



# Colchester Archaeological Group

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## ANNUAL BULLETIN VOL. 35 1993

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### Notes from the editor

Once again we must thank Ida McMaster for an excellent list of speakers, everyone who helped with the projector and Harry Palmer for his weekly lecture summaries. I must thank Andy Roper for producing the layout.

We must congratulate Mark Davies on becoming a Fellow of the Society of Antiquaries in 1992.

### Red Hills Book

The Group book, published in October, is going well and our debts are repaid. We have sold almost half the quantity produced and, although we expect sales to continue only slowly, from now on we shall be in profit.

We have been able to make a donation of £100 to the Essex Heritage Trust, one of the bodies which made grants towards our publication costs. Any further proceeds from the book are to be devoted to suitable projects which will advance our knowledge of local archaeology.

The book was entered for two Awards for books concerning Essex produced by a local Society. In the Essex County Amenity Award Scheme we were awarded the second prize of £100 and in The Friends of Historic Essex Award we were the runners-up.

Several readers have kindly sent information on Red Hills not previously known to us.

Kath Evans

## Summer Outings 1992

### **Monday 11th May : Visit to Hadleigh, Suffolk**

About twenty members met at Hadleigh church on a sunny evening. We were met by the Dean, The Very Rev Geoffrey Arrand BD, AKC, who showed us round the church and deanery. The church had a close connection with the Guildhall on the other side of churchyard. On certain special days of the year, the guilds used to parade across from the Guildhall and enter the church through a special porch. The Deanery is a marvelous brick building. We were particularly impressed by the study on the first floor, which had a painting on the overmantle of the fireplace showing the interior of the church about 1700 AD. The view from the roof showed the roofs of the church and town to great effect.

### **Monday 1st June: Visit to Flatford Mill and East Bergholt Church**

We were fortunate in some ways (a barmy summer evening), unfortunate in others (long hold-ups on the A12), in choosing this particular Monday for our visit. Jonathan Oldham, the warden and our guide throughout, took us back to Constable's time as he showed us the views Constable had painted, in postcard reproductions and through today's eyes, while he also re-created in words the mill and the other buildings as they had been in the past. We first went to the mill, to see where the waterwheel had been and where the barges used to tie up. The mill has two date-stones, 1733 and 1753 bearing the initials "A.C".

The original mill house was 16<sup>th</sup> or 17<sup>th</sup> century, timber framed with brick facing and of several periods. On the other side of the mill pond stood Willy Lotts Cottage, looking just a little too pristine from recent rendering. Once inside, however, the atmosphere of the old house re-asserted itself, with low beams and a huge inglenook. We next walked along the river to the recently restored lock and almost unchanged views painted by Constable. On the way back we saw the famous dry-dock restored in 1985-6.

The group was particularly interested in Church field, reputedly the site of two churches and excavated by James Fawn and others. Our next stop was at Valley Farm, a fine medieval hall house with many original features. Our visit to Flatford itself ended with drinks and splendid home-made cakes in the part of the mill house used as a library.

Dusk was closing in, but many of us stayed to visit the exterior of East Bergholt church, where we saw the famous bell-cage and the Constable graves, trying in the fading light to fill in the worksheets Jonathan had given us.

### **Saturday 27th June: Day trip to Norfolk Churches**

About 30 people went on the coach trip to Norfolk churches. At Horsham St Faith, the vicar showed us round the church, then we went on to the Priory, where we saw the famous wall paintings which were only uncovered a few years ago, (Bulletin 31, p44). We then went on to Cawston and Salle churches with their magnificent roofs, carved benches and painted rood screens. Members were given handouts showing them what to look out for.

## **Lamarsh Park (The-Origin and Management of a Medieval Deer Park)** *by Leigh Alston*

### **Introduction**

Almost every parish in Essex is likely to have possessed a deer park at some time, though most have vanished without obvious trace. The ownership of a park was as essential to the fashion conscious manorial lord during the twelfth and thirteenth centuries as moats became in the fourteenth, and parishes with several manors often boasted an equal number of parks. Many, squeezed into an increasingly crowded landscape, covered less than a hundred acres, while others extended to more than a thousand. Often these parks disappeared with the demise of the manorial system, and their existence was either forgotten completely or perhaps preserved in a "park" field-name or two. The purpose of this article is to examine one particular park in detail, and to illustrate how much can be discovered about its nature and management. In describing the process of detection involved, it is hoped that others will attempt a similar task elsewhere, and so contribute to our as yet sparse knowledge of this fascinating aspect of landscape history.

The name Lamarsh Park today belongs to a wood of some 30 acres which lies at the junction of the North Essex parishes of Bures Hamlet, Pebmarsh and White Colne (TL 874327, fig 1). Until the reorganisations of the Boundary Commission in 1884 it lay in a detached portion of Lamarsh parish. A comparison between figures 1 & 2 shows that the wood has doubled in size during this century, as neighbouring fields have been abandoned, and the original extent of the park is far from certain. From this inauspicious starting point however, a remarkably detailed history may be drawn. Lamarsh Park is perhaps unique among smaller Essex parks in its combination of extant medieval earthworks with a comprehensive written record, which affords an insight not only into the park's initial size and origin, but into its management and maintenance. As if to reinforce its claim to the title of *"the wood with everything"*, Lamarsh Park is also a fragment of the prehistoric Essex wildwood.

This article is divided into five sections as follows:

1. The Maintenance of the Park
2. Timber Production
3. The Origin of Lamarsh Park
4. The Extent of the Medieval Park 5. Lamarsh Park Today

### **The Maintenance of the Park**

The court rolls of Lamarsh manor<sup>1</sup> contain numerous entries which combine to provide a vivid glimpse of the park's appearance in the later middle ages. In 1512, for example, James Morres, the overseer of the King (into whose hands the manor had then fallen) granted the grazing of *"the great park of this demesne called Lammersshe Parke"* to Thomas Manns, *"with the profits of all the underwood growing in the said park called Bushes, Thornes & Brembelles"* for a period of twenty years. Mann was to pay five shillings a year for the privilege, and undertook to make and maintain at his own expense all the fences and hedges around the park boundary<sup>2</sup>. Brambles are still very much in evidence in the modern wood, and this entry suggests that a proportion of the early sixteenth century park was relatively open grazing land, rather than coppiced woodland. The low rental may reflect the relatively small size of such areas, or, more probably, an attempt by the overseer to persuade Mann to foot a large bill for re-fencing the park perimeter. Such an interpretation is supported by an entry in the court of 1533, just six years later, which laments that *"all the hedges around the entire circuit of all the aforesaid wood called le park are entirely broken, wasted, & of no value for the preservation of the aforesaid wood, because, they say, there has been no hedging there..."*<sup>3</sup>. This entry is unfortunately interrupted by damage to the parchment, but concludes with a resolution to consult the lord's council in order to arrange for a new *"greatly needed"* hedge to be made.

The typical medieval park was managed as much for its timber and underwood resources as for its game, and Lamarsh Park is often referred to as *"a wood called the park"*. Deer were frequently absent; the nearby park of Dame Alice de Bryan's manor in Bures was used in the early fifteenth century to fatten stock animals for the table, but venison does not feature in her household accounts<sup>4</sup>. *Although* Lamarsh Park contained an unspecified extent of pastureland, which was held in the demesne until the sixteenth century, its primary role appears to have been the production of timber. Any deer which may have been maintained there after 1353 succeeded in escaping documentation in the extant manorial records, the earliest of which date from that year. However, as venison was rarely, if ever, sold on the open market, and the deer were expected to fend for themselves in their parks, there was no reason for the manorial stewards to mention them in their annual accounts.

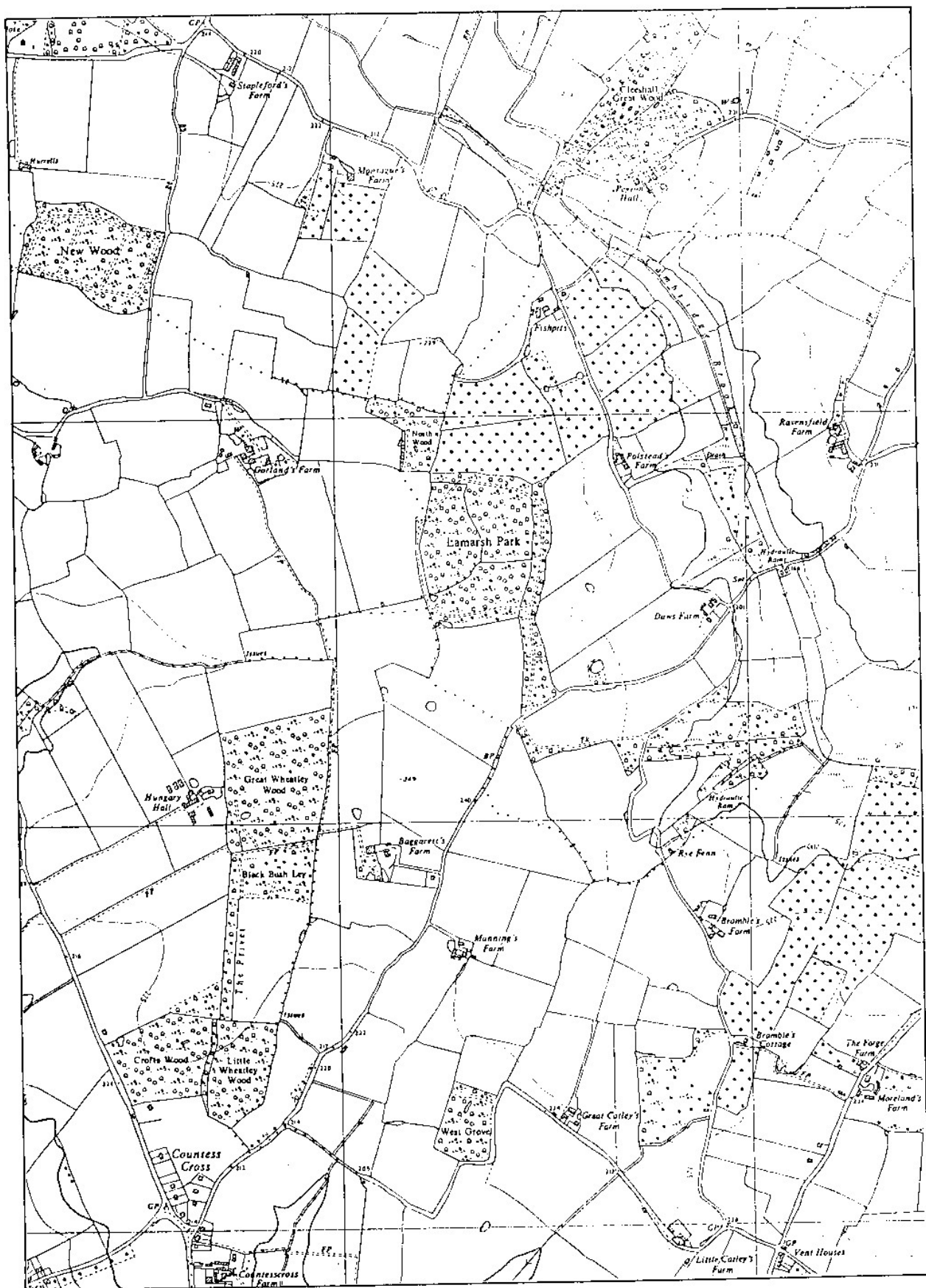


Figure 1: Lamarsh Park: After Ordnance Survey 6" map (1958) Sheet TL 83 SE

The only animals recorded as lawful occupants of Lamarsh Park are the 45 pigs and 23 piglets belonging to various neighbouring landholders which for a penny a head were fed on the pannage there (the fall of acorns) in 1474. One tantalising court roll entry in 1414 has bearing on the matter: Neglect appears to have played a large role in the history of Lamarsh Park, and in that year the bailiff, Richard Clerk, was presented to the court for "*cutting and lopping the crop growing upon the borders of various ditches of the park*"<sup>5</sup>, i.e. for coppicing the hedges upon the banks, without making any fences to replace them. In consequence the new grass and underwood in the park was destroyed, as were the crops and pastures of neighbouring landholders. This may well imply the presence of deer, which had been permitted to escape from their allotted compartments, but the question remains uncertain.

The tenants of the arable lands in the immediate vicinity of the park were fined with some regularity for allowing their animals to enter the park and do damage, though the fault perhaps lay with the manorial officials who failed properly to secure its boundaries. The nature of these presentations does not suggest that the fines were in fact agistment (pasturage) fees. The courts of 1362 provide typical examples, fining William Buk eighteenpence for trespassing in the park with two oxen, William Dounyng twelvepence for two bullocks, William Shanke twelvepence for two horses, and William Bolour two shillings for two cows and a bullock. Each was required to produce a fellow tenant as a pledge to guarantee payment of his fine. A more serious charge was levelled at William Potyer, who held land adjoining the park in 1505; he had not only allowed his animals to consume and trample the pasture in the park, but had actually "*overturned and destroyed the land of the lady with his plough*"<sup>6</sup>. This offence was sufficiently important for the issuing of a writ, and sheds light on the process whereby the park was gradually reduced in size over the centuries.

Stealing wood was also a common offence. In the single year 1353, which may have seen a purge of such offenders or possibly a disturbance of some kind, no less than six instances of wood-stealing were presented, and four of trespass. Richard Markaunt and his boy were fined five shillings for taking ten ash trees and young oaks worth only tenpence, while William Bolour was fined just a shilling for lopping no less than thirty perches (about 150 yards) of park hedge and taking firewood worth two shillings. Thomas le Baker was similarly fined for taking two shillings worth of firewood, and it may be that these offenders possessed customary rights to a certain amount of such wood. John Baggerouke, whose name is remembered in nearby Baggarett's Farm, paid a fine of two shillings in 1366 for cutting six bundles of rods in the park, while John Bolour's son received an eighteenpence fine in 1353 for making off with an unspecified haul of rods<sup>7</sup>. Any timber growing upon the customary land of the manor belonged to the lord, though his tenants rarely seem to have appreciated the fact. The value of no fewer than eleven black poplars (now a very rare tree) and one elm unlawfully felled in 1419 on a tenement called Blakbackys amounted to eight shillings, which the tenant was ordered to pay. The only defence for the customary tenant against such a charge was to prove he had used the timber to repair his house.

### Timber Production

The medieval Lamarsh Park was essentially a wood with clearings or launds of pastureland, and by far the most exciting documentary references concern the production of timber and underwood. The enormous demand for building timber, wattle poles and firewood placed a great strain upon the limited woodland resources of late medieval England, and remarkably efficient systems of woodland management evolved. A comprehensive analysis of such techniques has been made by Rackham<sup>8</sup>, to which the interested reader is referred. Two consecutive account rolls survive for Lamarsh manor, covering the years 1398/9 and 1399/1400. Both specify the existence in the park of fiftynine acres and three roods of underwood divided into seven parts, worth twelve shillings and ninepence-halfpenny at eighteenpence the acre<sup>9</sup>. Each part is said to contain eight acres, two roods and five and a half perches. The use of coppicing compartments was a common method of managing woodland, enabling the fresh growth in newly cut areas to be protected from grazing animals without the need to exclude them completely from the entire wood or park. Each compartment would be ditched and banked to facilitate this, and would usually boast in addition a paling fence or plashed hedge. As a general rule the ditch is dug on that side of the bank from which the threat is expected to come. The modern practise uses heaped brushwood to make a thick barrier around new coppice, but this is likely to have been too wasteful of valuable firewood to be commonly employed in earlier times.

The Lamarsh coppice cycle of seven years accords well with the averages for this period, as calculated by Rackham<sup>10</sup>. The medieval cycle ranged between 4 and 8 years, but this increased sharply to between 10 and 20 years during the sixteenth century and has continued at this level into the modern era. The reason for this dramatically shorter coppice cycle during the middle ages is uncertain, but probably reflects a difference in the ideal type of fuel; open hearths require quick burning and relatively smoke-free faggots, while timber and brick chimneys, which were becoming commonplace by the mid-sixteenth century, can accommodate much larger logs. Timber trees and other selected underwood would of course be harvested on a much longer and more selective cycle, though very few timber oaks would have stood for more than 60 years and the majority for only 30. Having largely disappeared during the first

half of this century, the coppicing technique has recently been re-introduced in a few local woods, and the modern scene at Chalkney Wood in Earls Colne would have been instantly recognisable to the medieval woodsmen of Lamarsh.

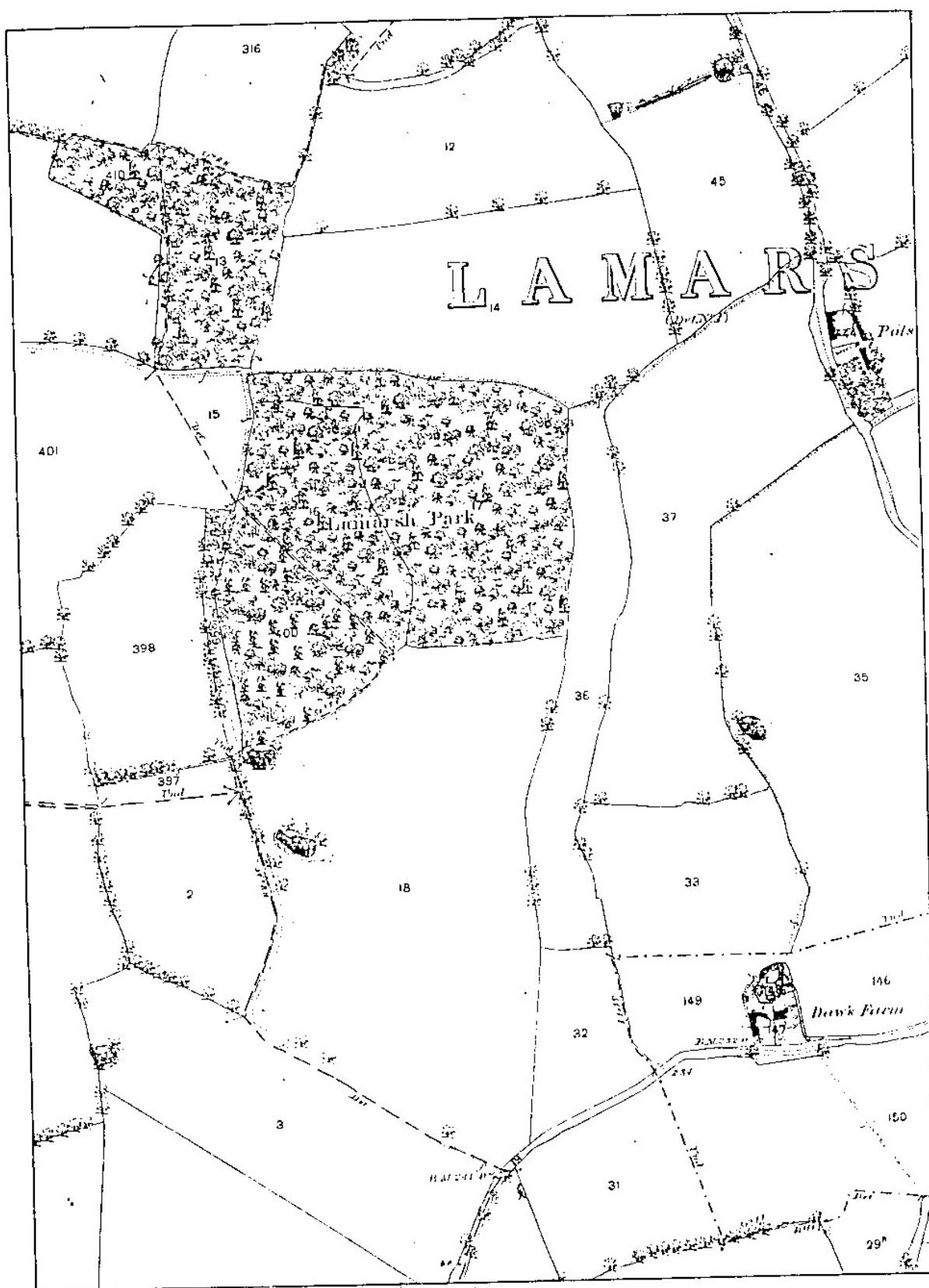


Figure 2: Lamarsh Park: Ordnance Survey 25" map — First Edition (1886) Sheet 17:7

The coppice compartment cut in 1398/9 produced 500 faggots, which cost eightpence per hundred to make, and that cut in the following year produced 350, of which 318 were sold off the manor priced at twenty pence per hundred without carriage. This implies a profit for the manor of one shilling per hundred faggots, at a time when a skilled labourer would expect to receive fourpence for a days work. Such a price compares favourably with the two shillings charged per hundred faggots (also without carriage) in 1384/5 on the de Bryan manor<sup>12</sup>, which each cost sevenpence to make, though one wonders how the neighbouring manor of Wiston<sup>13</sup> managed to sell its faggots at four shillings a hundred in the same year. Presumably the higher price represents a difference in size, though the eightpence cost of their manufacture does not reflect this. A coppice compartment of eight acres should produce far more than 500 faggots, and timber and other wood intended for use on the manor seems not to have fallen within the remit of the early accounts and court rolls.

Unusually among Essex manorial courts, that of Lamarsh appears to have enjoyed jurisdiction over the extraction of timber trees from the manor's woodland. The same was true of the neighbouring manor of Wakes Colne, and it is clearly no coincidence that from 1344 these two manors were held together. The demesne wood of Wakes Colne manor was Westheywood in Colne Engaine, and timber from both Lamarsh Park and Westheywood was on occasion delivered to repair the same customary tenement. The prevailing system was common to most local manors: The tenements or houses of the manor were either freehold properties or held "by custom at the lord's will", the latter having originally been occupied by unfree bondsmen or villeins who owed labour services to their lord. By the sixteenth century the old divisions had largely broken down, and in practise the customary tenants possessed similar security of tenure to their freeholding neighbours. In deference to his greater nominal degree of ownership, however, the lord of the manor was still expected to provide timber at his own expense to repair his customary tenements. While the allocation of timber would elsewhere be controlled by the lord himself or by his bailiff, at Lamarsh the manorial court jury, or homage, had control over its distribution. At times, as the following extracts show, this control was exercised in minute detail. In addition to that of the bailiff, the presence of a number of homage members was required in the selection of timber and even in the supervision of the actual work. When Richard Fryot, for example, required one oak in 1533 to make a ground sill for his barn, the homage ordered one of its number to accompany the bailiff in selecting a reasonable oak for the purpose<sup>14</sup>. The cost of the repair work itself would be defrayed by the tenant, and anyone who permitted his buildings to fall into ruin was subject to a fine-or the confiscation of his property.

Unfortunately the records of the Lamarsh courts held between 1424 and 1460 are damaged, and have for some time been languishing on the Essex Record Office's priority repair list. The first available reference to timber extracted from the park occurs in a court of 1462. In that year John Clerk, the bailiff of the manor, delivered 88 oaks from the lord's wood called Lammerssheparke to various unspecified customary tenants of Wakes Colne to repair their tenements, 12 to repair Lamarsh mill (Sharnford mill in Henny), 3 to repair the manorhouse at Lamarsh, and another 4 to one William Peryman to repair his customary tenement. This brief account appears on the roll as an unqualified statement of fact, with no bearing upon the more usual business of the court. Numerous such entries appear in subsequent years, with the mill featuring in almost every one. Among the lists of tenants' names the manor's sheephouse<sup>15</sup> required three oaks in 1472, and four were used the previous year to repair the pound and make eavesboards (the long heavy boards used to support the eaves of a peg-tiled roof)<sup>16</sup>. Sharnford mill was a clothfulling as well as a corn mill, and in 1494 a piece of timber was sent to the miller to make a new fullyngstok (a wooden mallet used for beating the cloth).

The custom of obtaining permission from the manorial court to extract timber from Lamarsh Park appears to have lapsed before the end of the fifteenth century, and such references do not appear in the later rolls. However, in response to a period of mismanagement on the part of the manorial officers, which led to widespread decay on the manor during the early sixteenth century, a special inquiry was made in 1533 into the timber recently extracted from the park. The court of Henry Duke of Richmond held on the 27th of May 1533 includes the following entry:

*"And the aforesaid jury, specially sworn and charged to diligently survey and render a true account of all the waste in the lord's timber and underwood made by John Sydey senior, late deputy bailiff there, of and in the great wood of the lord called Lammershe Park, State and present upon their oaths that during the time in which the said John Sydey was in his aforesaid office of deputy bailiff, namely for the period of iiii and a half years to the feast of the Annunciation of St Mary last past before the title of this court, the number of timber oaks as underwritten were felled there, viz. Ix great oaks of which nothing remains there except their stubs". Item. xxxii other great oaks of which some lie there intact except the toppings and some others of them were chopped into pieces<sup>18</sup> of which a certain portion was then carried away & a certain portion still remains there upon the ground. And ten other lesser oaks called Spere Ware of which none remain in the wood. Item. they*



*find xii young oaks were felled there called Saplyng Spirkes of less than single Sparres of which none remain upon the ground. Item. R young Ash trees called Asshen Spirkes in the form of young timber and part thereof in the form of hokewode, viz. any better of them and any poorer<sup>19</sup>. And in underwood lx greater & lesser willows. But in what use or repair the aforesaid timber was expended the said Jurors are ignorant."*

This detailed account reveals a good deal about contemporary timber and woodland management. Particularly interesting is the revelation that a substantial portion of the timber oaks felled during the previous four years were still lying in the wood at the time of the survey. This contradicts the widely held belief that the tools available to medieval carpenters restricted them to the use of green, unseasoned oak. Spere ware was suitable, as the name suggests, for making speers, or partition cross-members, while sparre in this context probably refers to rafters rather than thatching spars. Spirke, or spurk, is an East Anglian word meaning shoot, and the twelve saplyng spirkes were evidently too immature to be used even as single rafters. The meaning of the final items is a little obscure; the straighter young ash trees were presumably earmarked as timber trees, but were felled prematurely, with those unsuitable for this purpose classified as hookwood<sup>20</sup>. Greater and lesser willows may refer to different sizes of crack willow (*Salix fragilis*), or possibly to crack willow and sallow (*Salix caprea*) respectively, though why this particular species of underwood should have been selected for felling or mention is unclear.

The court of the following year, 1534, contains the last and most specific account of newly assigned timber:

*"And that the customary tenement of John Ryce called Broseleys, the customary tenement of John Polley called Watir Lyes, the customary tenement of Hugh Johns gentleman called Reynold Laytons, the customary tenement of Richard Fryott called Pakes, the customary tenement of William Carter called Blakbakkes and the customary tenement of John Heyward called Jerlingons are ruinous and in decay from the lack of various repairs in the carpentry work & other things. Therefore it is ordered to them & to each & anyone deficient therein [to forfeit] iiis iiid. And it is ordered to the Bailiff & iii tenants together with him to assign & deliver to the aforesaid tenants enough timber within the wood of the lord called Lammershe parke for all the aforesaid repairs, viz. to the aforesaid John Ryce two pieces of timber already cut down & felled by the same John which are still lying in the same park<sup>21</sup>. Item. and to John Polley eight oaks to newly make the barn of his aforesaid tenement, to the said Hugh Johns four oaks for various greatly needed repairs to his aforesaid tenement, to the said Richard Fryatt two oaks for one board log & one ground sill<sup>22</sup> needed at his aforesaid tenement, to the said William Carter one oak for the repair of one solar, ii pairs of stairs, and the window of his aforesaid tenement<sup>23</sup>, and to the said John Heyward iii oaks for the repair of one solar and ii ground sills at his aforesaid tenement. And when the aforesaid repairs are being made, then it is ordered that the said bailiff and four tenants diligently oversee the same, And on the day of the next court with the lete report how much of the aforesaid timber was used & expended in & about the same repairs, their waste &c. "*

No attempt has yet been made to identify these named tenements with existing buildings, but in view of the number of Tudor houses which survive in Lamarsh it seems likely that much of the above timber is still doing service. The descriptions of the repairs are interesting: The word solar describes any upper chamber, and in this context probably implies a floor joist repair, while window may refer to a hinged or sliding shutter as well as to the mullioned window opening itself. William Carter's tenement evidently conformed to the typical medieval house plan, possessing a central hall flanked by solared parlour and service bays, each containing a staircase.

### **The Origin of Lamarsh Park**

The exact date of emparking at Lamarsh is uncertain. Had it occurred during the thirteenth century, when "*planning permission*" was required for new parks, we might expect to find a record of the fact in the extant royal archives. The absence of any such record suggests a tentative twelfth century date. The manor of Lamarsh was held by Ralph Peverell at the time of Domesday, and became part of the Honour of Peverell. Thorold was then tenant, but was succeeded by successive generations of the locally based Beauchamp family, who still held it at the beginning of the thirteenth century and may probably be credited with the establishment of the park. By 1271 the manor was held of the Honour of Peverell by Sir Philip Bassett, whose daughter Aliva married Hugh le Despenser and so brought it into the hands of the ill-fated favourites of Edward I. The earliest known reference to Lamarsh Park occurs in a charter of c1300, in which Thomas Gernon of Pebmarsh grants "*a certain wood within the park of Lamarsh*" to Sir Hugh le Despenser. This charter was confirmed by Thomas Gernon's mother, the widow of Benedict Gernon of Pebmarsh, as "*the wood which she formerly held in dower which lies within Sir Hugh's wood called le Park de Lantmere*"<sup>24</sup>. These deeds may record

an extension of the park boundaries, but more probably concern the purchase of woodland which had previously been leased. The implication is that Lamarsh Park was well established by the end of the thirteenth century, its name having already supplanted any earlier names by which the area may have been known. The description of the park as a wood confirms the nature of the medieval park as a tract of woodland containing launds or clearings for grazing animals rather than the open, landscaped park of the eighteenth century. A third charter of similar date records the release by John le Bretun to Sir Hugh le Despenser of land called Buggelond, which formerly belonged to Ralph le Belencumbre, lying within Sir Hugh's wood called le Park de Lammersh<sup>25</sup>. This too is likely to concern a purchase of land previously leased, and is of particular interest since Buggelond lay at the heart of the park and adjoins the modern wood (fig 3, Bugaland).

Although the precise date of Lamarsh Park's institution remains obscure, the above references shed a rarely seen light on the process of that institution, and upon the location of parks in general. Evidently its original founder was unable to locate his park entirely on the manorial demesne or bond land, and was obliged to lease or purchase the free lands of his neighbours. The Gernon family were wealthy Essex landowners, and the Pebmarsh branch held a substantial capital messuage on the site of the present Garland's farm. Since Lamarsh manor equates approximately with the 1200 acres of Lamarsh Parish, the difficulty lay not in any absence of land as such, but in a shortage of suitable land. The Domesday entry for the manor includes a pannage acreage of 100 pigs (i.e. woodland capable of producing sufficient acorns to feed 100 pigs), though this is likely to have been depleted by the period of the park's establishment. As we have seen, the medieval concept of parkland was closely associated with that of woodland, and as the court rolls demonstrate, Lamarsh Park itself was the sole substantial area of woodland in demesne, and therefore on the manor, from at least the fourteenth century onwards. The location of the park was therefore dictated by the availability of woodland, the position of which was in turn dictated by the nature of the soil. Throughout the Stour valley medieval woods typically occupied the boulder clay soils which were too heavy for the plough, with the prime agricultural land of manorial demesnes located on the lightest, sandiest soils of the valley sides and hilltops. The plateau lands around Lamarsh Park are among the heaviest soils in the district. Where the ancient field names of the surrounding vales refer to poor, sandy or stony land, those around the park abound with the indicative elements clay, kiln, bog, ley, and (at the risk of begging the question) park.

It is no accident that Lamarsh Park is divided by the boundary between the parishes of Pebmarsh and Lamarsh. Few significant acreages of early medieval woodland in East Anglia lie far from parish boundaries, and it seems highly likely that such wooded areas were apportioned between neighbouring estates at some unknown Anglo-Saxon or earlier period. The coincidence of such woodland (where it survives) with identifiable fragments of primary wildwood, does not suggest any large scale appearance of secondary woodland in the immediate post Roman period, despite the decline in population. A study of the correlation between Essex parks and parish boundaries is likely to yield significant results. As the tithe maps show (fig 3), Lamarsh Park lies in a detached 'island' of Lamarsh parish, containing 200 of its 1200 acres, and separated by almost a mile from the rest of the parish. It would be tempting to suppose that this island represents the original extent of the park. The evidence, however, does not support this interpretation, and neither does such a scenario explain the remarkable manner in which no fewer than six parishes converge at this point, distorting their boundaries in order to do so. White Colne and Colne Engaine to the west each stretch long, narrow fingers of land from their respective heartlands to touch the Lamarsh island, and Bures Hamlet appears to have taken a neat bite from its south-eastern corner. The antiquity of this situation is proven by a charter in the cartulary of Stoke by Clare Priory, which confirms the position of this boundary between Bures and Lamarsh in the early thirteenth century<sup>26</sup>. More significantly, the rentals of Earls Colne Priory reveal that the land contained within the Bures "*bite*" at Daws Farm was part of "*Bures in the Soke of Clare*", and was one of the 13 soke holdings held in Bures at Domesday and presented to Colne Priory soon after 1141 by Richard de Beauchamp<sup>27</sup>. It has been suggested elsewhere that such soke holdings represent the vestige of a pre-Danish system of land tenure<sup>28</sup>.

Having illustrated the likely pedigree of the Lamarsh island as a separate unit of tenure, the question of its explanation remains. Parish boundaries typically distort in this way to claim a share of either heath, water, meadow or woodland for their original owners, and in this case only the latter can apply. The bulk of Lamarsh parish lies on the lower slopes and floodplain of the Stour valley, all of which, as aerial photography confirms, were cleared of woodland by the early bronze age. The need of Lamarsh's owner for a share in the remaining woodland on the clay plateau between the Colne and Stour rivers would have been paramount, and does much to explain the evidence. The "*bite*" of Bures sokeland can perhaps be interpreted as an early assart.

The eventual demise of Lamarsh Park probably occurred during the late sixteenth century. Having been confiscated from the Despensers in 1326 the manor of Lamarsh was held by various royal favourites, including Henry Fitz-Roy, the natural son of Henry VIII, before being granted in 1545 to John de Vere, the sixteenth Earl of Oxford<sup>29</sup>. The park may have been broken up for profit by those who preyed upon the estates of the seventeenth Earl, who finally sold the manor into social obscurity in 1586. The last reference to the park in the manorial record occurs in 1548, when the pasture was

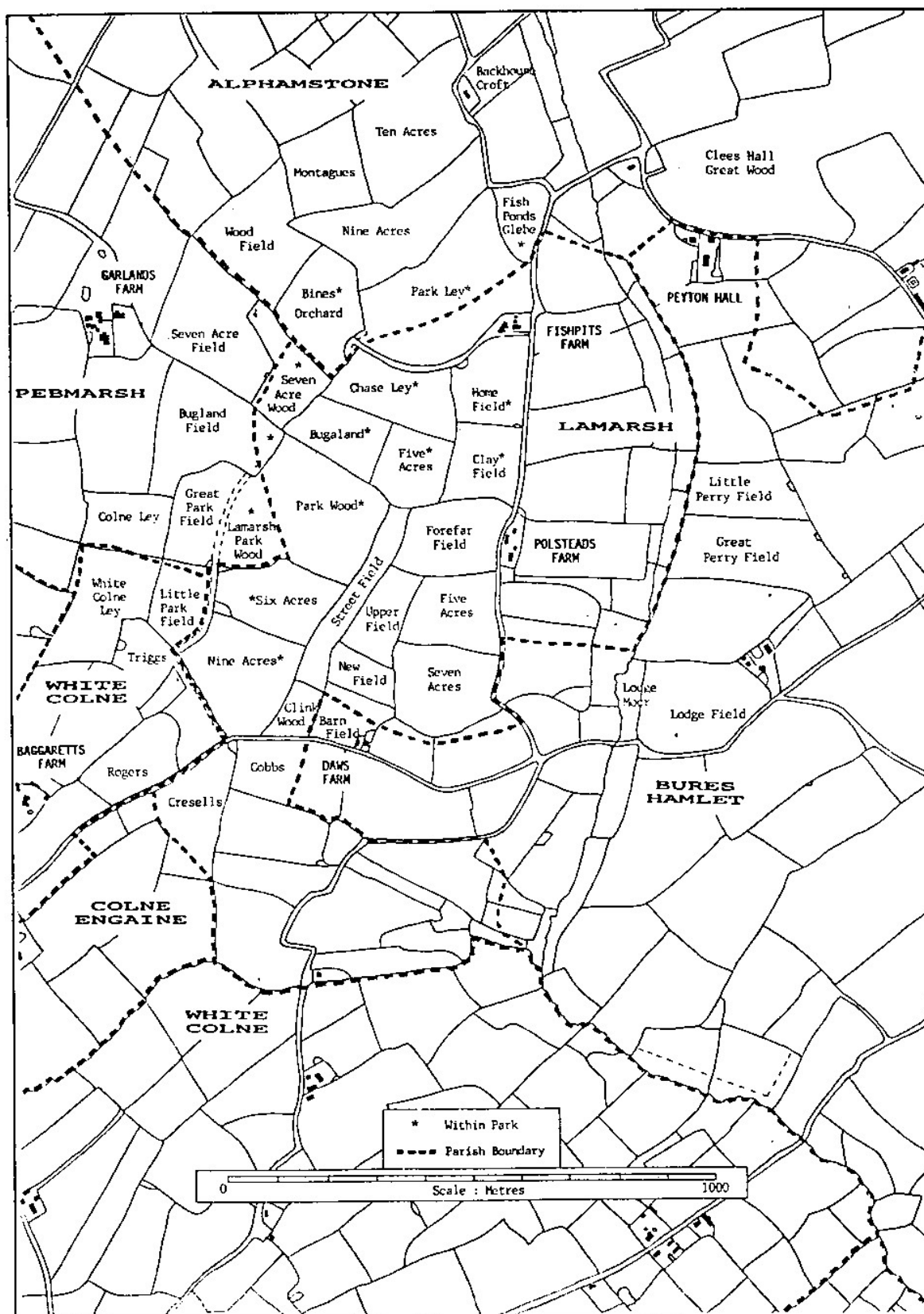
let for ten shillings, and it is conspicuous by its absence from the later court rolls.

### The Extent of the Medieval Park

At the end of the fourteenth century the park at Lamarsh contained sixty acres of underwood, and an unspecified area of pasture. The wood known as Lamarsh Park in 1840 and 1886 (figs 3 & 2 respectively) covered no more than sixteen acres, of which four lay in Pebmarsh parish, and the rest in Lamarsh. Given that the Lamarsh island does not represent the original extent of the park, where did the remainder lie? The evidence here is essentially negative, in that while very few references have direct bearing on the park's location, copious records survive to indicate where it was not. Readers of a nervous disposition may be advised to skip this section. In addition to the Bures soke lands already mentioned, Colne Priory held the lands in White Colne immediately to the west of the park. In 1537 John Potter, whose family had acquired Baggarett's Farm from Stephen Bagroke in 1476, paid a free rent of seven shillings to the Prior for various lands including Rogers and Francklyns; John Sidey the elder paid eight shillings and fourpence copyhold rent for Trigges and Davys<sup>30</sup>. Both Triggs and Rogers appear on the tithe map (fig 3). John Bakerouke held a two acre pasture called Clynkefyld on his death in 1384, for which he paid ninepence a year to Lamarsh manor and owed a heriot. This field is known severally as Clynkwodfeld or simply Clynkwode, and is said to lie "*below the park*". It can be equated with the 2.3 acre Clink Wood of the tithe map which, despite its name, was arable at the time of the survey. The fields belonging to Daws Farm (fig 3: Barn Field, Three Acres, New Field, Five Acres & Seven Acres) were Lamarsh copyhold lands known collectively in the nineteenth century as "*Daws & Dummers*". They appear in the fourteenth century courts rolls as Donymereslond<sup>31</sup>, held by Margery Payn, and as a messuage and croft held by John Dawe alias Frankeleyn. Donymereslond is said in 1398 to have once been held by Geoffrey atte Park before being taken into the lord's hands during the time of Hugh le Despenser and farmed out to John Payn of Bures. Since the two Hugh le Despensers were executed in 1326, it appears safe to assume that both Lamarsh park and Donymereslond existed as distinct entities prior to the fourteenth century. Geoffrey atte Park appears as a substantial landholder in the Subsidy Return of 1327<sup>32</sup>, paying twenty-one pence, while Ralph Dawe paid two shillings and one penny (respectively the sixth and fourth largest tax-payers in the parish). The curiously long, narrow strip of land adjoining Park Wood, called Street Field in the tithe apportionment and Streaks on a map of Fishpits Farm made in 1772, can be equated with the four acres called le Sladelond which John Bachebrook surrendered to Alan Payn in 1375<sup>33</sup>. To the west lies Garlands Farm, which appears as Gernownes in the 1446 rental of Barringtons Fee, together with an unspecified area of land called Dayvies held at the same date by the Earl of Oxford<sup>34</sup>. The park is thus effectively delineated to the south and west.

The single positive reference to the park's extent suggests that it reached the Pebmarsh road to the north. A curious interpolation in the 1380 rental of Colne Priory's Alphamstone properties refers to eight acres of land held by John Schedde which abut upon Rechsheyfeld on one side and upon land of the same John Schedde called Parkhowslond on the other, with one end lying against the way from Bures to Pebmarsh, and the other against John Shed's grove and Lamerchpark<sup>35</sup>. This entry does not, unfortunately, appear in the later and less detailed Priory rentals. The William Sands map of Pebmarsh<sup>36</sup>, surveyed c1598, shows several fields near the Bures/Pebmarsh road held by Shedd, and the family tenement seems to have been the house, now demolished, between the road and Backhouse croft (fig 3). The eight acres in question is almost certainly the field called Nine Acres in 1840, which implies that Bines orchard and possibly Park ley were within the park. In the nineteenth century Park Ley was part of Goulds Farm in Alphamstone, and was detached from the rest of its lands, suggesting that it may have been acquired when the park was broken up. The lane leading from Fishpits Farm to Bines orchard however is a likely candidate for the park's northern boundary. The possibility nonetheless remains that the eponymous fish ponds lay within the park, as is often the case in parks elsewhere.

Fishpits and Polsteads Farms provide the key to Lamarsh park's eastern limits. The nineteenth century Fishpits Farm included those lands such as Bugaland<sup>37</sup> which were certainly part of the medieval park, together with lands between the Polsteads/Fishpits lane and the eastern edge of the Lamarsh parish island. Fishpits was known as Bullers in the sixteenth century, and a map of Bures surveyed in 1600 calls the Cambridge Brook at this point Bullers Brook<sup>38</sup>. In 1467 John Siday, the farmer of Peyton Hall, failed to pay his suit of court for Boulours, and as we have seen the Bolour family had a serious habit of trespassing in the park during the fourteenth century. Polsteads Farm is described in 1479 as Polstedes alias Dawes, and, like Bullers, was evidently a freeholding of some size<sup>39</sup>. In 1381 Richard Polsted, who does not occur in the Lamarsh records prior to this date, was ordered to show the charter by which he purchased a messuage and curtilage from John Dawe, and in 1393 received a copyhold croft which had previously been held by Dawe. He was ordered in 1399 to scour a ditch at Domerslond, confirming that he already possessed the land called Upper Field and Forefar field which belonged to Polsteads Farm in 1840 (fig 3). In view of this, the order made in 1546 to John Siday senior to scour forty perches of ditch from Polstedes Lodge to Bullers gate is somewhat puzzling. Was Polsteads originally the site of the park lodge? The presence of a Lodge Field and Lodge Moor on the Ravensfield Farm lands which adjoin those of Polsteads also suggests this connection.



**Figure 3: The Lamarsh Park region c1840 reconstructed from tithe maps (ERO D/CT 3, 61, 102, 104, 201, & 271). The probable extent of the original park is denoted by asterisks**

The present Polsteads and Fishpits buildings are unhelpful, dating from only the late sixteenth century, and since forty perches is only half the present distance between them one of the two farmsteads probably started life by the pond which divides Home Field from Clay field. The existence of Butlers and Polsteads as free farms during the fourteenth century seems to preclude any possibility of the park reaching across the lane to the Cambridge Brook; even had the park diminished in size from its original twelfth or thirteenth century extent, the land thereby vacated is highly unlikely to have been sold away from the manor. The question of whether Polsteads in some way subsumed a park lodge, and the identity of the Park-house mentioned above, remains uncertain. The fields denoted by asterisks on the tithe map (fig 3) represent the maximum probable extent of the original park, and contain approximately eighty-five acres of land. This fits well with the sixty acres of woodland which lay in the park at the end of the fourteenth century.

### **Lamarsh Park Today**

Although a fragment of its former self, Lamarsh Park retains many of its original landscape features. Despite the depredations of time, remarkably few medieval parks are as well preserved as this. Figure 4 indicates the complexity of the earthworks which subdivide the surviving woodland, and the distribution within it of areas dominated by hornbeam and small-leaved lime (*Tilia cordata*). The solid lines delineate ditches, while the adjoining earthbanks are indicated by parallel lines reflecting their relative widths. Although these banks are much eroded, their appearance within the wood remains impressive, with examples up to twelve feet in breadth, and the combination of bank and ditch produces a barrier some twenty feet wide which would have daunted any avaricious deer.

It is clearly impossible that the medieval coppice compartments should all have contained exactly eight acres, two roods and five and a half perches, as the fourteenth century accounts specify. This precision reflects the tidymindedness of the auditor rather than the practicalities of woodsmanship. Only one enclosure survives which can safely be equated with the record; the area in the north-eastern corner of the wood contains precisely eight acres, and appears to form an integral embanked unit. The adjoining area to the south of this, called Six Acres on the tithe map, in fact contains over seven, but since it was arable land until tumbling down to woodland earlier this century, it is impossible to be sure that it was not once subdivided. Any earthworks will have been ploughed out. This is equally true of the field called Nine Acres which borders Clink Wood, and of Bugaland and Five Acres to the north of the modern wood, which together formed a single field called Eight Acres in the eighteenth century. Conversely, one cannot readily distinguish post-medieval earthworks from those which relate to the park, or from features which may have existed before the park's creation. Indeed, the park's compartments may have been reorganised during its period of use. The area to the east of the main compartment, containing a complex system of banks and ditches, probably represents a laund - a region of permanent grazing within the wood<sup>40</sup>. The western edge of the Lamarsh Park has been cleared and bulldozed to accommodate overhead power lines, effectively levelling the surface, and at least one bank on the outer edge of its ditch has been largely ploughed out. No stream flows across the clay plateau upon which the park lies, and this absence of water is remedied by the large number of deep and well defined ponds, which have been dug in the corners of the compartments.

A separate wood known as North Wood, formerly Seven Acre Wood, lies immediately to the north-west of the present Lamarsh Park. Lying within Lamarsh parish and adjoining Buggelond this was clearly part of the original park, and is perhaps the most exciting of the two woodlands. Containing a little less than five acres in total, it is divided by substantial earthworks into at least two regions. Its northern and southern limits appear to date from the fragmentation of the park, and North Wood was probably linked with the rest of Lamarsh Park along the approximate course of the parish boundary, which now cuts across a field (shown by a dotted line on fig 4). The south-western edge of this wood is marked by double ditches, separated by a broad, low bank of some sixteen feet in width. This bank in turn supports a much smaller bank which follows the actual woodland edge. The internal ditch turns to the south, and continues to the corner of the wood, but the bank switches to its inner (eastern) side. This is likely to represent a rare survival of a freeboard; an access route around a wood or park perimeter enabling repairs to be made to the main defensive pales or hedges without trespassing on neighbouring property. Similar examples occur in the deer park at Bradfield woods, and along a parish boundary woodland edge at Rowley Grove in nearby Wissington. A bank which is ditched on both sides possesses the additional advantage of retaining deer in the park while keeping other animals out<sup>41</sup>. The freeboard may have extended around the entire western boundary of the park, and have served as an access route for timber extraction. The nineteenth century Ordnance Survey (fig 2) shows a ditched track following the parish boundary to the road at the presumed southern extent of the park, which at that time afforded the only method of entry to the wood. The ditches of a normal roadway are embanked on their outer edges, to prevent animals straying from the track, and while much of this feature was recently destroyed, the surviving twin banks indicate that its original purpose was a more complex one.

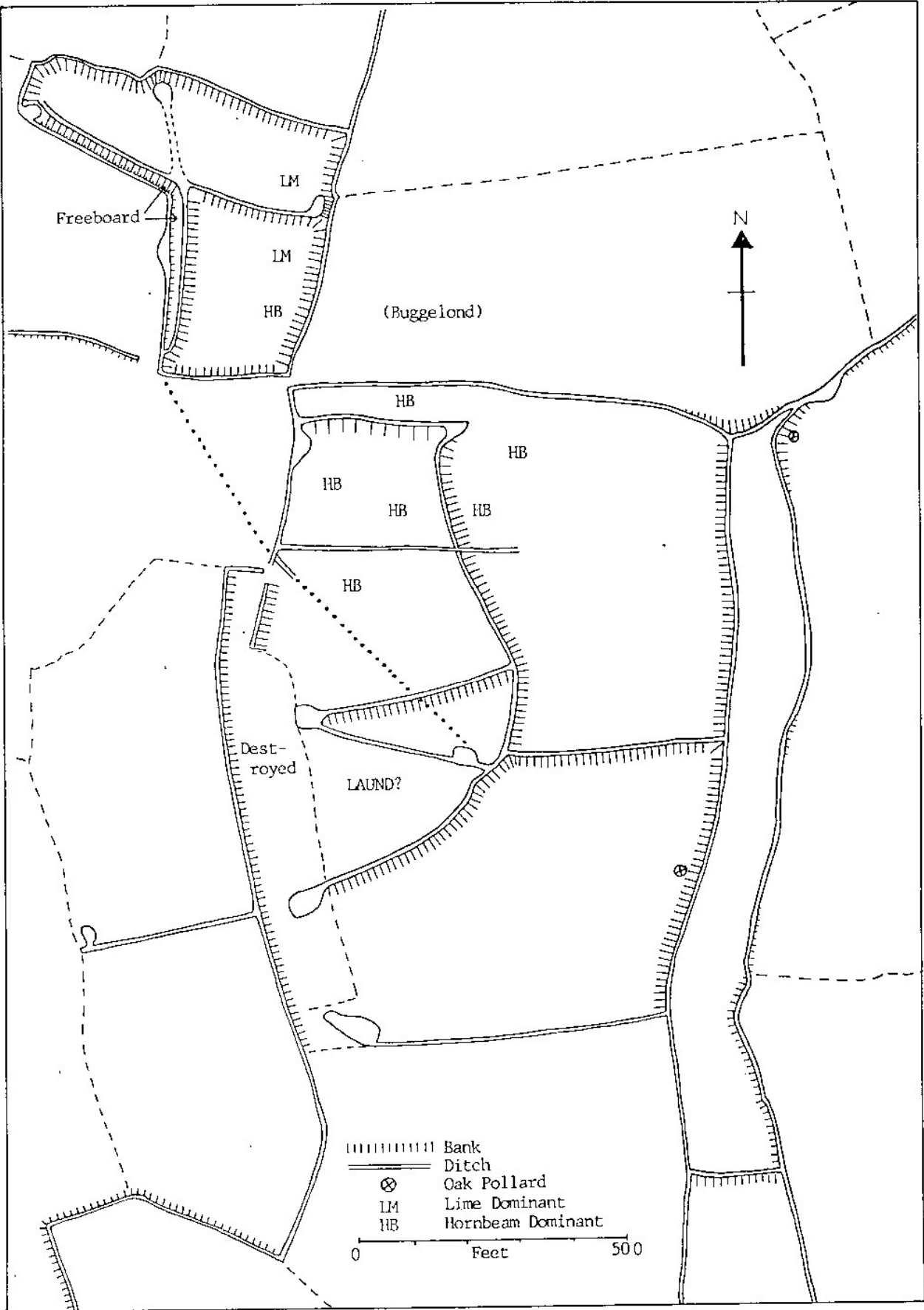


Figure 4: Plan of modern Lamarsh Park and North Woods showing earthworks and selected tree species.

Much of the modern woodland comprises oak, ash and chestnut, with an understorey of hazel and field maple. Had the land been clear felled in the mid-nineteenth century it could well have regenerated as it is today. Indeed that half of Lamarsh Park which was arable land at the turn of this century, and was allowed to tumble naturally down to woodland, differs from the rest solely in the dominance of blackthorn and hawthorn as undershrubs<sup>42</sup>. Only in the north-western corner of Park Wood, and more dramatically in North Wood, do the trees themselves complement their historic context. This part of the wood at least is genuine primary woodland, unploughed by man, where the trees are the direct descendants of those which grew in the prehistoric wildwood. Small-leaved lime was the dominant species in much of the Suffolk and Essex borderlands, and is well represented in local ancient woods such as Chalkney Wood and the nearby Clees Hall Great Wood. At some point after its original colonisation this tree lost its ability to regenerate successfully from seed, and is unable to invade new territory. The small-leaved limes of North Wood have occupied their site for some eight thousand years.

Hornbeam too is a species of the native wildwood, and frequently occurs in company with lime. The existing location of these two species in the park ignores the system of earthworks, and is likely to reflect their indigenous distribution. The coppice stools of hornbeam in the north-western corner of Park Wood reach up to twelve feet in diameter, and bear witness to the medieval management of Lamarsh Park with an eloquence greater even than that of the manorial records. The park abounds too with woodland hawthorn (*Crataegus laevigata*), which rarely occurs in secondary woodland. Indeed this is more common in the few surviving hedgerows in the park area than hedgerow hawthorn itself (*Crataegus monogyna*), suggesting that these hedgerows were formed from a more substantial area of primary woodland when the park was broken up<sup>43</sup>. Only two pollards appear, both of which are dead (fig 4). Pollarding was a common method of timber management in parkland, since animals were unable to reach the new growth, and such trees are often found in association with extant deer park boundaries. Their absence here is perhaps explained by the process of neglect and overtopping, whereby the pollards are deprived light by the unchecked growth of the surrounding coppice and, in this case, former arable land. However the presence alongside the lime in North Wood of a single wild service tree (*Sorbus torminalis*), perhaps the most famous indicator of ancient woodland, finally makes the point that Lamarsh Park is indeed the wood with everything.

By the time of the tithe apportionment of 1840 Lamarsh Park and North Wood (then called Seven Acre Wood) were held in hand by Robert Hills of Colne Park, who also owned Baggarets Farm, and the bulk of the probable parklands were farmed from Fishpits, Baggarets (Nine and Six Acres) and Lower Goults Farm in Alphamstone (Park Ley). The woods are owned today by a sporting syndicate, and although a public footpath runs through the original parkland, linking Polsteads with Garlands Farm, the woods themselves are private. The rearing and shooting of game birds seems a not inappropriate use for a sometime deer park.

### Conclusion

A careful study of an individual landscape feature, whether it be a wood, park, or even a particular farm, can produce a great deal of valuable information for both the social and landscape historian. An understanding of Lamarsh Park allows conclusions to be drawn which have a far wider application, permitting insights into the nature of parish boundaries, the distribution and management of medieval woodland, and the everyday minutiae of life under the manorial system. Ancient woods are a six thousand year old palimpsest upon which successive generations of man have left their mark, and it is a pity that they are largely ignored. Medieval earthworks are continually destroyed by the creation of new rides or deciduous plantations within woods, and even the vital record represented by the distribution of small-leaved lime is being inexorably erased by the thoughtless planting of saplings in hedgerows. It is to be hoped that more local historians will exploit the boundless archive of Essex manorial records, and will enable such features to be recognised and understood, and perhaps protected, before they disappear completely.

### Acknowledgements

I would like to thank Colonel John Cowgill for allowing me access to Lamarsh Park, and Dr. Rosemary Hoppitt for visiting and discussing it with me. Elaine Andrews and Witgar Hitchcock kindly read and commented upon my original draft. Thanks are also due, as ever, to the staff of the Essex Record Office at Chelmsford and that of the Public Record Office in Chancery Lane.

## Notes and References

1) Lamarsh Court Rolls (ERO).

D/DGd:

M 57	1353- 1376
M 58	1378- 1399
M 59	1413- 1422
M 60	1424- 1460 (Unseen)
M 61	1461-1482
M 62	1483 -1508
M 63	1512-1546

- 2) ...*faciet & manntenebit tota clausur(a) & cepes circa p[re]dict[um] parc[um]*. (The Latin translations and extensions of this article are the author's own)
- 3) *Et q[uo]d omnes sepes circa totu[m] circu[m] totius bosci p[re]dict[i] voe[atu] le park tot[a]lis fraeti sunt vastati & nullius valoris ad cons[er]vand boscu[m] p[re]dicu[m] quia dicunt q[uo]d null sepiacio ib[ide]m...*
- 4) The Household Book of Dame Alice de Bryene, Suffolk Institute of Archaeology & History, 1984.
- 5) *It[e]m. q[uo]d Ric[ard]us Clerk ball[ius] d[omi]ne succid[it] & amput[avit] vestur[a] crescent sup[er] bordur div[er]s fossat p[ar]ci d[omi]ne voc Lamm[e]ssh park & non fecit clausur[a] ib[ide]m p[er] quod nova g[ra]m[en]a i subboscu[m] in p[re]d[i]c[o] parco qua herba ? & blad vicinorum & tenen[tum] ib[ide]m o[mn]ino distruxit[ur] ad g[ra]vu[m] dampnu[m] d[omi]ne & ten[entum] &c. Id[e]o &c. Et p[re]st emendar[e] ic.*
- 6) *Et q[uo]d Wyll[elmlus] Poryer fecit transsgrese[ion]em in p[a]Jeo do[m]ine videl[ice]t cu[m] bestiis suis herbas & pastur[a] ib[ide]m depast fuer consump[er] & conculcaver & cu[m] carucis suis terre d[omi]ne subv[er]tit et devast. Ideo fiat bre[ve]*
- 7) *In m[isericord]ia xviid. Joh[ann]es Bolour filius amput[avit] virg[es] in p[ar]co & asport[avit]. I[de]o &c. p[er] pl[egius] Will[elmlus] Kebbel*
- 8) Oliver Rackham, Ancient Woodland, Edward Arnold 1980.
- 9) PRO SC6 845/8 & SC6 845/9: *Parcus: Et de lix acr[is] iii rod[is] subbosc[i] in quod[dam] p[ar]co que succid[i] possent qual[ibet] viio anno Et o[rru]i d[iv]iderent[ur] in septem p[ar]tib[us] succidi possent quol[ibet] anno viii acr[e] ii rod[e] v p[er]tic[e] di[media] que valent in ao valore xiis ixd ob[ulus] p[re]c[ia] acr[e] xviid*
- 10) Rackham 1980, page 141, fig 10.3.
- 11) i.e. tied bundles of rods and twigs for firewood.
- 12) The manors of Overhall and Netherhall, which at the time were occupied by Sir Richard Waldegrave in his wife's life interest and managed as one. PRO SC6 1245/10.
- 13) ERO (Colchester branch) D/DPb MIS.
- 14) *Et comp[er]tu[m] est p[ro] homage[io] q[uo]d necesse est Ric[ard]o Fryot h[ab]ere unius quarcu[s] sibi assignari p[ro] i groutt[er] facienda rep[ar]ac[i]an Orrei ten[emen]ti sui customar[i] voc[atur] Pakes. I[de]o p[re] est ballio cu[m] cert[o] tenent[ibus] sibi assignari raconabil[um] quarcu[m] ad[de] (MS lacking) p[re]d[i]c[t]u[m]*
- 15) ...*p[ro] rep[ar]acone bercarie man[er]ii*
- 16) *p[ro] rep[ar]acone parci d[omin]e & pro hevesborde inde faciend.* The Latin *parcus*, unfortunately, may mean either park or pound, but in this context probably refers to the latter. The manor pound was at Lamarsh hall, near the church, which John Clerk occupied. Oak palings, which may have surrounded the park, are unlikely to have been made from timber oaks.
- 17) ...*nisi stipites eo[rum]*
- 18) ...*de quibus div[er]s iacent ib[ide]m integre except les loppis & div[er]s alie eo[rum] p[er]cussi sunt in peciis*
- 19) *Ix juvenes Fraxinos voc[atur] Asshen Spirkas in modu[m] juvenis merenii & p[ar]s inde in modu[m] de hokewode scil[icet] aliquos eo[rum] meliores & aliquos peiores*
- 20) Hoke is a contemporary form of oak, but must here refer to a classification of low grade wood, usually dead, which can be pulled from a hedge or woodland by means of a hook. A Bures yeoman left his wife her fuell & proficts of hooke wood not mynishing the tymber of a certain woodland in his will of 1531.
- 21) *duas pecias maeremii p[er] ip[su]m Joh[ann]em prius p[ro]sternat & succis adhuc iacen in eodem parco.* The timber may have been felled by a carpenter in Ryce's employ.
- 22) *p[ro] uno borde log & uno groundsell.* A board log was intended to be sawn into boards, and a ground sill is the large foundation beam which lies horizontally upon the ground and supports the rest of the timber frame.
- 23) *unius solarii ii par de Stares & fenestri ten[emen]ti sui p[re]d[i]c[t]i*



- 24) PRO Ancient Deeds E40 524 (*...de quoddam bosco infra p[ar]cu de Lam[er]sh*) & 525 (*...infra boscum suum qui vocatur le Park de lamm[er]s*).
- 25) PRO Ancient Deeds E40 527. *...infra boscum p[re]d[i]c[i]yi d[ominu]m Hugonis qui vocat[ur] Le Park de lammersh*. The witnesses to this charter are identical to those of charters E40 528 & 535, dated 6th June 29th Edward I(1301), whereby Hugh le Despenser grants the manor of Lamarsh to Sir Ralph Pippard to hold during his lifetime. The Buggelond grant was probably made at or shortly before this date. Bugge is a medieval variant of bog, ie. marsh, and also occurs in the neighbouring manor of Crepping in Wakes Colne; the land is heavy clay and would have well justified its appellation before the advent of modern drainage.
- 26) Stoke By Clare Cartulary (BL Cotton Appx. xxi), Suffolk Records Society 1983 Vol. H Charter 364. Grant by Robert de Bures to the Priory of twelvetence rent from an alder grove lying between Piriefeld (fig 3, Great & Little Perry Fields) and the fee of Lamarsh. Robert de Bures occurs in the Book of Fees, 1235-6, and probably held Peyton Hall of the Honour of Clare. A Matilda de Bures married Robert de Peyton, of Peyton Hall in Boxford, who died in 1287.
- 27) J. Fisher (ed.) Cartularium Prioratus de Colne, 1946, charter 58. Gilbert the son of Count Richard held no fewer than 152 sokemen in central North Essex parishes at Domesday. Of these, 13 were in Bures, holding small and widely dispersed lands on the higher ground above the Stour valley. The Burys in Sokena de Clare section of the rental of Colne Priory (c1380 ERO D/DPr5) includes two tenements near what is today Daws Cross, held by Hugh Dawe and Margery Payn, along with adjoining lands (including Cobbys) which abut upon the road from Colne to "marsh and the lane between Redynngate and Crankebreggecross. Daws farm, until its removal to Daws Cross earlier this century, lay on the lane which led from a former grove called Reedyng near Pricketts Hall in Bures to Countesscross.
- 28) For example M. Chibnall, Anglo-Norman England, 1986, p137, and R. Davis (ed.) The Kalendar of Abbot Samson, 1954, pp.xl, xlv-xlvii.
- 29) Letters Patent 9th April 1545. The grant specifies a park of 28 acres, which may indicate that the park had substantially diminished by this time. Such acreages are notoriously inaccurate however. The extent of the park is given at just 40 acres in the Inquisition Post Mortem of Edmund Earl of Kent in 1331 (PRO C 135/23), and IPM extents too have a habit of varying wildly from generation to generation as the juries, often unfamiliar with the properties, seemingly plucked figures from the air.
- 30) ERO D/DPr 59. The existing Baggarett's Farmhouse, a late fifteenth century hall of some quality, was evidently built by William Potter on acquiring the property in 1476.
- 31) This name is probably ancient. The land lies on heavy clay above the Cambridge Brook, and don, or dun, occurs frequently in local hilltop place names. Donymere probably refers to a hill above a marsh, or a marshy hill. Compare Dunstead and Wolfden Down in Bures.
- 32) Jennifer Ward (ed.) The Lay Subsidy of 1327, 1983.
- 33) Street Field would otherwise be a probable candidate for a ride or hunting alley within the park. Its dimensions in fact reflect the medieval acre of 22 by 220 yards, the ratio of its sides approximating to 10:1. Slade is a common local name for any long, narrow strip of pasture, and the presence of woodland cannot necessarily be inferred. John Frankelyn died holding Scladecroft in 1421, and it is said in 1539 (when it is confused by the steward with Dummersland) to have once been held by John Slade. Street Field contains 4.4 acres.
- 34) FRO D/DGd M51. Barrington's Fee is a highly dispersed manor centred upon Ballingdon, Essex (Morant's History of Essex Vol II, p315). Gernownes was held with ten acres of land in 1446 by Geoffrey Siday for 4s3d, and is said to abut upon Dayvies Land of the Earl of Oxford. The Sands map of Pebmarsh (D/DU 760/114, 1598) shows a large block of land of this name between Garnons and Lamarsh Park (which is not shown), but records it as held of Barrington's Fee. I have been unable to locate Davies land in the possessions of the Earls of Oxford.
- 35) ERO D/DPr 5. The road from Bures to Pebmarsh is shown in figure 3 at the top of the plan, linking Peyton Hall and Backhouse Croft. In 1382 Both John Schedde and John Ressay were fined for allowing their cattle to trespass in the park.
- 36) ERO D/DU 760/114, surveyed in 1598.
- 37) A plan of Fishpits Farm shows the Lamarsh Bugaland of the tithe map linked with the neighbouring Five Acres and called Eight Acres, while the Chase Ley of the tithe map is called Home Field and contains over seven acres. These fields would appear to reflect the coppice compartments of 1398.
- 38) ERO D/DU 351/1.
- 39) An inquiry was ordered to be made into "*all those lands, tenements, meadows, feedings, pastures & alder-groves called Polstedes alias Dawes in the vill of Lamarsh*". Manorial stewards frequently lost track of freeholdings at this date, whose rents, fixed centuries before, were scarcely worth collecting. The references to meadow and alder confirms Polstead's possession of the land by the Cambridge Brook (the list is specific to Polsteads).
- 40) The relatively straight ditch which cuts through the main woodbank is clearly later, though the second unbanked ditch linking two ponds is large and probably contemporary. Its purpose may have been to irrigate the land. The course of the parish boundary is followed by a recently created ride, which has erased any trace of it.
- 41) The ditch is constructed on the side of the bank from which the threat is expected to come; a bank is rendered more formidable to any animal if it is required to leap a ditch before attempting to scale it.
- 42) The plastic-overcoated ash trees recently planted in Lamarsh Park Wood amidst a sea of natural ash seedlings bear testimony to the speed and efficiency with which native English woodland will generate if left to its own devices.
- 43) The hedgerow leading from the north-eastern corner of Park Wood to Polsteads is particularly rich in woodland hawthorn, as are several hedgerows to the east of the Polsteads/Fishpits lane. This may well indicate the large tract of woodland which has been suggested as an explanation of the Lamarsh parish island, but could equally result from the original planting of the hedgerows using thorn shoots cut in the park.

## **Two stained glass coats of arms at The Hall Mount Bures** *identified by Joan Corder*

At Mount Bures Hall, on the upper floor, set in a window between a cupboard and a corridor, are two stained glass coats of arms. They have been repaired over the ages and some pieces have been replaced with plain glass. Some pieces are too hard to read but in 1968, Mrs Joan Corder examined a slide of the stained glass and wrote the following letter to Mr and Mrs McMaster who then owned the hall.

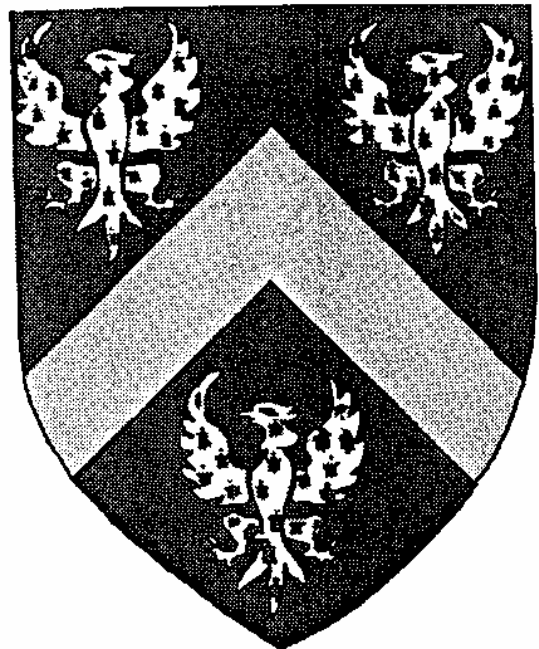
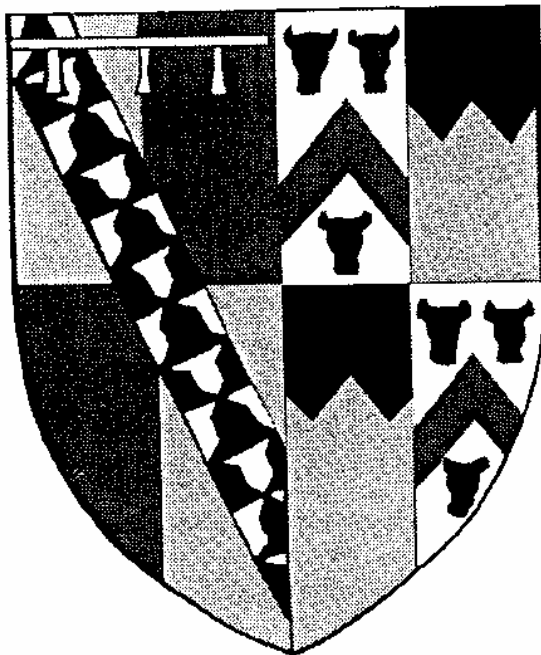
"I've done the two coats for you in colour, as they should be. The Dister coat has faded almost beyond recognition, but it is still possible to pick out the chevron and eagles. The latter should be two-headed according to some authorities, but these appear to have only one. (I may well be wrong, a close look at the glass itself will probably prove this point). The crest of Dister was "on a mount Vert, a centaur passant regardant Proper and Argent, drawing a bow and arrow Or feathered Argent ". Of this the centaur's head and drawn bow can still be seen, the rest faded away.

The Sackville coat is in pretty fair condition, except that the top of the bend is damaged and one of the three points of the label has been turned sideways. The two Bullen quarters of the impaled coat are intact, but the Butler ones have been sadly used - the top of one and the bottom of the other have been replaced with plain (red and white) glass.

Now as to why these coats should be in Mount Bures Hall:

John Sackville married, during the lifetime of his father - hence the label on his arms, Margaret, one of the daughters of Sir William Bullen and his wife Margaret, daughter of Thomas Butler, Earl of Ormond. John Sackville was 40 when his father died in 1523, and when he himself died in 1557 his son Sir Richard was 50. Which gives us a date for the marriage, and the glass, of c1505/6.

John and Margaret's grandson, Thomas Sackville Baron Buckhurst, sold the manor to John Dister, gent., who presented to the living in 1575. Alice Dister, presumably his widow, held it in 1581. She gave it in marriage with her daughter, to Richard Weston, Esq. Which marriage almost certainly took place in 1584, hence the dated Dister glass.



**Figure 1: The two coats of arms as drawn by Joan Corder**

This is the full correct blazoning of the shields

- 1) Quarterly Or and Gules, a bend Vair. A label of three points Argent for difference. for Sackville Impaling Quarterly, 1 & 4; Argent, a chevron Gules between three bull's heads cabossed Sable - for Bullen (or Boleyn)<sup>2</sup>. 2 & 3; Or, a chief indented Azure - for Butler.
- 2) Gules, a chevron Or between three eagles displayed (? with two heads) Ermine for Dister. The Crest typed out, the centaur would have the horse part of its body in natural silver, the human part in natural colours.

#### Notes

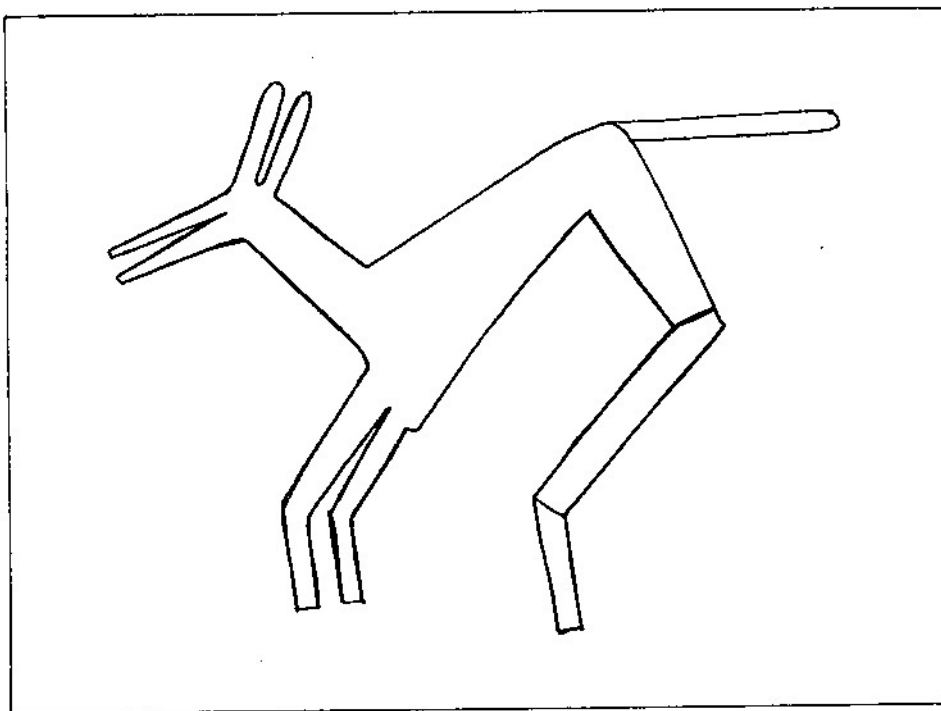
1) Margaret was aunt of Henry VIM'S queen

2) They evidently thought that "Anne Boleyn" sounded a bit more ladylike than "Nan Bullen"; and so the change was made.

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### Hare Intaglio from Colchester

Mr Norman Bone found an agate intaglio in the River Colne at Colchester. It is 12mm long by 9mm wide and 3mm thick. The stone is a pinkish red agate. The carving is a very skillful depiction of a hare. The accompanying illustration is a sketch of the hare.



**Figure 1: Hare intaglio from Colchester.**

## A Roman site at Stable Cottage, Alresford (TM 073203)

*by Adrian Koval*

### Introduction

While building an extension to his house in 1989, the author discovered a length of Roman building foundation. The structure was just below the topsoil and consisted of broken stone, hard red brick and tile set in a lime mortar. The foundation suggested a Roman wall set at an angle of 70 degrees to the S.E. corner of the main residence. During building work the foundation was sectioned and found to be 300 mm wide and 600 mm deep. In 1989 there was no time for a detailed examination but in 1990 it was re exposed during landscaping. This time the foundation and the spoil from the 1989 trench were examined more closely. The fragments of hard red brick and tile looked very Roman and included a piece of tegula. There were also flaking white shells and potsherds. Mr Philip Clarke of the Essex County Council Archaeology Section came and inspected the site.

He explored a small area around the remaining ancient foundation and unearthed some more potsherds. These were taken away for further examination and dating. His initial reaction to the site was that the remains had been so much disturbed that the material was unstratified. The pottery sherds have recently been confirmed as being early Roman, 1st and 2nd century.

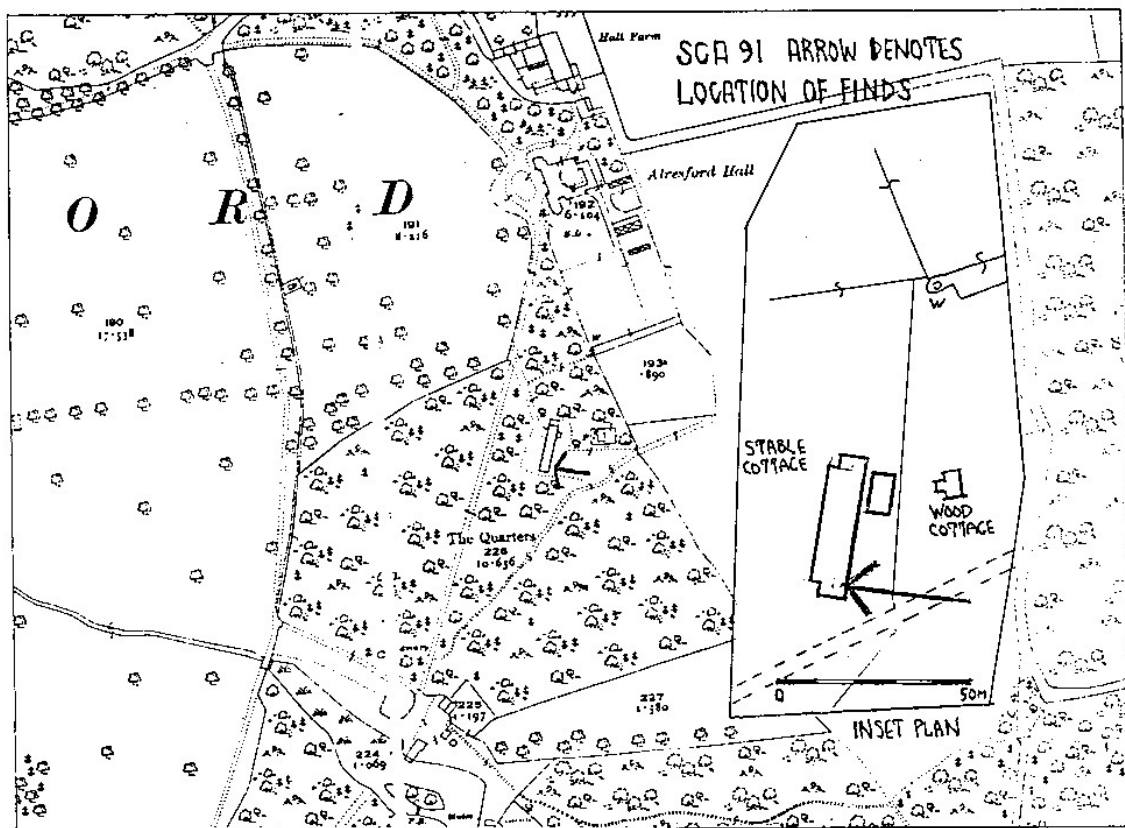


Figure 1: Roman site at Alresford, Essex.

### Discussion

The site lies 9km SE of Colchester and is occupied by an early 19<sup>th</sup> century building known as Stable Cottage, (fig 1) formerly a coaching and stable block built in 1818 to serve Alresford Hall, some 120 metres to the north. Also nearby is a building complex known as "The Quarters" which is 150 metres to the South West. Both of the above mentioned properties appear on an early 18<sup>th</sup> century map dated 1720, commissioned by the contemporary owner Matthew Martin. To the East of Alresford Hall is a 17<sup>th</sup> century timber framed barn. The general area is known to have been occupied from at least the 17<sup>th</sup> century. The site of old Alresford Hall, which was probably medieval and timber

framed, is unknown, but there is an "Old Hall Wood" and a "Old Hall Field" approximately 450 metres to the West. The ruins of the Saxon church of St Peter, 800 metres to the West, contains a lot of reused Roman brick, particularly in the quoins. In 1986 Saxon graves were discovered 400 metres to the South West. Some Romano-British enclosures nearby, which showed up as parch marks, were recorded by the E.C.C. Archaeology Section before being destroyed by gravel extraction. The remains of the Roman Villa at Alresford, 1.4 km to the SW, have been excavated.

The discovery of Roman Material at Stable Cottage, Alresford, may confirm occupation in the 2<sup>nd</sup> century or the reuse of Roman material from the vicinity. The remains have been much disturbed by the construction of the 1818 building and by recent building work. It is a pity that there was not more time for archaeological investigation during recent building work.

### Finds

Philip Clarke, under site reference code SCA 91, identified six sherds of early Roman pottery, four of which are illustrated here. (fig 2)

- 1) grog-tempered jar rim.
- 2) sandy greyware platter rim.
- 3) bodysherd in storage jar fabric.
- 4) jar or beaker base in fine greyware. (This piece may be later than the rest).

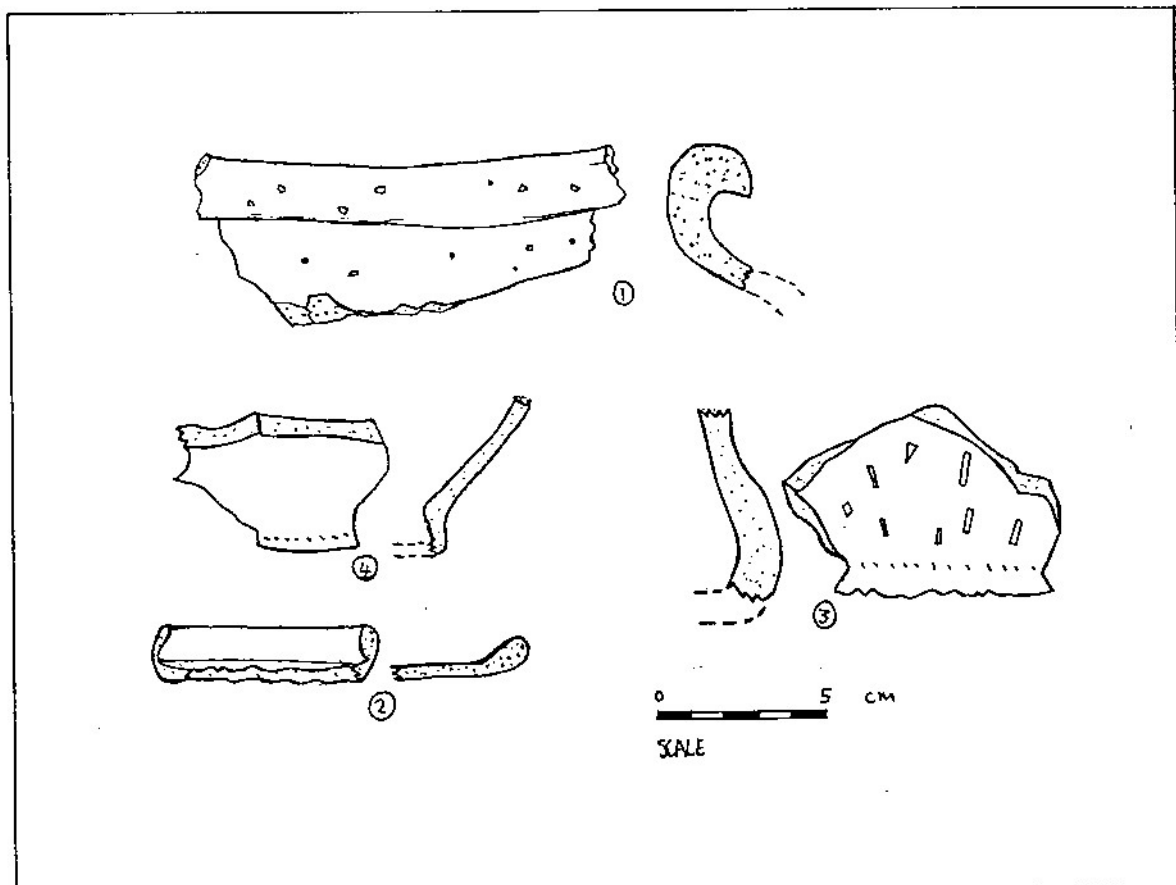


Figure 2: Pottery finds from the Roman site at Alresford

### References

- 1) Excavation of Broomfield Meadow by Owen Bedwin; Essex Arch and Hist; VOL 17 1986
- 2) Remains of Roman Villa at Alresford Creek by Henry Laver; Essex Arch Soc, vol 111 p136. Essex Arch and Hist; VOL 17 1986
- 3) Remains of Roman Villa at Alresford Creek by Henry Laver; Essex Arch Soc, vol 111 p136. Essex Arch and Hist; VOL 17 1986

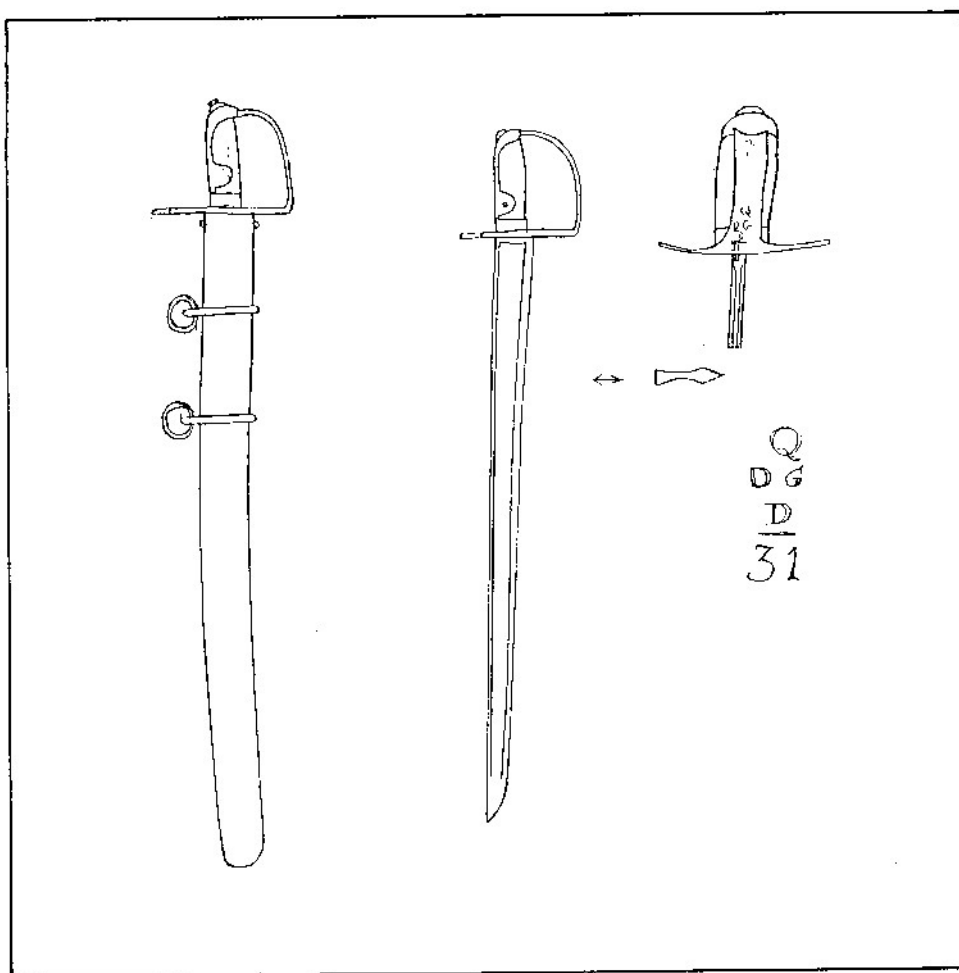
## Arms and Armour relics at Great Horkesley

*by Richard Shackle*

One day in the 1930's Mr Page, who farmed at Rignells Farm, Great Horkesley, instructed some of his farm workers to demolish a derelict thatched farm building in a distant field on the farm. We are not sure what this farm building was, it may have been a stockyard for animals. While they were demolishing the building, the farm workers found, hidden in the thatch, four pieces of military equipment:-

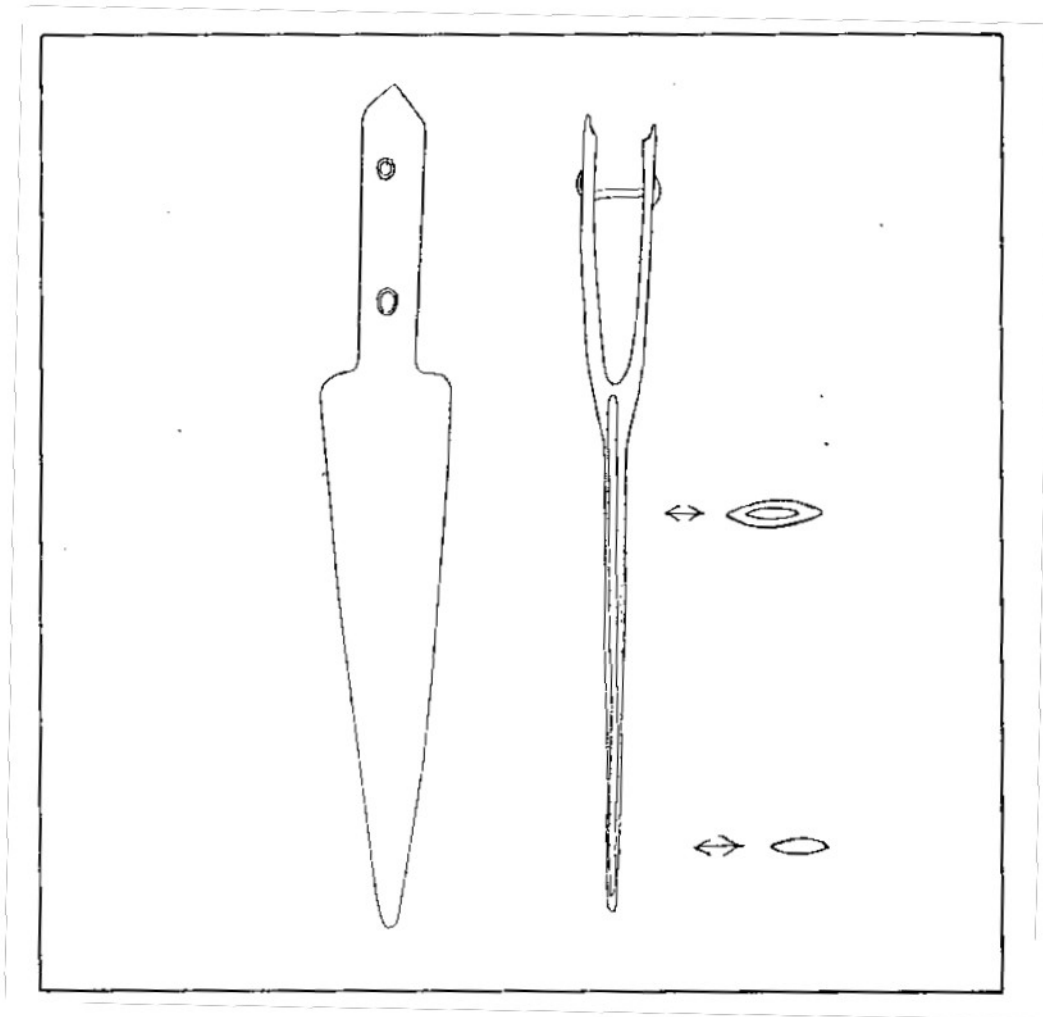
- 1) Breast plate
- 2) Helmet
- 3) Sword
- 4) Pike Head

The breast plate and the helmet were taken for the Spitfire scrap drive during the second world war. The sword and the pike head are now in Colchester Museum. At first it was thought that these were Civil War relics, which would have been exiting as there was a Civil War skirmish at nearby Bosted. It now turns out that the sword is Victorian. It is a cavalry sword of the 31st Division of The Queens Dragoon Guards (fig 1). The sword plus scabbard is 41 inches long.



**Figure 1: Cavalry Sword from Great Horkesley**

The pike head which may also be Victorian (fig 2) is 15" long. This means that the whole collection was probably Victorian and was just being stored at the barn.



**Figure 2: Pike head from Great Horkesley**

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### **A Bronze Cannon at Clacton**

*by Alf Morgan*

In February 1947 there was washed up on Clacton beach, a bronze cannon complete with wooden carriage. The carriage bore a brass plate but it was too corroded to be read. The barrel of the cannon had wooden packing round it.

In December 1946 a ship returning from the continent with a load of Art treasures was lost on the Goodwin Sands. It is more than possible that this cannon came from that shipwreck. It was probably deck cargo which became separated from its packing case and floated upside down just above the seabed, thus escaping the worst of the currents and drifted North against the sweep of the currents, which on the East coast are North to South, until it was washed up on Clacton beach.

Now what happened to that cannon and carriage? A workman I interviewed, who was repairing the promenade at the point opposite Butlins Camp, said that the carriage was broken up for firewood, and the cannon after being used as a weight on the pile-driving machine, was dumped into the foundations of the promenade.

There are people in the London Museums who could identify both the ship and the cannon.

## The Watermill at Mount Bures in 1086

by Stephen Walker

It is written in the Domesday book that in the year of 1086 there was "*Always 1 mill at Bura*" (Mount Bures). With available evidence might it be possible to find the most likely position of this mill, its type and construction as seen in 1086?

With regards to the position of such a mill, the first clue comes from the landscape. The Essex of this period was, for the most part, a heavily wooded county, comparatively open only in the extreme North West and where the marshlands fringed the river side and the coast. Many villages and hamlets were still probably like islands in a sea of woodland'.

This was very different from the landscape of today. The only part which the Anglo-Saxons would recognize would be the rise and fall of the land, together with the river Stour and the Cambridge Brook<sup>e</sup>, although even here there has been change (fig 1).

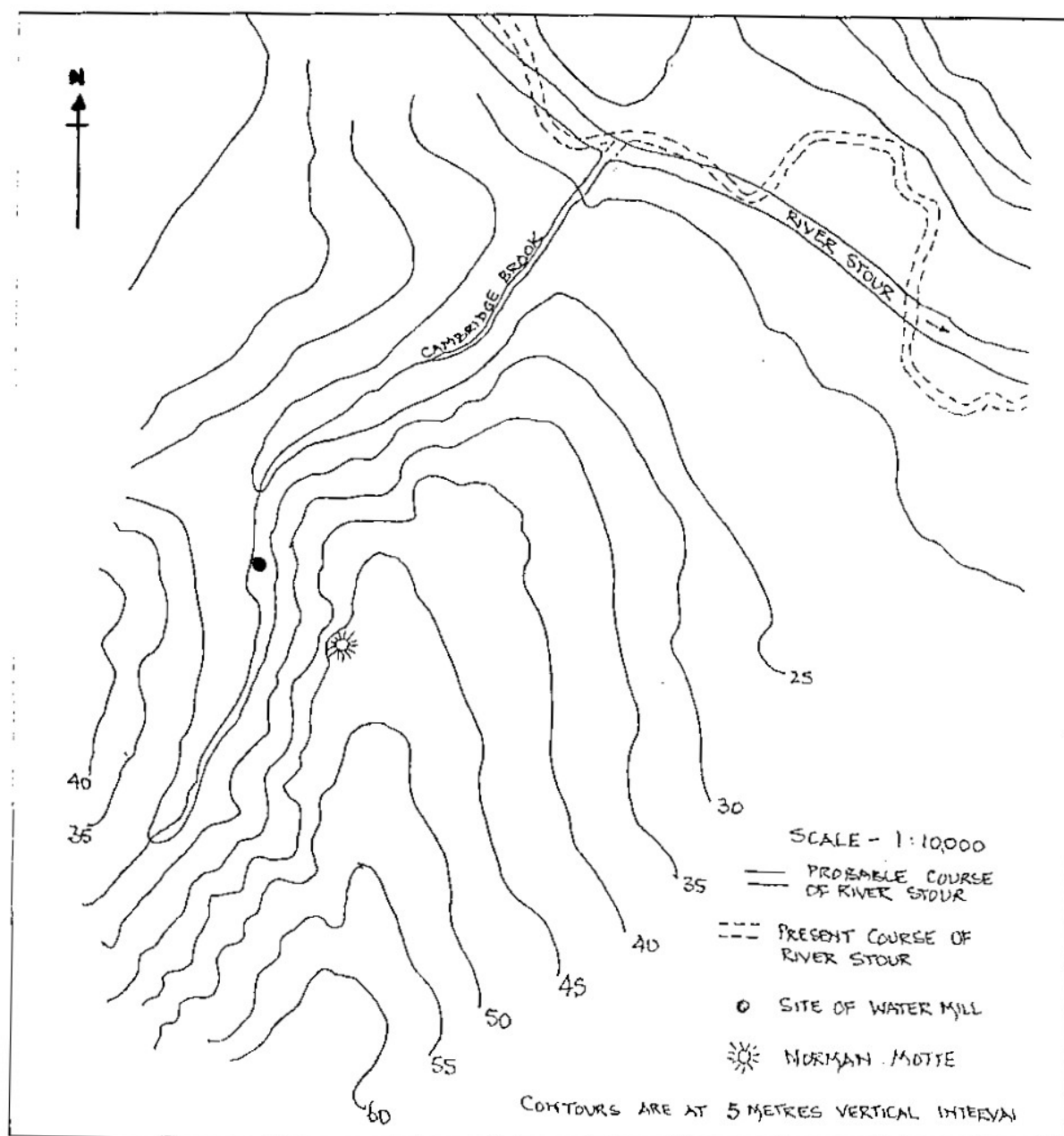


Figure 1: Countour Map of the area around Mount Bures, c1086 AD



The river was bordered by marshland with the land behind predominately a canopy forest, interspersed with waste and scrubland, through which passage was possible and in which grazing animals provided a useful resource for man.

The general trend from perhaps the sixth and seventh centuries was towards a drier and less stormy climate. There were several climatic changes in the period c550 AD to c1180 AD.

There was a world wide rise in the sea level as water from the melting ice caps and glaciers returned to the sea. This was linked to the general rise in long term averages in temperature with a depression track further to the north of the British Isles, producing a continental effect, with the summers warmer and the winters much cooler<sup>3</sup>.

The average temperature for the year was higher than that of the present day. There is some evidence for an increase in storminess in the North Sea after 1000 AD<sup>4</sup>.

These weather factors had a considerable effect on the seasonal changes, the plant growth and the rivers. The North Western portion of Essex lies for the most part over 200 feet above sea level, much of it over 300 feet, and in places, is over 400 feet. The general slope of the plateau is from the North-West towards the South-East. This sloping surface ensures that the rivers and streams flow South-Eastwards into the Essex estuaries<sup>5</sup>.

The River Stour falls 200 feet from source to sea, and would have ranked among the faster flowing rivers in Southern England. The Celtic word "*Stour*" means 'fierce' and 'violent'. A twelfth century Norman chronicler, Geoffrey of Wells, describes the Suffolk Stour as "*pure and rapid*"<sup>6</sup>. It was a navigable river from the coast to Sudbury.

Rivers and streams were the main access to the interior and, the early Saxons travelled along them to find a place to cultivate and settle. The Cambridge brook was a useful offshoot and a way through the marshland. It is probable that the first Saxon settlers of Mount Bures arrived in this way around 500 AD. They preferred to settle in valleys, they were farmers and grew grain. This in turn required grinding in order to produce flour. For this purpose they brought with them the saddle stone or quern, which formed part of the hearthside gear of every household and was operated by the women of the family. This was a laborious job.

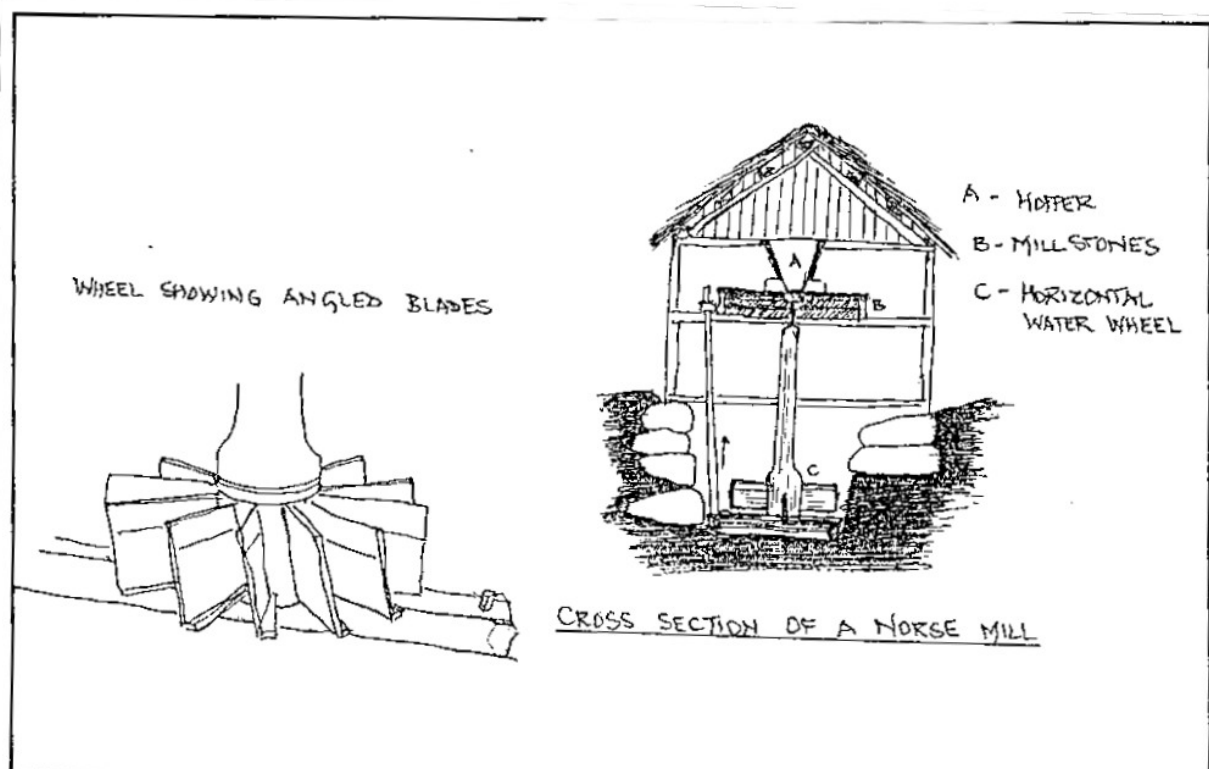


Figure 2: Cross-section of a Norse Mill

The Saxons had knowledge of a corn mill with stones turned by water power that is the Norse or Greek type watermill (fig 2). The water wheel lay horizontally in, or upon, the water, turning on a shaft fixed to a stone in the bed of the stream. The upper end of the shaft passed through the lower of the two quern like grinding stones, with the mill-wheel, shaft and upper stone all turning together. It was small and adapted for use in minor streams.

The mill stones were often no more than eighteen inches in diameter and ground very slowly, one revolution of the waterwheel producing but one revolution of the upper stone. It gave a very inefficient use of energy with poor productivity.

This was probably the first type of mill to be built on the Cambridge Brook, which was ideal for the purpose giving a good rapid flow for turning the wheel.

Moving up the brook from the River Stour, the first place where the contours draw in, thereby accelerating the already rapid flow, is at the bottom of the present day Craigs Lane. This was a very likely situation for a mill (fig 3).

The second clue to the placing of the mill comes from a long, low, tree covered mound situated by the brook, again at the bottom of Craigs Lane (fig 3). The Colchester Archaeological Group cut a section through the mound and concluded from their findings that the mound was built as a dam across the valley of the brook in order to hold back sufficient water to drive a small mill<sup>8</sup>.



**Figure 3: Location of Watermill at Mount Bures**

This dam is evidence that the new technology of the vertical wheel undershot mill, with its greater efficiency, had arrived. The wheel was mounted vertically on a horizontal axle, driving one pair of stones through simple gearing to the vertical shaft (fig 4).

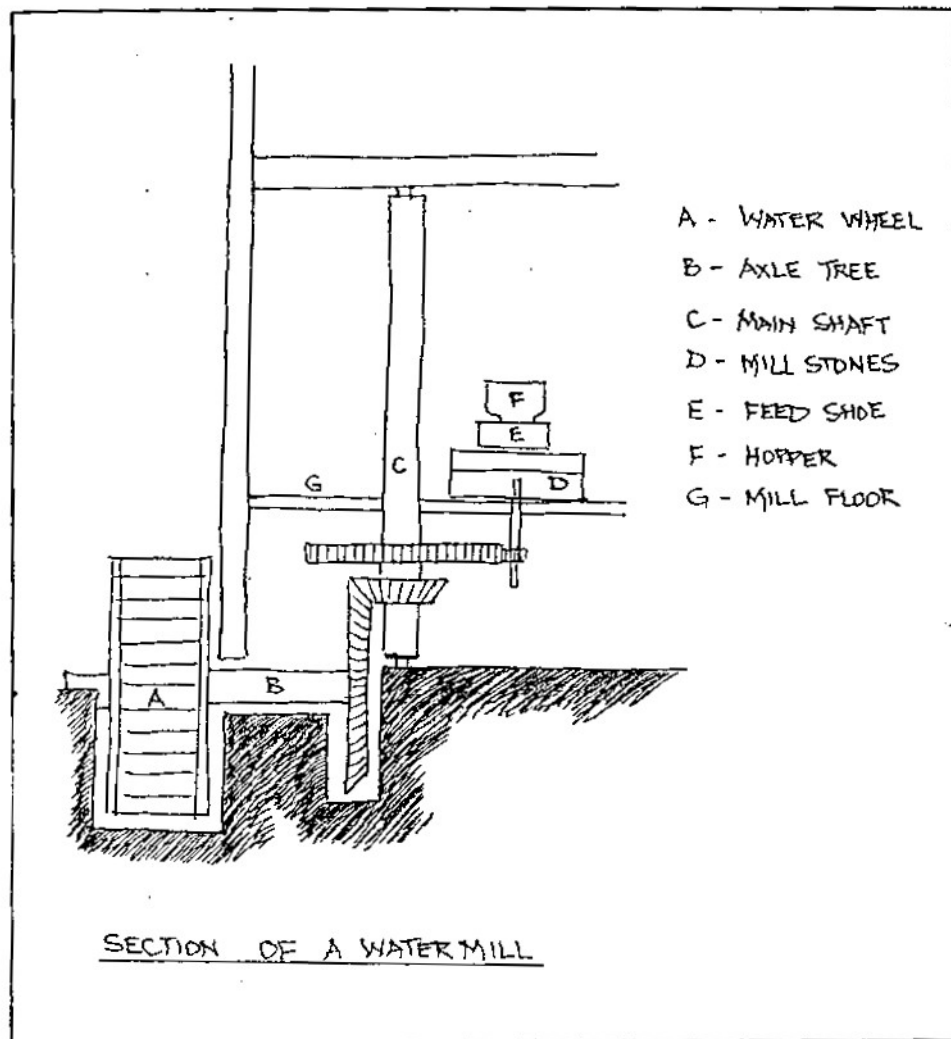


Figure 4: Section of a watermill

The wheel was driven by the water flow striking the flat paddles or floats at the bottom of the wheel. The force exerted in an undershot wheel derives entirely from the mass and velocity of the water flow. It was realised that even a relatively small change of level, created by a natural or artificial dam could materially increase the power of the mill<sup>9</sup>. The Domesday book states "*always 1 mill*", the always refers, not only to the time of King William but also to the time of Edward the Confessor 1043-1056. It is very likely that there was an undershot mill on this site well before this time, perhaps as early as 800 AD.

Once a mill had been established the site was very jealously guarded by the lord of the manor. An efficient mill was recognized as an important financial asset. The lord possessed the custom of "*soke rights*", which meant that all corn grown on the manor was required to be ground at the lord's mill, bringing him useful revenue. Its construction and maintenance, however, involved considerable expenditure and the lord, no doubt, felt justified in enforcing his rights.

In order to find out the size of the dam in 1086 it is necessary to discover the quantity of grain to be milled. The total land for cultivation for Mount Bures given in the Domesday book is:

*1 hide which equals 120 acres  
half a hide plus 30 acres which equals 90  
acres 25 acres  
total 235 acres*

With the three field crop rotation system used, one third is left for fallow, one third is spring sown and one third is winter sown; i.e. 78 acres in each case. As long as we bear in mind that any figures are only approximate we can try to see what the crop yield for 235 acres would be.

Walter of Henley tells us that "*land which did not yield more than three times the seed sown gained its owner nothing*". It is generally agreed that about two and two fifths bushels of wheat were commonly used to sow an acre so that it is clear that 8 bushels per acre had to be harvested. Therold Rogers gave it as his opinion that "*The rate of increase was not more than four times i.e. four times two and two fifths bushells*" - say between 9 and 10 bushels<sup>10</sup>.

But, of course, all the 78 acres were not sown with wheat. The other crops would be rye, barley, oats, peas and beans in varying proportions. The figures of Sir W Beveridge may be taken as our most accurate modern evidence. In these he takes the sowing of wheat, barley and oats in equal areas and assumes a good growing year.

Wheat (@ 3.4 bushels per acre)	265.2 bushels
Barley (@ 4.75 bushels per acre)	370.5
Oats (@ 3.5 bushels per acre)	273.0
<hr/>	
making a total grain grown from 78 acres	908.7
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to retain for next years seed, 2.5 bushels per acre	195.0
to retain for beer making (usually barley) <sup>11</sup>	237.9
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leaving a final total to go to the mill	475.8

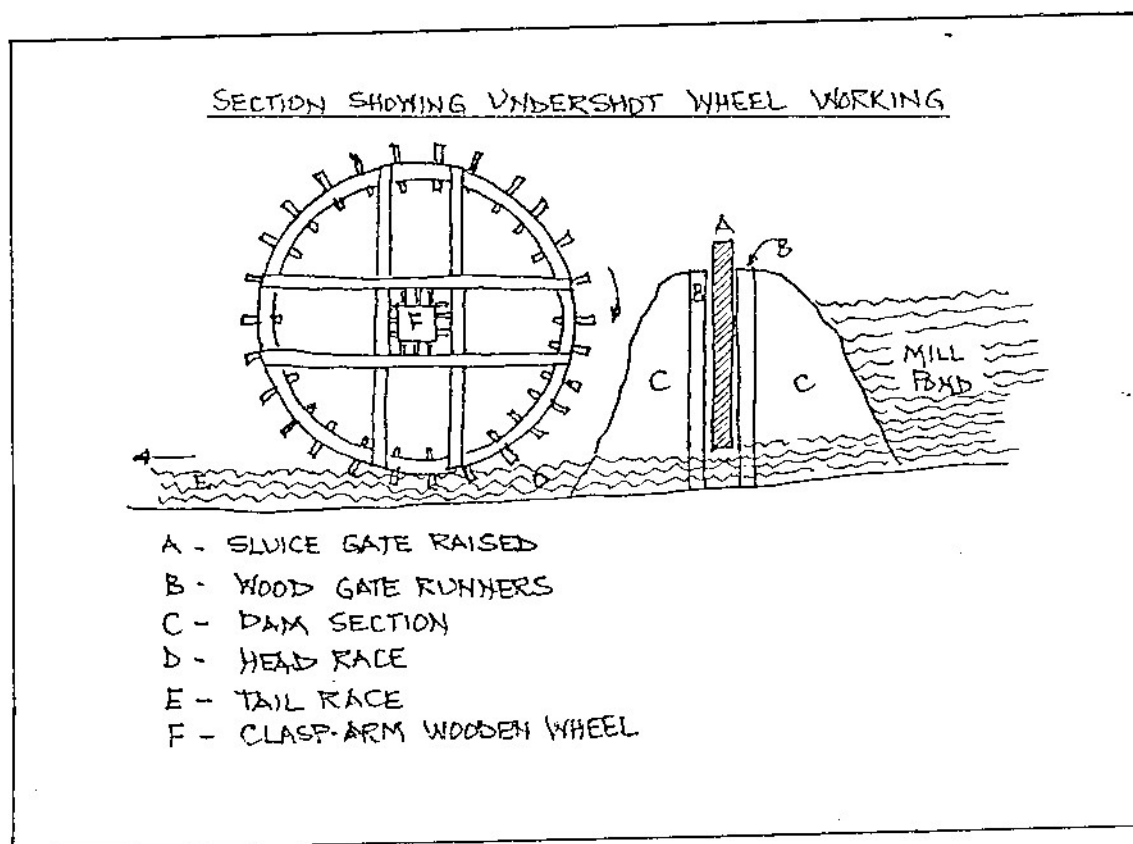


Figure 5: Section showing Undershot Mill working.

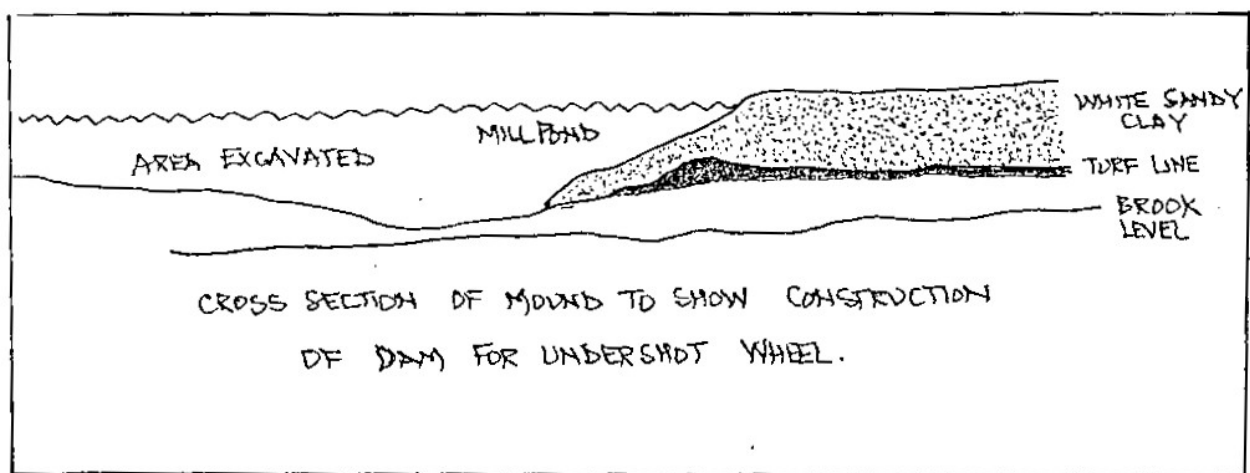
With 30 inch diameter stones the miller will process 2.5 bushels per hour<sup>12</sup>, and so this gives a milling time of 190.32 hours or approximately one hour per day over half a year.

This could be achieved easily. The first milling taking place in the early morning using the night filling of the millpond. A prudent miller never emptied his pond but allowed it to refill while there was still some power available.

With a head of water of five feet he would be able to mill for 20-30 minutes before expecting to replenish the millpond<sup>13</sup>. This milling and refilling cycle would take place several times during the day, depending on the capacity of the brook. The season and weather conditions would effect the quantity of water in the brook and therefore how long that it would take to refill the millpond.

A water depth of five feet would require the dam to be about six feet high from the bed of the brook. If the water was allowed to flow over the top of the dam considerable erosion would take place (fig 5).

Examining the excellent sectional drawing given in the Colchester Archaeological Group's findings it will be seen that there is a layer of white sandy clay which is about six feet in height from the brook bed. Is this evidence of the original dam? If this is correct it would be reasonable to presume that it was excavated from the ground which was then covered by the millpond (fig 6).



**Figure 6: Cross-section of mound to show construction of Dam for undershot wheel.**

The added length, height and lining shown on the sectional drawing will be examined later.

The level of water in the millpond was maintained by wooden hatches fitted in channels. When the wheel was stopped the water was diverted into the brook via the spillway. The over flow hatch was lifted to achieve this. Well in advance of starting work, the miller replaced this spillway hatch to build up a good head of water and thus store for his mill. The second hatch or sluice gate was raised allowing the water to turn the wheel (fig 7).

After turning the wheel water must escape quickly or it would impede the turning process, a good fall was required to the tailrace, which leads water away from the mill. The drop to the River Stour from this point is approximately eighteen feet in the three quarters of a mile length and is quite adequate for the purpose.

There is scant evidence to show what the small country mill of these times looked like. One of the earliest pictures comes from the Luttrell Psalter of the early fourteenth century (fig 8).

This shows a small timber framed building with walls of wattle and daub and a roof of thatch. Only the water wheel, turning against the gable end, distinguished it from the peasants' cottage. Other early representations of watermills indicate that very similar buildings were in use throughout Europe at that time.

The fact that few mills survive is not surprising when consideration is given to all the hazards to which they were exposed. Many stood on marshy ground, which provided a poor bearing for foundations. Timber piles rotted away in the water-logged soil, and rivers in flood presented a recurring danger.

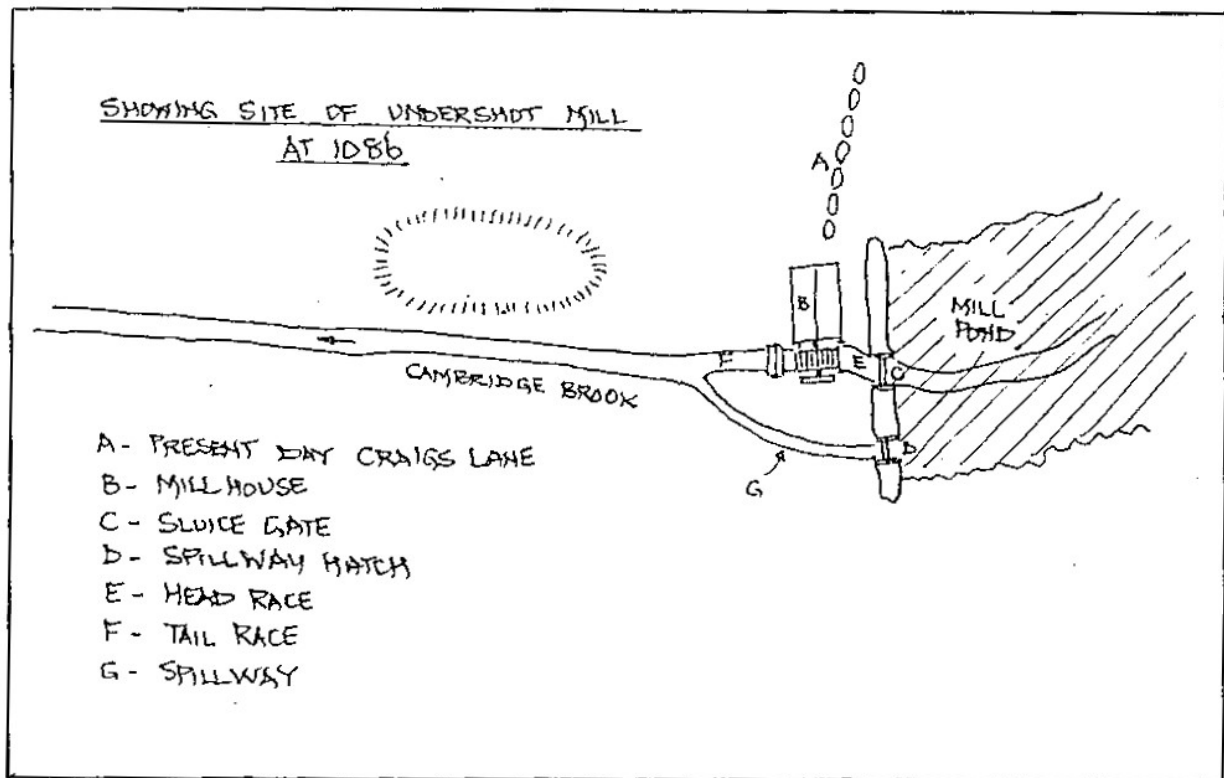


Figure 7: Map showing site of Undershot Mill at Mount Bures, c1086 AD

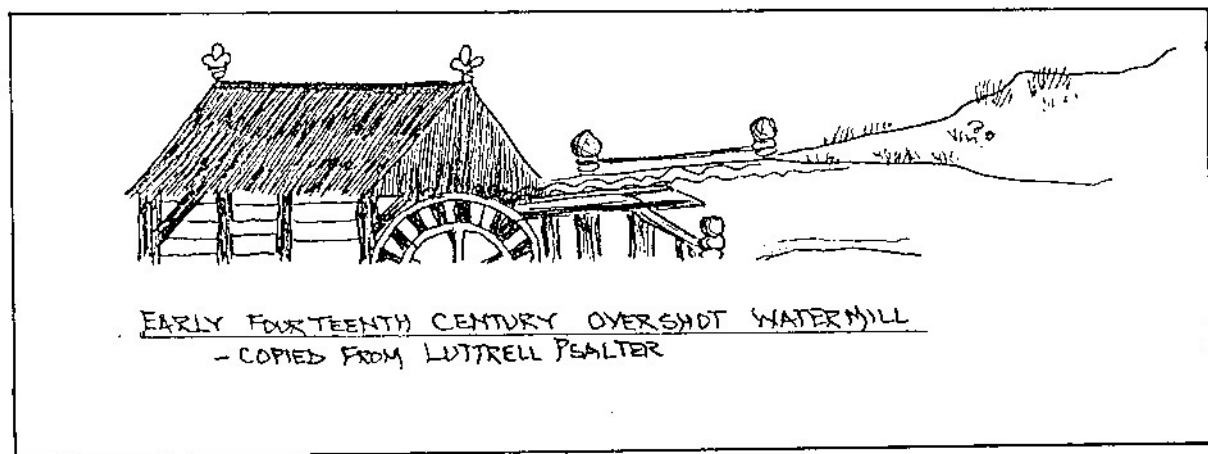


Figure 8: Early Fourteenth Century Overshot watermill.  
- copied from Luttrell Psalter.

The vibration of the machinery, and the heavy, intermittent loading tended to weaken the structure. While friction between the stones might, at any time, spark off a fire which could spread rapidly through the dust laden air<sup>14</sup>.

With the dam built astride the brook at the bottom of Craig's Lane, the position of the mill in 1086 becomes clearer.

For maximum effectiveness the wheel must be close to the dam, and the peasant must have ready access to the mill as the whole grain kept in a better condition, for a longer time. It was only milled when required for a few days supply.

These two conditions mean that the millhouse was built on the north side of the brook, that is, the side nearest to the village. It was a simple structure, no more than a rectangular hut of timbers and daub, materials locally available. The water wheel turned in the open air, its axle passing through the wall to drive a single pair of stones inside the building.

The machinery was of timbers, skillfully framed together and fastened with wooden dowels or trenails, wrought iron was a costly commodity and its use was strictly limited.

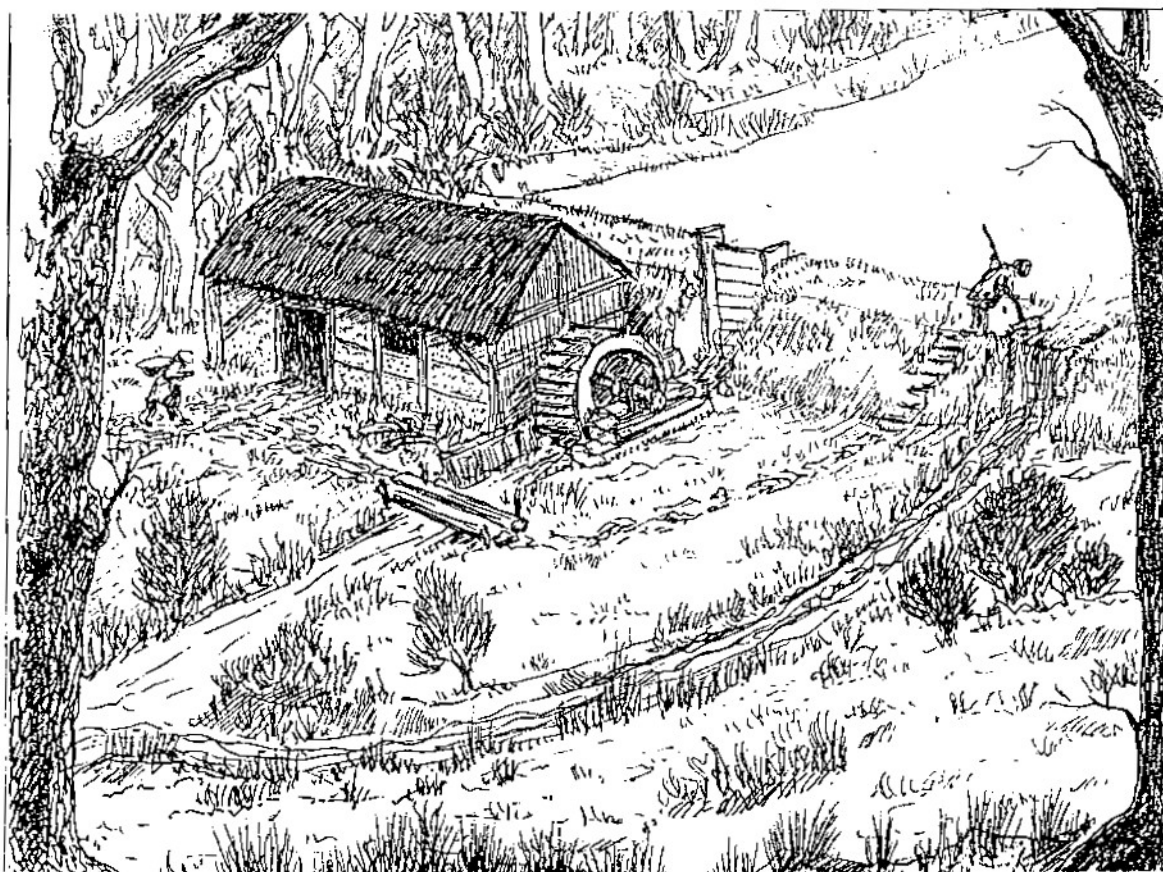
Oak was used for wheels and shafts, holly for trenails. Cogs were shaped from applewood, or some other native hardwood such as hornbeam or beech. Elm was favoured for the floats on the water wheels because of its resistance to rot, while stone was employed for bearings. There had to be considerable care in the design and construction of the wheelpit where the sides of the floor needed to be a close fit to the wheel paddles<sup>1b</sup>

As mentioned already the mill belonged to the lord of the manor. It was built and maintained by the villagers as part of their "*week*" work, that is their time during the week when they were required to work for the lord'.

All grain grown on the manor was required to be ground at the mill, the miller deducting a proportion of flour or meal as payment for his services. This toll commonly amounted to one sixteenth of the final product of the mill. It was measured in a "*toll dish*" or "*multure bowl*", struck off level with a "*strike or strickle*".

Tenants were strictly bound to the manorial mill. This was unpopular with them, as they would prefer to grind their small quantities by their handmills in their own cottages, so avoiding the payment of an extra charge.

Where there was a small mill it was usual for the miller to combine an agricultural holding with his work at the mill. This would explain the Domesday's failure to distinguish the millers from other villagers. It was with mills as sources of income for the landlords that the Royal Commissioners were concerned in 1086<sup>18</sup>.



**Figure 9: Mount Bures Watermill, as it might have appeared in 1086 AD.**

Accepting that this mound was originally a dam to retain water for a small mill poses a problem. As the construction of such a loam was expensive in both labour and time, it would be reasonable to expect that the size of the dam would be in proportion, both to the need, and to the labour force available.

The report gives the measurements of the present day dimensions of the mound as 148 feet 5 inches in length, 49' 8" wide and 9' 9" high. As water finds its own level the dam must extend in either direction to contain it. Taking a level from the top of the mound in both directions gives a total length of 465 feet. After the years of weathering it is more likely that the original was at least 10 feet high, perhaps 11 feet, thus adding to this length. If the dam was extended as suggested, at the eastern end there is evidence of a disused water course, running in a northerly direction until it rejoins the brook. This has a fall of three feet in its length and might well have been the path of the spillway (fig 10). This suggests a greater need for milling and probably an investment in the more efficient overshot mill, perhaps similar to the early fourteenth century mill shown in the Luttrell Psalter, the dam would be the correct height for this.

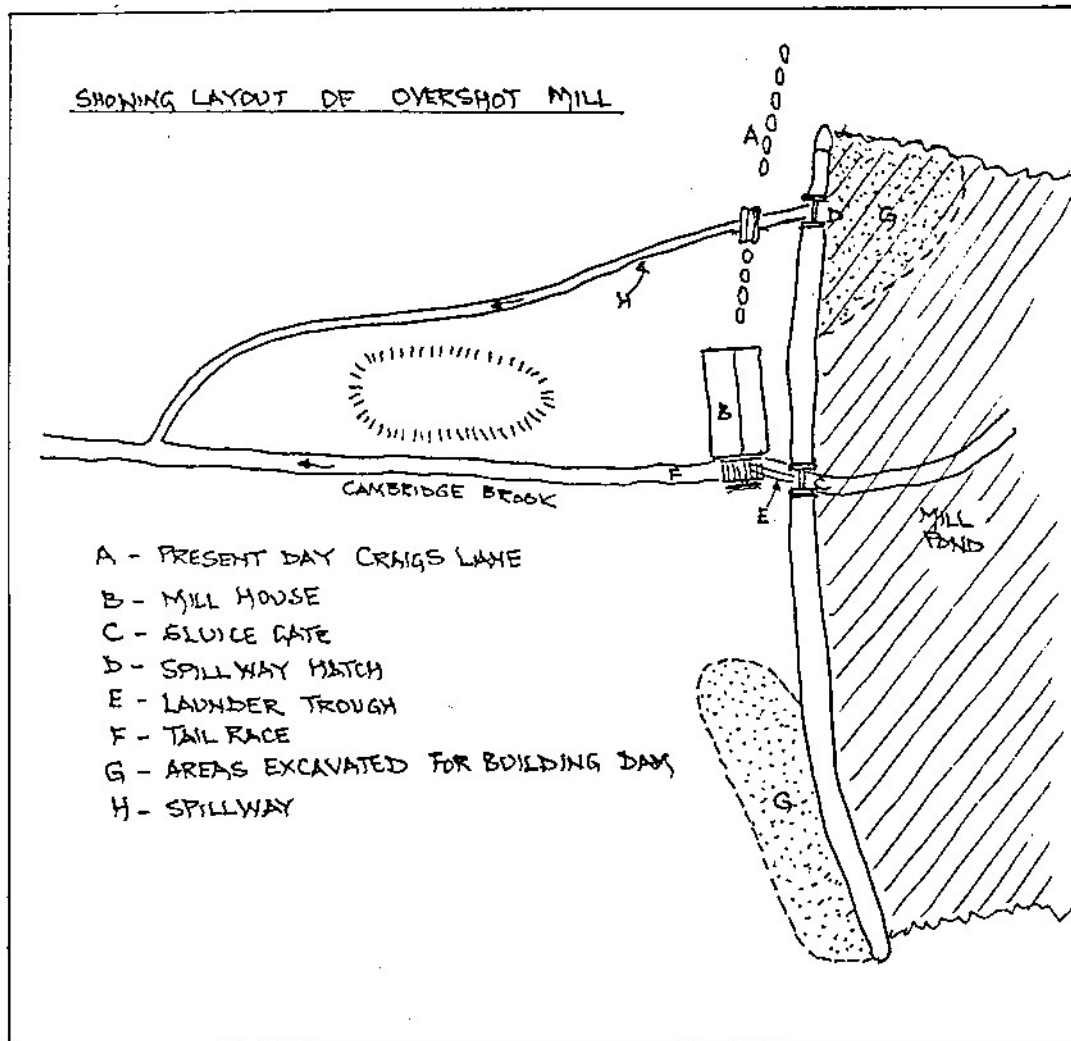


Figure 10: Map showing layout of the overshot mill.

A dam built to service an overshot wheel had a different function to the dam built for undershot wheels. It had to raise a large area of water to a sufficient height, usually about ten feet, so that the flow through the launder could clear the wheel.

This height made a much more efficient use of power, some 68 % against 35%<sup>19</sup>, because the weight of the water turned the wheel. This required much less water flow than the wasteful undershot (fig 11).

Between 1086 and 1377 there was a remarkable rise in the population of England, an increase of 300% or more, taking the population to a peak of about six millions before The Black Death (fig 12).



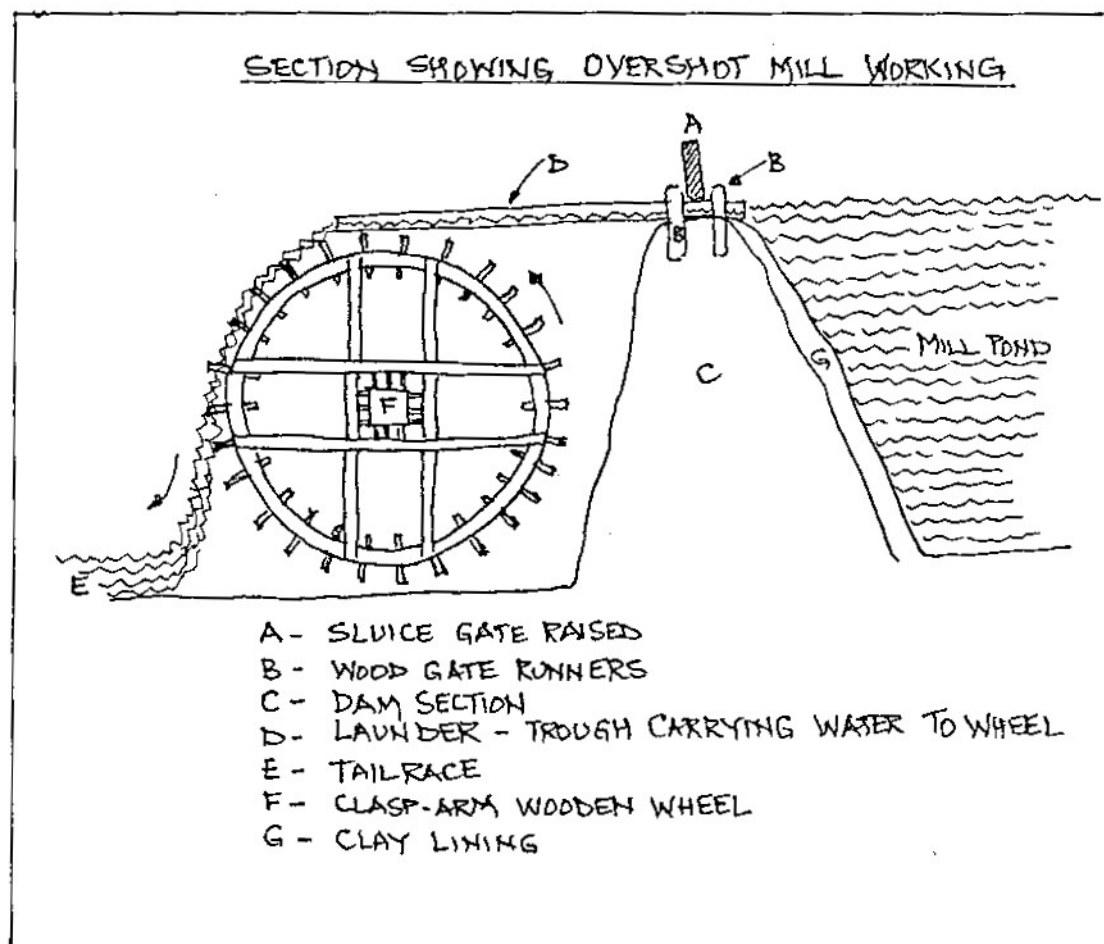


Figure 11: Section showing overshot mill working.

The causes are generally attributed to the fact that in the late eleventh and early twelfth centuries, and more particularly after 1250, there were few recorded epidemics, thus life expectancy and fertility were probably high<sup>20</sup>. In addition new land was being cleared for agriculture and times were generally more settled.

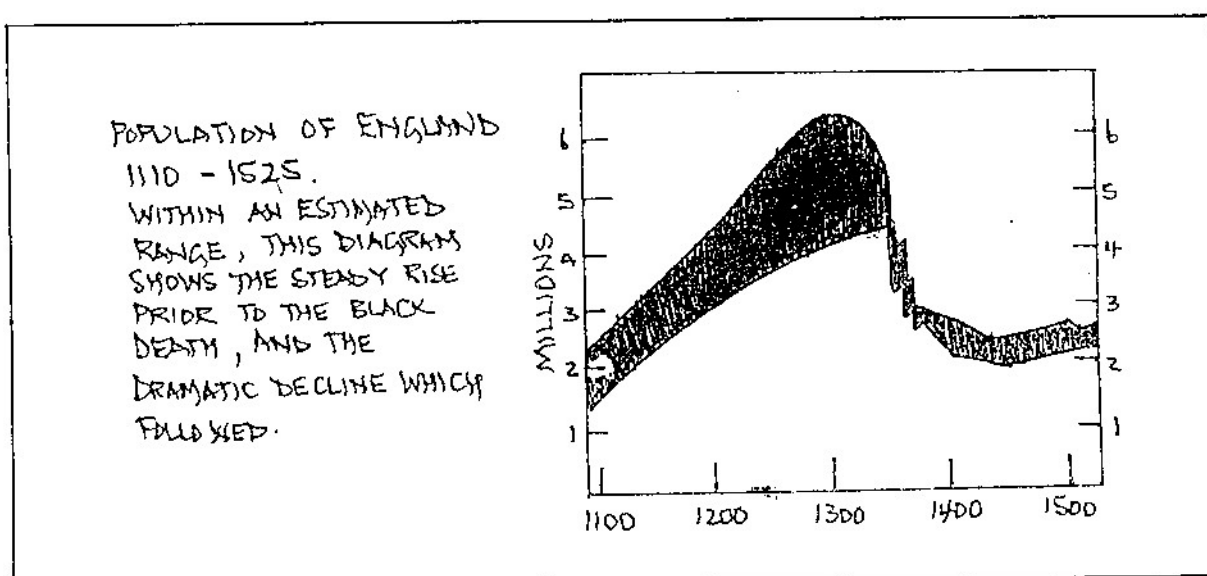


Figure 12: Population of England - 1110-1525 AD.

It is reasonable to suppose that Mount Bures and the immediate surrounding area had an expanded population during this period.

If this had been the case and taking the increase of 300% as the maximum, then assuming that enough land had been cleared and put into production, a figure of grain for the mill in 1300 AD as can be arrived.

The total to be milled would be  $475.8 \times 3 = 1427$  bushels. At 2.5 bushels per hour this gives a milling time of 571 hours or approximately three and a quarter hours per day over the half year.

If the miller worked in half hour shifts, the time dictated by the millpond, and assuming that the millpond can be refilled in these hours, it becomes apparent that the undershot mill would not be able to manage. Taking an average working day as eleven hours, from 1am to 6pm, allows for four millings a day, that is, two hours milling time. This leaves one and a half hours work to be carried out.

There is obviously a need for a more efficient mill, as the undershot mill would not be able to manage this volume. The overshot mill would drive a 36 inch millstone and grind three and a quarter bushels per hour<sup>22</sup>. All this would require the old dam to be built up, extended and lined (fig 13).

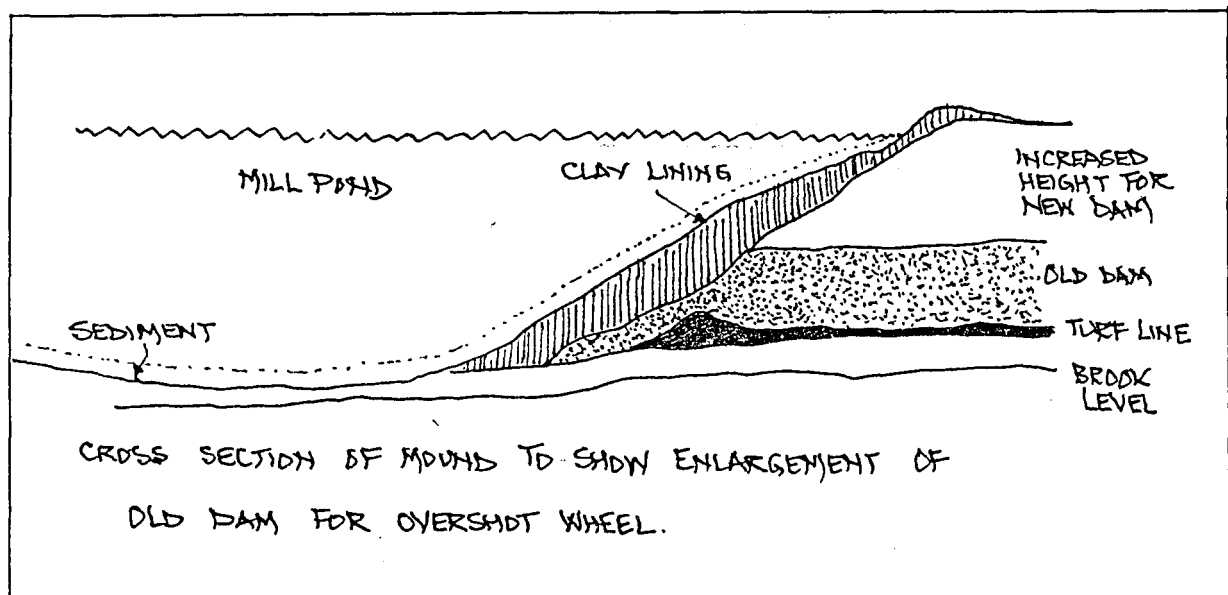


Figure 13: Cross-section of mound to show enlargement of old dam for overshot mill.

#### Notes

- 1) in this area, the dense woodland of Essex stand out prominently. Medieval Essex - Essex Record Office.
- 2) Present day names are given throughout.
- 3) An Atlas of Anglo-Saxon England - D.Hill
- 4) "Between 1050 and 1150 the sea level in the North Sea was half a metre above the modern mean sea level." - Fairbridge.
- 5) The Domesday Geography of Eastern England - H.C.Darby.
- 6) Bures History Society occasional paper No 1 - L. Alston.
- 7) Windmills and watermills - John Reynolds.
- 8) Colchester Archaeological Group Annual Bulletin, Vol 16, 1973, P3.
- 9) *ibid* 7
- 10) Life on the English manor - a study of peasant conditions, 1150-1400. - H.S Bennet.
- 11) Domesday Book and beyond - F.W.Maitland.
- 12) Discovering watermills - John Vince
- 13) Watermills, an introduction - P.N. Wilson

- 14) *ibid* 7
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## Winter Lectures 1991-92

### **The History of brickworks in the Hedingham Area**

14th October 1991, *Adrian Corder-Birch, Halstead and District Local History Society.*

Brickmaking - one of the oldest crafts - died out in England after the Roman period and revived in the late Norman period, (note Little Wenham Hall and Coggeshall Abbey), though at first bricks were used mainly for chimneys, in mansions and churches, and produced in numerous small local brickworks.

With the advent of the railways about 1850 larger works developed as coal for firing the kilns and taking away the bricks to London and elsewhere caused 500 people to be employed at Hedingham alone in 1890. The bricks were "hand-made reds". The clay was dug in the winter, spread out to weather and then put through a pug mill which, until the end of the 19th century, was worked by a horse and then by a steam engine. The brickmakers were paid "by the thousand" which they produced and were often assisted by their wives and children who took the clay from the pug mill to the brickmaker. Until 1870 children as young as seven years were occupied in this way. The men were the only ones to receive payment. Cornish - a Colne Valley brickyard owner had 12 children and employed no other labour. The speaker's family had twenty members who were in the industry at various times. The area produced so many bricks that the Colne Valley Railway could not cope and a line was projected from Ongar, at the end of the Central Line to Hedingham but this Central Essex Railway scheme was abandoned in 1914. The kilns in use were mainly Updraught ones open at the top and were forbidden to be used in 1939. The down draught ones were more efficient and did not infringe Black Out regulations.

One of the bigger enterprises was run by Mark Gentry. He supplied London, Dublin and even Africa. He produced a vast number of designs and advertised he could produce any required form in three weeks. Like most of the other makers he had a siding on the railway. But Eli Cornish who had no siding and sent his bricks by Traction engine to the railway at Hedingham. He supplied the bricks for 30 churches in North London. He sent 30,000 bricks a day to the railhead. Mark Gentry is notable in that he paid his workers twice the agricultural wage - this made him unpopular with farmers.

The speaker told of several other brickfields in the area. But after the first world war the revival was short lived as the big Bedfordshire and Peterborough firms making cheap machine bricks were far too competitive. The only surviving hand-made brickworks in Essex are at Bulmer and Marks Tey.

Tudor bricks - reused - can be seen in the bridge at Hedingham Castle. Reused Roman bricks and tiles are found in 105 Essex churches - most common in North Essex. No other county has so many. Tudor bricks are found in more church towers in Essex than in any other county. Fine examples are Wickham St Pauls, Gestingthorpe, Steeple Bumpstead, Layer Marney etc. Further afield Oxburgh Hall (near Kings Lynn) has a splendid late 15th century gatehouse and a remarkable stairway.

### **Sheppey - Isle of Buried Coins**

21 October 1991, *Malcolm Harden BA, Sheppey Archaeological Society*

The speaker took his lecture title from the name of a book published earlier this century. He lamented the decline in funding professional excavation especially serious in London, and never very evident in Sheppey, which emphasised the need for good amateur groups.

In Sheppey, much has been lost already and his group is raising interest by publishing 'populist' booklets on their digs. Written records of the island go back to the Anglo-Saxon chronicle telling of Viking raids. The Dutch (1667) occupied the island for a few days. Minster Abbey on one of the higher spots has a record of the nuns using bad language (AD 800) and Sheppey history goes down to early episodes in the development of flight, the dumping of iron railings which had been collected in the second world war and the foundering of an ammunition ship near by.

In December 1986 a workman noticed green discs brought up by a digger machine. The police were told but took no notice. 3500 were gathered up by workmen and subsequently sold by the developer but the Sheppey Archaeological Group spent an atrocious time in cold mud searching for the remainder. They recovered 99 but 33 of the best of these Roman coins were later stolen from the local museum. The publicity brought to mind a previous coin find and the owner was persuaded to put them on show.

Much of the land at Minster was divided into building plots by a developer called Mr Ramsey and finds are reported from various gardens. These included iron pattern rings found in wells. A man with a metal detector on the cliffs noticed parts of a Deverel-Rimbury urn and this reminded people of such urns falling out of the cliff for many years. A hasty excavation on the site for a church hall (not done by the group) resulted in a group member salvaging the gilt weathervane (previously on the church) from the spoil heap. This vane is mentioned by Hogarth, it figures a horse - the church was known as the horse church. The group excavated the site of a medieval iron works and exposed the blooming floors. A watching brief at a Minster High Street shop found a medieval wall which was cutting off part of the basement. This part was found to be full of earth and in a pit was a sheep's skull - perhaps a foundation deposit - under a red brick floor.

Field walking in adverse conditions at Harty (a scheduled Roman site) produced no finds, however many finds have been made in the course of the group's relatively short life and interest in the subject is being raised by its activities, publications and exhibitions.

#### **Recent Work in Garden Archaeology at Kirby Hall, Northamptonshire.**

28 October 1991, *Brian Dix, BA, FSA, Principal Archaeologist, Northamptonshire C. C Planning Dept.*

Kirby Hall, near Corby, a splendid Renaissance mansion, was bought five years after construction by Sir Christopher Hatton ("The Dancing Chancellor") and remained in his family to the 18<sup>th</sup> century. It is now in the guardianship of the State. Round the house is a famous series of gardens, now being restored after excavation and research which has revealed several phases, mixed up in restorations in the 1930's. The present work will result in a much more authentic late 17<sup>th</sup> century layout.

A survey made in the 1580's survives, showing early cottages and a church in a triangular church yard and a mound in the garden shows the original height of the land. Excavation has now disclosed remains of these buildings and a large dump of human bones - confirming folk memories of bones being carted away.

An arched 'tunnel' 3'6" high, under a boundary terrace of the "Great" garden, with good stonework in the sides and roof, has been cleared of silt for 46 feet. At this point there is a collapse. Excavation from the present ground level here reveals a chamber and connection with a stream. The purpose of the tunnel was to take water.

After Hatton's death Charles Hatton II inherited the estate, and with it a vast debt to the queen. He traded off the main Hatton residence at Olney to settle this and filled in the craters where stone had been extracted with material from quarries he owned and vast quantities of soil were brought in. On the west side was a terrace and a boundary wall carrying an arcaded structure. Half way along was a gateway of the period with carefully dressed stone stairs. Later this structure was removed and now stands as a feature on the present N-S axis - the original axis was E-W. The garden was designed in four rectangular plots, each hedged in - probably with box.

These alterations met with difficulties during their development from water and a drainage channel was dug under the edge (on the west). This was filled with stone rubble to act as a land drain.

Between 1680-1690 the terrace was reduced from 48 feet to 32 feet. Records of c1685-86 give particulars of labourers pay. This was the time when the axis of the garden was altered. The stream was canalised and sluices put in involving stone work and heavy elm planking (fixed with long metal spikes) to provide a watercourse as a feature. The South wall was demolished to expose the view. The layout of the "great garden" was one of typical "English Parterres" with hedges and paths like embroidery and shrubs in large pots. It is this school that English Heritage is now restoring.

Excavations have revealed the remains of buildings put up to accommodate the family when King James visited the house, and the Hattons moved out temporarily. At this time some of the house windows were filled in so these buildings would not affront the royal gaze! It is hoped the restorations will be completed in another two years or thereabouts.

### **The Brandon Excavation: The Scientific Viewpoint**

Monday 4th November 1991, *Bob Carr, Archaeological Section, Suffolk County Council Planning Department.*

The site at Brandon was a sand island in the River Ouse in Mid-Saxon times, i.e. 600-900 AD. It has not been ploughed or occupied since then. Resistivity testing revealed little as the soil was so uniformly dry but aerial photography showed a series of rectangular buildings about the size of a small modern bungalow, enclosures, a church and cemetery.

Excavation showed the dwellings were typical of Mid-Saxon houses across the country, each was divided into two by a passage running from entrances in the middle of each longer side. The upright members of the framework were made from planks approximately 10" by 2", split radially from tree trunks. There is no dendrochronology date for this region to assist in dating. Samples of reed thatching and heather for bedding were detected.

The church, of three cells, had opposing doorways in the N and S nave walls. The cemetery, (where burials were not very deep), produced 150 skeletons, showing the population was about the same build as between the wars modern individuals, but only 9% survived the age of 55, and 38.5% of juveniles died between 6 and twelve years of age. Arthritis of the spine was observed in 15 % and of the wrist in 11.8 %. Several had received accidental bone breakages but there was no evidence of pillage and violent deaths. Some groups of graves evinced signs of genetic disorders - suggesting kinship groups being buried together. The people had not been too well nourished but there were no signs of starvation. Some cases of polio and one of leprosy were observed.

Along the waterfront is a waterlogged peat deposit with sandy patches where textile production was carried on. As flax was grown no doubt both woollen and linen cloths was made. Dying with Elderberry and Rucket was evinced. Rye and Barley were grown - the former, being more drought resistant was predominant. Animal bones showed sheep the predominant domestic animal followed by cattle and pigs. Few horse bones were found. The sheep were smaller than those found on earlier Pagan Saxon period sites and lived to "a ripe old age" suggesting they were kept primarily for wool.

Pollen analysis showed the peat had formed 2000 years ago. The environment then was much the same as the rest of the district. There had been some deterioration in Pagan Saxon times and evidence of flooding c900-100 AD when the causeway which joined the island to the mainland had to be replaced by a bridge.

Besides farm animals, roe deer and other wild animals are attested and hunting dogs. Also a peregrine falcon - probably the property of someone of importance. Unusual finds were bones and parts of a dolphin.

The pottery was mostly Ipswich ware with a little German imported ware. Some Roman ware was also found . The coins were almost all mid 8<sup>th</sup> century. A considerable amount of bronze and iron material was found. The corroded finds were all X-rayed and the more important ones then cleaned. Some fine bronze pieces (strap ends ) came to light.

The rectangular enclosure and the dwellings gradually "moved" from the North to the South of the island during the period. Eventually increasing damp seasons made the whole island uninhabitable and the population moved to farmland hamlets they had on the mainland.

### **The Worcester Pilgrim**

12th November 1991, *Jim Spriggs, Dip Cons, FIIC, MIFA, York Archaeological Trust.*

In the Spring of 1986 during work on the foundations at the 'crossing' in the cathedral at Worcester 30-40 burials (mainly of clerics) came to light, among them, at the SE corner the un-coffined one of a pilgrim, close to the choir screen (built in 1347) so later than that date.

The remains were clothed and booted together, with an ash staff and a cockleshell. The head was missing, due to previous pipe laying. A scatter of goat willow and laurel was in the grave-all was sent to York for research and conservation. The bones were sent to Cardiff and identified as those of an elderly man who had led a hard life, was arthritic and had several vertebrae fused together. All the foot bones showed much walking, the shoulder bones too confirmed this. The femur and pelvis had received wounds which had become septic.

There were fragmented remains of two garments, the outer one long-sleeved and reaching to the knees and of good quality. The boots were of good quality calf with soft soles, of early Tudor style. They had been split to facilitate being put on the corpse. All the boot fragments were plotted to show original positions and painstakingly conserved then mounted on an artificial leg for display.

The staff of ash, now much degraded, had a metal two pronged fork bat the bottom and previously had carried something on top, as shown by the knob and three holes drilled there. The ash was of heartwood and had been painted a darkish purple with paint made from an expensive Levant dye and bone ash, together with fish glue to make it adhere to the staff. The V & A has a bust painted with similar material and of the same age. The shell was a large cockleshell but probably the missing head had a covering with a scallop shell. The staff was the 'real thing' - not just a show one for the funeral, but had not been used.

All classes of people and both sexes went on pilgrimages but mainly middling folk. Some were doing penance, some had a desire to travel, "some were paid to go by wealthier citizens, and some to seek a cure-as often happened at Worcester which had a revered statue of the virgin and a reputation for cures.

Besides clerics, eminent local citizens were sometimes buried in the cathedral-the subject of this talk was probably one of these. A possible candidate might be Robert Sutton, whose will of 1455 left several bequests to the cathedral and made a wish to be buried by the figure of St James (which is likely to have been on the choir screen). The will does not claim he had been on pilgrimage nor to have been a member of the confraternity of St James - one of the recipients of a bequest. This is the only case known in England of a burial in pilgrim robes. The human remains have now been buried elsewhere in the cathedral.

#### **East Anglia: 500,000-50,000 years ago**

18th November 1991, *John Wymer, MA, FSA, Leader of the Southern Rivers Palaeolithic Project.*

There have been tremendous advances in quaternary research in recent years increasing our knowledge of palaeolithic peoples life, environment and distribution.

The speaker began with Homo Erectus as shown by a boys skeleton found in Kenya, dated 1.2-1.3 million years ago. The boy was about 12 years of age, 5 foot 4 inches tall and as an adult would have grown to nearly 6 foot. The only differences from modern man were found in the skull which had a massive jaw and no chin. Stone axes found in Ethiopia date from the same period. They are of splendid workmanship - equal to that shown in axes one million years later.

Homo-Erectus lasted a long time - finds in Italy from the same aged stratifications date from 400,000 BC showing emigration (via the Middle East). The stratifications have been dated by climatic changes exhibited in deep sea cores going back 1.2 million years.

Prior to major glaciations there was a solid chalk bridge forming the South Downs to the same formations in France though the sea level was 45 metres higher than now. Rhino, shrew and other mammals have been identified in former beach strata near Chichester where flints had been knapped on the beach and carried away to be finished at camp sites. At High Lodge, (near Mildenhall) flint finds of the same period have been found in lacustrine clays. These had been pushed into the clay when total rafts of the strata had been moved by glacial advance. A number of such sites found in East Anglia i.e. roughly north and South of each other, showing the limit of glaciation in the period of the Anglian glaciation. Before this time the Thames had a wide valley into Norfolk, but having been pushed by the ice and the material moved by it to the present position, remained there when the ice retreated. The period of glaciation was approximately 472,000-400,000 BC.

The Hoxnian interglacial period brought a climate not very different to today's. Human activity is attested by Clactonian stone artifacts found in gravels now under calcareous marls at Clacton and at East Farm, Barnham, Kent. The technology was similar to the earlier ones but did not include axe making.

However axe finds at Hoxne - a former lake site with a river later superimposed has yielded axes, as have numerous other sites. These axes are identified with much more ancient ones mentioned above so their use as dating material is no longer valid. This interglacial had an open deciduous nature. Scrapers and other tools show use as hide cutters, woodcutters etc. So we see these people had a reasonable comfortable life with clothing etc. Swancombe man is the only European site where human bones are associated with hand axes. He is almost modern man but classified as Archaic Neanderthal. There were other interglacial periods in East Anglia with practically no signs of human

occupation probably because the forest was too dense to permit it.

At Plas Newydd, North Wales, human remains of c200,000 BC were found in a former cave later overwhelmed by clay in a later glacial period. The fragmentary remains showed Neanderthal characteristics - especially the tooth were sometimes fused together.

By 35,000 BC, Cro-Magnon (modern man) arrived in Europe. He appears to have developed in South Africa where remains dated 129,000 BC have been found in a cave. It seems a genetic mutation in a female in that area caused her to be the origin of all modern man. The date of this South African find agrees with dates of similar finds in France.

### **Unravelling Prehistoric Textiles**

25 November 1991, *Dee Dee Roche, Research Student at Cambridge and CA G member*

Specimens of ancient textiles are often very fragmentary but can reveal the methods of weaving, the kinds of fibres used, and perhaps throw light on the environment of the district where the fabric was made. In some cases even the type of loom can be established from the weave produced. It is rare that actual remains of looms are found as they were made of wood and often demountable.

Fibre choice was limited by availability and varied from silk in China to cedar fibres. The earliest fibre being wool from sheep of the Jacobs sheep type whose wool was plucked from them, not sheared.

Flax was grown; often the plants were pulled from the ground to obtain maximum length of fibre. The plants were retted in ponds, then dried, pounded and combed, ready to spin into linen threads. The speaker showed specimens to exhibit various stages. Spinning was done by using several types of spindle, slides showed the dropped spindle, the supported spindle, (used to produce delicate cotton thread) etc.

Weaving began with setting up the threads - the backbone of the fabric and then passing a shuttle through them. A great improvement was the use of a heddle which raised some of the warp threads so leaving a space (the "shed") to facilitate the passing of the shuttle. The weft was then pressed down produce a dense fabric, the warp was tensioned by the use of loomweights though other methods, such as pushing by the foot could be used. Fulling made the fabric denser. Finally dyeing, then cropping to make the surface level produced the finished cloth.

Various modes of production occurred. The simplest one was the making of cloth in households using entirely local fibres. This developed with some division of labour and then into workshop production with more equipment, storing facilities and a marketing system. This last stage is pictured at Pompeii.

The work was not full-time always in earlier times and even today the producers of Harris Tweed are often part timers and have other occupations.

Archaeological remains:- Textile fabrics are sometimes found in this country in wet sites or testified by carbonised remains after fires. Metal objects which had been associated with fabrics may picture the latter with metallic salts, clay impressions also occur.

Finds of flax seeds, bundles of flax in retting pools, shears, tools to pack weft threads down, loom weights are all evidence of textile making. Post holes said to show the sites of looms are doubtful evidence and loom weights - in some cases - may have been made for other purposes.

The speaker concluded by saying that traditional assignments of functions to finds need critical re-appraisal.

### **The Boss Hall Anglo-Saxon Cemetery, Ipswich**

2nd December 1991, *John Newman, FSA, AIFA, Assistant Field Officer, Suffolk County Archaeological Unit.*

East Anglia was one of the most powerful Saxon kingdoms among the septarchy. Settlement was mainly along river valleys, Ipswich ware is commonly found on these seventh century sites, south of the Stour (the East Anglian boundary) it is uncommon. Few habitation sites have been found - none in the central clay belt.

Several cemeteries have been found, none very large. The earlier ones seem to reflect a fairly egalitarian society;



with the coming of kings and then Christianity appear graves of the elite and graves of low status-eg Snape cemetery. Many sites occur up and down the River Deben and in the Gipping Valley.

Boss Hall, a moated medieval site, is on a gravel terrace between the Gipping and the Sproughton Road which nearby joins the Bramford Road. Formerly there was a chapel dedicated to St Albright (Aelthelbeorht) the East Anglian King (died AD 794).

Levelling of the site by developers discovered by chance four cremation urns, later studies uncovered another one and 22 inhumations, all oriented with head to west. The acid soil had left no skeletons and little in the way of sand images. None had been coffins but artefacts found were shield bosses, knives, studs, spears among the male graves, the females were buried with cruciform brooches, chatelaines, little amber objects etc. The wealthiest female grave had a silver cosmetic set with wire rings and a composite brooch with garnets - this being about three inches across - of Kentish type. Silver coins and a gold solidus of the Merovingian King Sigebert III (634-656 AD) used as a pendant had been buried in a linen bag under the lady's robe. The silver coin dated to c700 AD

There was an intrusive male grave of higher status than the others. Here the burial had been in a wooden chamber and surrounded by four cremation urns, and held a shield boss, three spearheads and various small articles. Originally it had been covered with a round barrow.

The excavations had to be carried out with some haste as construction work was pending. The finds in the chambered grave were lifted on a metal sheet en bloc and treated at the British Museum where they are at present on display in the current Anglo-Saxon exhibition. It is thought that the area excavated deals with only part of the cemetery as the remaining part is not available for excavation - at present under buildings.

It is not surprising that rich graves are to be found in this area as Sproughton manor was part of an estate belonging to the Archbishop of Canterbury and Bramford manor was a royal estate of 1400 acres belonging to Saxon Kings, as recorded in the Domesday Book. The surrounding districts - e.g. Ipswich with its Saxon cemetery at the Buttermarket carried on a thriving overseas trade.

## **Heraldry**

Monday 20th January 1992, *Mr David J Tassell, Member of the English Heraldry Society.*

A kind of heraldry has been used by man long before the Heraldry system we know today developed, family emblems were used in ancient times, as were mottoes. Egyptians, Greeks, and are mentioned in the Old Testament as using symbols used for gathering the Israelites together in their groups on their journey in the wilderness. The Babylonians used them and later the Persians during the reign of Darius, and then by the Romans.

An early instance in this country is Harold's banner (probably a dragon on a green field) at Hastings. The earliest heraldry of modern type is dated 1127 AD. This was passed down to the owner's nephew, but the practice really took off during the Crusades, because the use of visors made the knight unidentifiable to his followers. The increasing weight of armour made steel shields too heavy for use so leather ones, on wooden bases were developed. The framework below the leather made a visible shape in the leather and this, when painted, is the origin of some of the features displayed in coats of arms. Other features reflect the activities of these groups - e.g. moles for the specialists in undermining fortifications, poles for those who carried pole stakes to make rapid defences, stirrups for stirrup makers etc. Some are of a punning nature.

The system was put on a regular basis by the King's Heralds and in 1483 Richard III incorporated the Heralds into the Heralds Collage or Collage of Arms who are still the official granters of coats of arms. A similar body exists in Scotland where there are still occasional prosecutions for use of unregistered arms.

At one time heralds made periodic "Visitations of Arms" to ensure in each county that the law relating to arms was being followed - particularly that those who had inherited arms had notified the College.

Crests and Mottoes were a somewhat later feature in Achievements of Arms and were often changed by their bearers without formality.

It is a misconception that anyone can use the arms of a person of the same surname. This can only be done if a person can establish a legal claim through descent. Women's arms in Britain (and Portugal) are normally depicted on a lozenge, not a shield.

### **Hadrian's Wall**

Monday 27th January 1992, *Mr Stephen Greep, BA, PhD, AMA, FSA, MIFA, Principal Keeper, Tyne & Wear Museum Service.*

From the eighteenth century the Roman Wall was visited by interested people who often recorded the remains and the damage which was still being done to them. It was not till the nineteenth century that finds of inscriptions firmly attributed it to Hadrian - previously it had been credited to Severus who we now know was responsible for renovations to it.

The first written reference to fortifications here is by Tacitus (in Agricola) which accords with studies of the building at Corbridge (which date it to 79-80 AD), a key site, as it is the crossing of Dere Street and Stanegate, and the site of the earliest fort and was still important even in times of withdrawal. Originally the wall stopped at Newcastle, a later addition of 14 miles to Wallsend brought it up to 80 Roman miles. Two milestones near Vindolanda are still in their original positions. The wall itself was started in the 120's AD as a result of a visit by Hadrian.

The construction was entrusted to three legions. Other labour was provided – e.g. a vexillation from the Roman fleet. The original plan was to make the wall ten Roman feet wide but the Wallsend addition was only eight feet and so was the length to the west of the River Irthing. The height seems to have been 15 feet plus crenelations etc of 6 feet - a total of 21 feet. There are no remains of the latter but it seems to have been Roman practice - they are depicted on Trajan's column. Recent work suggests the structure was lime-washed, though not perhaps from the beginning. Modern reconstructions at Vindolanda and South Shields show how expensive the project was. The western end was originally a turf wall, probably due to a shortage of suitable stone there, and defences were continued by a series of fortlets down the Cumbrian coast. The biggest constructional difficulties were carrying the wall on bridges over the North Tyne and River Irthing.

A gateway in the wall at each fort allowed trade and traffic through, as did gates in each mile tower. This permitted trade with the tribes to the north and no doubt the levying of customs. However it was soon found that there was over-provision of gates and some were filled in.

A flat bottomed ditch was originally provided to the south of the wall. Each side had banks so the structure was 120 feet wide. The intention seems to have been to keep native settlements away from the wall. This ditch (the vallum) was discarded soon and filled in as shown by the fact that some forts, originally to the rear of the wall were brought up to the wall and partly built over the vallum. In the 140's the construction of the Antonine Wall to the north caused the temporary abandonment of Hadrian's Wall - probably a political move as a forward policy brought kudos, but later this advance was abandoned and Hadrian's Wall became the frontier again.

The sixteen forts could accommodate 9,500 men. Some were legionary (eg Housesteads), some cavalry (eg Chesters) and some mixed. The wall and its forts do not appear to have been the scenes of battles, the policy was one of defence in depth and there were other military sites both to the north and south. The large Roman presence entailed having temples, barns etc and the forts were provided with baths, hospitals, sanitation etc.

Early third century barbarian activity prompted the arrival of Severus who ordered the refurbishment of the Wall and the building of a number of barns at South Shields (he died at York). Many gateways were closed up or narrowed to ensure closer control.

In later days of the empire the soldiers seem to have had their families move into the forts and remains of civilian type housing have been found.

The wall was occupied till very late Romano-British times and in the Dark Ages timber buildings were added. Brigands (moss troupers) later found the fortlets good places to live in until settled times came.

### **Bone Working in Roman Britain**

3rd February 1992, Nina Crummy, BA, Finds Analysis, Colchester Archaeological Trust.

The speaker began with a brief review of some of the ancient use of bone-one of the earliest materials used by man - beginning with hammers or clubs of 5,000,000 BC. long after this comes a necklace of fox's teeth from Neanderthal times, then finds in the West Kennett barrow and Skara Brae. Snailwell barrow had bone awls and a needle very like a Saxon one. Slides showed a stringed instrument made from a sheep's tibia and an apple corer, both medieval.

Roman society was a 'consumer society' and bone was used for a great variety of purposes though often not so prestigious as metal or shale. Long bones made knife handles, dice, pins, needles and combs. Pins often had carved heads-(one illustrated had a bust) and folding knives (with e.g. Venus) Horn was used for horses' cheek pieces.

The quality of work varied. In Britain the most skilled work was, in Roman times, at first imported - e.g. a military buckle. Later, very fine work was produced here, as shown by finds from Winchester and Butt Road, Colchester. c360-365 AD combs made of three pieces of antler riveted together and of Germanic type were made. These often had decorated ends and patterned with dot and ring decoration.

One of the finest pieces of bone work or antler comes from Winchester. This was a box decorated with bone plates, containing a comb. The bone was decorated after the plates had been attached to the box. This was the work of a gifted craftsman.

A surprisingly small proportion of bone or antler can be used in the craft. The metacarpal bones of cattle (or more rarely, horses) are the most robust. Scapulae, though large, have small amount of useful material but were sometimes used, e.g. for weaving tablets in braid making. Antlers, though easy to come by, did not have a great deal of usable material. Modern experiments show that some artefacts, e.g. pins, could be made by experienced workers in a very short time.

In Britain evidence of bone working sites is scanty. Pitt-Rivers found a site in Cranbourne Chase with spoons of various states and quality and Winchester had sites with vast lots of residue which seem to have been dumped, perhaps by civic authorities. Butt Road has well defined areas of secondary waste with work of unparalleled skill, e.g. a bird in flight and foliage. The site was used in early times when the area was probably used for little industrial work, grazing etc.

It is quite possible that craftsmen were itinerant, as they were in Viking times, though cruder could be produced in situ. The economic side of studies in Roman boneworking would be greatly strengthened if more sites of primary bone working could be located.

### **The Economic History of Country house building**

10th February 1992, *Dr Richard S Wilson, School of Social Studies, University of East Anglia.*

Studies of "The Country House" have mainly been made by architects and art historians, mostly interested in style etc, not in economics. Questions such as their number, cost, distribution and the size of their surrounding estates have not had much consideration.

In the eighteenth century enclosures and improved agricultural methods resulted in land becoming more profitable and the ownership more concentrated into large estates and the profits - were they siphoned off or used in improvements?

In the seventeenth century large houses in the country were not often given more than modest improvements, and did not change hands very frequently, though in Essex and Hertfordshire, exceptionally many were acquired by London brewers, merchants etc.

The speaker's researches have been largely in Norfolk which appears to have been typical of most counties. He computes that from 1700 AD onward that county had 119 houses started, altered or extended on estates of 3,000 acres or more and 124 on estates of 1,000-3,000 acres. These figures break down as follows:-

In periods of 50 years	3,000+	1,000-3,0000 acres
1700-49	19	20
1750-99	28	24
1800-49	35	42
1850-99	24	26
post 1900	13	12
	<hr/> 119	<hr/> 124

The New Domesday Book of 1873 gives 68 in the first category and 144 in the second - classification is difficult.

There is a demonstration effect - the building of a big house such as Castle Howard results in its style being reflected in its area and a desire to emulate it. Extraordinary amounts were spent on houses. In Essex £100,000 was spent on cutting Audley End down and some remodelling. Walpole's Houghton Hall (1710's-1720's) not so large as some, was built regardless of cost. The stone used was brought from near Whitby to Kings Lynn and then carted 15 miles to the site and mahogany was used on a large scale as at Holkham, which was 30 years in the building (at a cost of £92,000) and finished by the founder's widow. There are only three houses in Norfolk of this calibre.

Unfortunately the bills for these great houses rarely survive, though one set, for Haverland Hall (1839-43) costing £21,000 has 200 weekly reports by Armstrong Clerk of the Works. Costs here were closely controlled. At peak times 86 men were employed. It was built in a recession, just before the advent of railways. It was stone built with stone from Brinke. Labour was mostly locally recruited but masons and other craftsmen came from a considerable distance. The building of such houses had a great effect on the local economy. (This house has now been demolished).

There was a social pyramid from the owners of the greatest houses through less but well off owners and prosperous clergy to the urban elites with its professional people such as town clerks. This is shown by the surviving substantial houses in Norwich.

The speaker gave many instances of the costs of building these handsome buildings, too numerous to record here.

#### **Survey Archaeology in Greece. What difference has it made?**

17th February 1992, *Dr Robin Osborne, Corpus Christi College, O~'ord.*

The first through archaeology surveys in Greece were carried out by a German army party in the late nineteenth century in Attica which made a through survey of what is now Athens airport and a limited region. This resulted in a fine map and a written description. Sir James Fraser writing on classical travel writers gives a good description of the state of the subject in the early twentieth century and since then there have been a great increase in the study, at first especially focussed on prehistoric Greece (especially Mycenaen). An early enthusiast was Hope Simpson whose work was rough and ready and gave a crude understanding of the landscapes. Upstanding monuments were recorded but less conspicuous sites left unrecorded.

One site which received careful attention was the valley in Elis where it was proposed to build a dam in the 60's, and another was Milos in 1970. Careful surveys were made in arcadia to see if the foundation of Megalopolis in 370 BC had resulted in changes in the surrounding landscape, but this showed that the questions could not be answered in this way. British work has been carried out in Sparta and the area to the north (interesting as the Spartans did not leave many substantial remains).

An attempt was made, in the same way, to see if the "Isthmus corridor" was the entry route for the Dorian invasion, but with scant success.

In twenty years much was found by these surveys and the employment of field walking with sampling techniques, at first with walkers 5 metres apart (too labour consuming) then 15 metres apart.

In many parts of Greece there is a widespread 'background scatter' of sherds. Where this is thin a somewhat thin but somewhat more concentrated area may well be a site - of a settlement, shrine, burial site. But a similar concentration in an area with more 'background scatter' this would be of no significance. Rarely is the pottery which is found of an attractive nature and accordingly it is often difficult to get the results of this field walking into print.

The speaker spoke particularly of his work in Boetia where successive periods of occupation with its rise and fall at different times from Neolithic to late Roman can be established, rising at first to the E.B.A., then much less in Late Bronze Age rising again in the Geometric and Archaic periods with a decline again in Classical times leading to increasing activity observable in Roman and Hellenistic periods. Similar research on Thasos has led to the same discovery.

Close dating of these changes in population or activity are up to now not possible because close dating of coarse pottery is a study still not adequate to the task.

The speaker concluded with an account of the tower sites etc in the ancient silver mining area in the far south of Attica. Mapping of sites shows the occupation was thickest on the stretches of good soil - perhaps to provide supplies to the very considerable slave and convict labour force at the mines.

### **Aspects of Bronze Age Metalwork in Essex**

24th February 1992, *Paul Sealey BA, PhD, Assistant Keeper, Archaeology, Colchester and Essex Museum - and CAG member.*

The main question is "How did the metalwork, found by archaeologists, get into the ground?" In Britain, a Copper Age lasting approximately 2,500 to 2,250 BC developed into the Early Bronze Age lasting to approximately 1,500 BC. Copper artefacts were of little practical use but had prestige value, and were copied in flint-Essex has few finds of this period, a rare example being the Salcott E.B.A. bronze flat axe.

Like gold objects of the period early bronze objects - rings, bracelets, etc were purely for prestige and ornament. It was thought that awls were an exception but Dr Sealey suggests that the recent find in an Austrian glacier of a tattooed body is that they may have been used for tattooing.

Essex, far from copper and tin sources, was late in producing bronze objects but by c1200 BC a large amount of these had found their way here and 'scrap bronze' was reworked into beautifully made objects-depressingly these were mostly swords, rapiers and palstaves. Warfare had become a way of life and the 'heroic' way of conducting relations between communities.

Ritual throwing of such objects into lakes and rivers (e.g. the Thames) has resulted in a great many finds. In 1973-74 a find in an originally wet situation produced a spectacular number of palstaves and weapons at Grays, Thurrock.

A remarkable example of Bronze Age workmanship is the sheet metal cauldron from Sheepen (Hawkes and Hull), considered by Hull to be a copy of an 8th century BC Greek model but now known to be native work from c1200 BC - the earliest in Britain. The bronze sheets formed into the cauldron were riveted with copper rivets, suggesting the maker could not trust himself to work entirely in Bronze. This cauldron appeared to have been ritually buried. Continual deposits of bronze must have made available supplies scarce.

The craft had spread to Essex from Northern France and then from Britain to Northern Ireland.

After c1000 BC ritual depositions seem to cease. The Deverel-Rimbury Ring three at Ardleigh produced only a very small fragment of a bronze bracelet, though many burials. However later there was a revival of the practice.

The speaker then turned to the subject of bronze hoards, of which there were many in Essex. These were mostly of hoards ready to be recycled, of broken pieces which generally could not be pieced together. This implies the chiefs collected together all the 'scrap bronze' they could obtain and then distributed to bronze founders, who often stored it in the ground for use later. These hoards of L.B.A. are often dominated by great numbers of axes, not sickles, as one would expect. A Dovercourt hoard had 29 axes. This suggests they may have been used as a primitive currency.

The last phase of bronze working is not represented in Essex finds. The Early Iron Age seems to have been developed rather more suddenly here than in most other areas and bronze objects were not in great demand - hence the large number of abandoned founders hoards.

### **Moats in the Suffolk Landscape**

16th October 1992, *Edward A Martin, BA, Archaeology Officer, Suffolk County Council Planning Department.*

Most moated sites are not (as usually pictured) banked and defensive. The later ones surround 12<sup>th</sup> century castles and are often dry. Essex and Suffolk each has about 800 moated sites - neither county being unduly subject to warfare. In each county they appear in clay areas; moats were difficult to be made in sandy or chalk areas, and nation wide occur most often in clay areas.

They are similarly found in Holland, France and Germany and as England were emblems of social status - the great lords built moated castles, the knights and lords built manor houses on flat sites surrounded by moats. The moats were often at their most impressive size on the approach side and were frequently skimmed with 'short cuts' where not generally visible. The house was normally in the centre of the island as it was unsafe to build on the moat edge. Parsonages (and often manorial farm buildings) were often moated. In the last 500 years many moats - especially those subsidiary moats have been lost.

The earliest moats were merely boundary ditches and sometimes enclosed both the house and parish church, and as at Brockly, Suffolk, the house still stands on its acre island. Kenton Hall had a complex moated system - only part survives. The front was frequently presented as a gatehouse, though island sites in East Anglia rarely have farm buildings or churches sharing the manor house island. Hitcham is a good example of the "pecking order" conveyed by moats. The Bishop's bailiff's house had no moat but the manors of several free tenants were moated. A map of 1355 AD shows similar conditions at Worlingmouth.

The provision of moats fell into decline, but at the end of the middle ages a fresh wave of moats occurred. These were very showy - described as "Old Soldiers Dream" as they probably derive from picturesque French buildings. They have wide moats with reverted inner banks so the buildings - often with towers - could be built at the water's edge and give reflections below. Wingfield, Helmingham, Kirby Muxloe are examples. Hengrave Hall was never completely moated and the entrance drive has short stretches of moat each side of the bridge (1538). Westhorpe has brick revetting where it is visible and terra cotta coats of arms of Charles Brandon, Duke of Suffolk and Mary Tudor his wife (daughter of Henry VII). The service buildings are not enclosed.

The speaker described many more moated buildings, concluding with two oddities - pleasure buildings - Leatheringham Lodge (c1600) with its non-functional moat, and a small property on a small moated site, all taken up by the house which was on an adjunct of the nearby Wingfield house.

### **Activities of Group Members**

9 March 1992.

The CAG members gave talks on their activities in the past year, each illustrated with slides.

1. Richard Shackle has investigated a small timber framed building at Forward Green, Stonham Aspal, Suffolk. It had been re-erected in Tudor times with its corner near the corner of another building. Originally wattle and daub, on its new site it had been given brick nogging and is now being much restored after a long spell of life as a store, during which the interior had been whitewashed. The whitewash had covered Tudor wall paintings-Tudor rose, flowers, stars, sun etc. A suggestion had been made that possibly it had been a market hall at some where like Stowmarket. At one time it had oriel windows on three sides and a staircase tower. There was a wardrobe on the first floor next to the brick chimney stack. The original site of this building is quite unknown.
2. James Fawn and a few other members had sectioned the Roman road near the villa site at Great Tey. The road had showed itself in air photos and the villa was partially excavated some years ago. The road was a "dual carriage" one and 62 feet from the outsides of the two bounding ditches. The only metal objects found were two nails. A piece of a tegula was also found. All the ditches were deep - the outer ones going down a metre into chalky boulder clay. On the west side earlier gullies appear to be associated with a near by Bronze Age enclosure and they held Bronze Age and early Iron Age pottery fragments. The purpose of building such an ambitious road here is not clear, neither is its relationship with the villa. Part of the line of the road is preserved in a section of Great Tey Village Street. The speaker described parallels with other Roman roads in the area-especially the one 'dug' some time ago on the CRGS playing field and the one which runs across the field behind 102-130 Halstead Road, Stanway.

3. Pat Adkins has field-walked practically all seven miles of the exposed strip where Anglia Water is pipe laying in Messing, Birch, Copford etc. He worked partly in co-operation with The Colchester Archaeological Trust and also studied land on the old Birch airfield designated for gravel extraction.

The whole area has enclosures identified on it – e.g. a large ring, partly in the garden of Curate's cottage at Birch, another round feature near Hardy's Green of Iron Age date, another stretch of pipe laying 82 metres long had much Iron Age pottery-but so fragile that only one piece was big enough to identify. The road from Maldon Road at Old Post Office corner towards Birch Village has a mill site on the East side of the road and features which probably are connected with it on the opposite side.

Here is a very large oval ditch (cropmark) which stretches across the road, surrounding the two sites just mentioned. Many of the sites described are rectangular. Altogether he described far too many archaeological sites for them all to be recorded here.

However it is hoped that the CAG Bulletin will be able to carry articles giving more adequate accounts of all three members' researches in due course.