparently a post mill, but documentary records and photographs provide important details of the smock mill built in 1759-60 and demolished in 1946 (Farries 1984). A photograph of c. 1898 (Plate 1; Farries 1984, 32) shows the smock mill at the end of its working life, and a second photograph of c. 1910 (Plate 2; Byford *et al.* 1992, 163) shows the mill disused but still standing, although its sails had been dismantled.

John Salmon (1938) made a detailed description of the windmill before it was demolished. The mill was 34ft (10.4m) high and 22ft 9in (6.9m) in diameter at the base. The base was formed by a single-storey brick roundhouse, 6ft (1.8m) high, above which was an octagonal timber-framed and weather-boarded smock structure of two storeys, 22ft (6.7m) high. This supported a timber-boarded cap, 6ft (1.8m) high, which formed a ridged and gabled curved roof with the appearance of an upturned boat. The cap would have carried four sails, but no fantail. A doorway in the east side of the brick roundhouse opened towards the Mill House, with a second doorway to the west. In its final state, the stone or milling floor (the lower floor of the smock structure) contained three pairs of underdriven stones, supported on a ‘hurst’, a substantial timber frame. In the absence of a fantail, the mill was turned by means of a chain linked with a winding wheel, worm and gearing under the rear overhang of the cap.

The structure of the smock mill remained largely unchanged through its life, although its sails and internal machinery were replaced and improved over time. Its original character is described in a notice of sale or let in the *Chelmsford Chronicle* of 6 December 1765:

A New-Built Smock Wind Mill, at Barling, near Rochford, Essex, in a fine Corn Country. On the Ground Floor there is a Round House, twenty-two Feet nine Inches in Diameter from Out to Out, built with Brickwork, a convenient Height to top Sacks upon each other.

Upon the Brickwork stands the Timber Frame of the Mill, which is substantially built, and carries a sufficient Height to answer a Sail of ten yards of Cloth.

There is a Grinding-room above the Round-house, in which are one Pair of French Stones, four feet six Inches in Diameter, and one Pair of Peak Stones four Feet in Diameter, with very stout and good Irons, and a Hurst and a Spur-gear . . .

Two details of the 1765 description are particularly important for correlating archaeological and historical evidence for the smock mill:

1. The base of the smock mill was formed by a brick roundhouse measuring 22ft 9in (6.93m) across externally;
2. The millstones were set in a grinding room (stone floor) above the roundhouse, supported by a “Hurst”, a substantial timber frame.

The 1765 notice also describes a “Boulting-mill” nearby, a mill driven by a large horse-powered wheel, 13ft across, together with a stable for the horse.

An important detail of the smock mill’s original winding mechanism and its replacement is described in an earlier notice of sale or let in the *Ipswich Journal* of 16 April 1763:

She was built to turn at the Bottom but is now altering to turn at the top, by means of an endless Worm, by which a man may stand on the ground and winch it round with greatest ease.

This describes a change in the winding process soon after the smock mill was built, from the old-fashioned tailpole and bracing ropes to use of a winch mechanism, a predecessor of the final mechanism recorded by Salmon in 1938.

A further important change was recorded in December 1811 when the lease was sold to pay creditors (CC 27.12.1811). The mill had recently been repaired and now contained three pairs of millstones, as it did in its last use in the early 20th century. The horse-driven bolting mill still existed, with a “pastry or flour house”.

2.3 The 1991 Excavation (Fig. 3)

Previous excavations were carried out on the windmill site in 1991 by Peter Byford, the then owner of Mill House, and the results have been published (Byford *et al.* 1992; Essex Historic Environment Record 11105). Although the smock mill was demolished in 1946, the brick base remained until about 1960, when it was taken down and the mill site was ploughed.

Some brickwork was still visible when the site reverted to a garden, leading to partial excavation of the windmill footings in 1991.

The 1991 excavations identified two sets of circular brick footings, an outer circle belonging to the smock mill built in 1759-60 and an inner circle representing the roundhouse for the earlier post mill (Fig. 3). The outer brick circle had the same external diameter (22ft 9in, or 6.9m) as was quoted for the smock mill in the 1765 sale notice (see 2.2.3 above). The footings of the post mill roundhouse survived over almost the entire circuit, but the footings of the smock mill survived very poorly, with brickwork recorded only in the west, and the rest of circuit is reconstructed. The internal area of the mill was only partially investigated in 1991, but several features related to the original post mill were recorded, including a rubble-filled central post-pit and a series of mortar-and-rubble bases interpreted as supports for the cross-trees (Byford *et al.* 1992, 164-5 and fig. 45). Structural details of the two phases of mill as recorded in 1991 are included in the description of the 2007 excavation results to help interpretation.

3. AIMS AND OBJECTIVES

The aims and objectives for the project relate to the archaeological research framework for East Anglia (Brown and Glazebrook 2000). East Anglia was of international importance in the development of innovatory farming practices in the agricultural revolution of the 18th century and the period of 'Victorian high farming' in the mid-19th century. Gaining a better understanding of these developments is an important regional research aim (Gould 2000, 46). The recommended research topics include understanding demolished buildings by combining study of historical sources with recording surviving remains below ground.

The objectives of the excavation, as set out in the Written Scheme of Investigation, were:

1. To identify and excavate the remains of the smock mill built in 1759-60 and demolished in 1946;
2. To identify and excavate the remains of the earlier post mill demolished in 1759-60;
3. To identify and excavate any earlier features.

4.0 METHOD

The investigation was undertaken in accordance with the Institute of Field Archaeologists' *Standard and Guidance for Archaeological Field Excavation* (IFA 1999), and the Association of Local Government Archaeological Officers' *Standards for Field Archaeology in the East of England* (Gurney 2003). The ECC FAU is a Registered Archaeological Organisation with the Institute of Field Archaeologists.

The archaeological brief (ECC HEM 2007) required excavation of any windmill remains exposed by stripping of topsoil over the footprint of the new house or in the area of the driveway to its north. In the event, the northernmost two-thirds of the windmill were exposed within the house footprint and there was no need to investigate the area of the driveway. The southernmost part of the windmill was not investigated as it lay to the south of the house and would remain undisturbed in the area of the back garden.

Topsoil was stripped by a mechanical excavator under the supervision of an archaeologist down to the top of the natural brickearth, at which level features related to the windmill were visible. The windmill footings and related features were planned at 1:20, related to Ordnance Survey, and were fully described. They survived poorly, however, but could be understood through selective excavation. Sections through the more important excavated features were drawn at 1:10. No finds other than bricks and mortar were recovered during the excavation. Only very limited brick samples were taken, as extensive samples had previously been taken during the 1991 excavation and a detailed description of the bricks had been included in the published report.

5.0 FIELDWORK RESULTS

5.1 Introduction (Figs 3 and 4; Plates 3 and 4)

The windmill remains were cut into the natural brickearth and sealed by topsoil 0.25-0.30m thick, and comprised two phases of severely truncated brick footings, rubble bases and post-holes. The brick footings survived poorly, with the foundation course present in some areas, but more generally they could be traced only as mortar and soil impressions in the surface of the natural brickearth. Comparison with the plan of the 1991 excavation (Fig. 3) shows that much of the brickwork had been removed during the earlier excavation. Nevertheless, the

two windmill phases recorded in 1991 were clearly recognisable in 2007, with an inner circle of footings and a central post-setting representing the post mill, and an outer circle of footings the smock mill. Full details of the structural remains, features and deposits recorded during the recent excavation are given in Appendix 1.

5.2 The Post Mill - before 1759/60 (Figs 3 and 4; Plates 3 and 4)

The brick footings of the roundhouse for the post mill survived patchily around most of the inner circle (Fig. 4), although the 1991 excavation plan (Fig. 3) recorded them as continuous around the whole circuit. The surviving footings were recorded but not excavated in 2007. They consisted of a single course, one brick wide, of half-bricks and occasional whole bricks laid end-to-end in chalky mortar (24) in a narrow foundation trench (23). The bricks were dark orange-red and unfrogged, and undoubtedly represent the same brickwork as was sampled in 1991 (see 6.0 below for details of the bricks). Areas where bricks had been removed in 1991 were visible as grey silt-clay soil marks (Plates 3 and 4).

Two external projections, 2.0m wide and offset between 0.2 and 0.4m, were recorded in the west and north sides of the roundhouse (Fig. 4), although these were better preserved when recorded in 1991 (Fig. 3). There were originally four symmetrical external projections, with those in the west and north well defined in the 1991 plan, that to the south disturbed by tree roots, and the easternmost surviving only as a mortar impression. As recorded in 2007, the western and northern projections had been much disturbed by the 1991 excavation, which involved extensive sampling of bricks in both areas (see 6.0 below). The western projection was also partially disturbed by an area of later construction (see 5.3 below). In 1991 two bricks laid on edge were recorded as forming a second course above the foundation of the eastern side of the northern projection (Fig. 3, brick B1), but no further evidence of a second course was recorded in 2007.

Both the excavations show that the post mill roundhouse was only lightly constructed. The external projections were hollow, so could not have been buttresses and were presumably decorative.

A large square pit (3) lay near the centre of the roundhouse. It measured 1.05m square and 0.14m deep, and had regular near-vertical sides and flat base. This was undoubtedly the pit for the large central post of the post mill. It was filled with dark grey silt-clay containing brick fragments and mortar lenses (4), with the rubble and mortar extending in irregular patches to the south of the central post-pit. This was recognised in the 1991 excavation as an irregular

depression filled with demolition debris, but was left largely unexcavated and the central post-pit was not defined.

5.3 The Smock Mill (1759/60 to 1946)

The footings of the later smock mill survived very poorly, with brickwork recorded only in the west. Here, the smock mill footings were two-and-a-half bricks thick (0.57m thick). Two rows of parallel bricks were laid across the footing and one row of bricks laid lengthways along its inner face, evidence of a substantial brick wall built in English bond (Fig. 3, see the location of bricks BA to BD). In this area the smock mill footings were clearly built up against and overlapped the footings of the western projection of the earlier structure, but the outline of the smock mill was not recognised elsewhere and could only be conjectured (Fig. 3, dashed line).

6.0 FINDS

Extensive samples were taken in 1991 from both the post mill and smock mill roundhouse footings, when these structures were better preserved (Byford *et al.* 1992, 164), and only limited samples were taken in the recent excavation, to confirm the earlier brick descriptions. The locations of the brick samples taken in 1991 are shown on the excavation plan

reproduced in this report (Fig. 3). The bricks sampled from the post mill roundhouse are marked B1-B11, and those from the later smock mill roundhouse are marked BA-BD.

The bricks are light to dark orange-red in colour, rectangular, average size c. 9 x 4 x 2½ in (230 x 105 x 68mm), with no frog, and made in moulds, most showing frame marks. There was no distinction between the bricks used in the post mill and the smock mill. The bricks are typically 18th-century.

No other finds were present in the 2007 excavation area.

7.0 CONCLUSIONS AND ASSESSMENT OF RESULTS

The 1765 notice also provides interesting information about the operation of the smock mill. The French Stones (Chert from the Paris Basin) and Peak Stones (Derbyshire Millstone Grit) would have produced different grades of fine flour, with the French Chert Stones particularly suitable for grinding wheat to a grade that could be cleaned and made into high-quality white bread (Watts 1983, 19-20).

The French Stones (Chert from the Paris Basin) would have been used for milling wheat and the Peak Stones (Millstone Grit) would have been used for grinding finer meal.

Fantails still very new in 1759-60, and first developed in northern England, so absence not surprising at Barling. However later absence = conservatism or lack of money.

ACKNOWLEDGEMENTS

The Essex CC FAU thanks Mr Graham Cole for commissioning and funding the archaeological excavation, and also for his help in setting up the work. The fieldwork was carried out by Matt Pocock. The report was prepared by Patrick Allen, and the plans were drawn by Andrew Lewsey. The project was managed by Patrick Allen, and was monitored by Richard Havis of the Essex CC Historic Environment Management team.

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APPENDIX 1: FIELDWORK DATA

Context Information

Context	Feature	Type	Description	Phase
1		Topsoil	Mid grey-brown sandy silt-clay, 0.25-0.30m deep	Modern
2		Natural	Orange-pink sandy clay (brickearth), unexcavated	Natural
3	3	Post-pit	Square, moderately steep sides, flat base, 0.14m deep, disturbed to S	Post Mill
4	3	Fill of 4	Dark grey silt-clay, brick frags, mortar lenses	Post Mill
5	5	Stake-holes	Circular, vertical sides, flat bases, 0.03m deep	Post Mill
6	5	Fills of 5	Light-mid grey-brown clay-silt	Post Mill
7	7	Post-hole	Oval, steep sides, pointed base, 0.19m deep	Post Mill
8	7	Fill of 7	Dark grey clay-silt	Post Mill
9	10	Foundation trench for 10	Linear forming a semi-circle, steep sides, flat base, 0.04m deep, indistinct to S	Smock Mill
10	10	Foundation	White-yellow chalky gravelly mortar, compact	Smock Mill
11	12	Cut for 12	Sub-square, shallow slope, flat base, 0.04m deep	Smock Mill
12	12	Post-pad	Yellow sand-gravel, compacted	Smock Mill
13	13	Post-pit	Oval, vertical sides, step in W, flat base, 0.30m deep	Smock Mill
14	13	Packing in 13	Mid grey-brown clay-silt, large brick frags	Smock Mill
15	15	Post-hole	Oval, vertical sides, flat base, 0.30m deep	Smock Mill
16	15	Fill of 15	Pale grey-brown clay-silt, pebbles, charcoal flecks	Smock Mill
17	18	Cut for 18	Sub-circular, unexcavated	Smock Mill?
18	18	Post-pad	Brick frags in dark grey clay-silt	Smock Mill?
19	20	Cut for 20	Oval, unexcavated	Smock Mill?
20	20	Post-pad	Brick frags in pale grey clay-silt with gravel	Smock Mill?
21	22	Cut for 22	Irregular shape, shallow, flat base, disturbed to NE	Smock Mill
22	22	Post-pad	Yellow sandy gravel, compacted, disturbed to NE	Smock Mill
23	24	Foundation trench for 24	Linear forming a semi-circle, steep sides, flat base, 0.04m deep, disturbed (1991 excavation)	Post Mill
24	24	Foundation	Half-bricks, occ. whole brick, laid end-to-end on bed on loose chalky mortar, disturbed (1991 excavation)	Post Mill
25		Post-hole?	Circular, clay-silt fill, unexcavated	Smock Mill?
26		Disturbance	Clay-silt, mortar flecks	Modern?
27		Disturbance	Grey-orange gravelly silt, mortar flecks	Undated

Phasing and Dating

Post Mill

Documentary/cartographic evidence: earliest reference c. 1724, demolished 1759-60

Smock Mill

Documentary/cartographic evidence: constructed 1759-60, last used 1903, demolished 1946, brick footings removed c. 1960, partially excavated 1991

APPENDIX 4: CONTENTS OF ARCHIVE

SITE NAME: SUMMERSFIELD, ERMINE STREET SOUTH, PAPWORTH EVERARD

Index to the Archive

File containing:

1. Introduction

- 1.1 Brief for the archaeological investigation
- 1.2 Written scheme of investigation

2. Research Archive

- 2.1 Client Report
- 2.2 Analytical Reports
 - 2.2.1 Finds Report
- 2.3 Catalogues
 - 2.3.1 Context Finds Record
 - 2.3.2 Finds Catalogue

3. Site Archive

- 3.1 Context Index
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The finds occupy seven boxes.



Plate 1. The Barling smock mill in c. 1898, looking south-west, with the sails turned to the west. The Mill House is off-picture to the left, and in the foreground are Herbert Manning, the last miller, and his family. (Kenneth Harries collection ©)



Plate 2. The Barling Mill in c. 1910, after the sails had been dismantled, looking east-south-east towards the church. (Essex CC Historic Environment Branch ©)



Plate 3. The truncated footings of the smock mill and the earlier post mill, with the Mill House in the background. The outer circle, showing as a mortar impression, represents the brick base of the smock mill. The inner circle, showing as bricks and a dark soil, formed the base of a brick roundhouse around the foot of the post mill. The square pit for the central post shows as a dark feature beyond the 1m scales, near the trench edge.



Plate 4. As Plate 3, showing detail of the two phases of brick footings (in front of scales). The dark soil marks in the foreground mainly represent trenches excavated in 1991.



Plate 5. The roundhouse at the base of the post mill at Aythorpe Roding, Essex, built in 1779. (Essex CC Historic Environment Branch ©)



Plate 6. The substantial timber frame or 'hurst' supporting the millstones and machinery on the stone floor of the early 19th-century smock mill at Lacey Green, near Princes Risborough, Bucks. (Reproduced by permission of the Chiltern Society ©)