ESSEX

ARCHAEOLOGY AND HISTORY

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THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

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The Society was founded in 1852 as the Essex Archaeological Society. Its objects are:

1. To promote and encourage the study of the archaeology and history of the historic county of Essex.
2. In furtherance of the above, to publish the results of such studies in its journal and to disseminate information on matters relating to archaeology and history in Essex through appropriate media.
3. To organise conferences, lectures and visits for the benefit of members and interested members of the public; to educate the wider community in the historical and archaeological heritage of Essex; to co-operate with other bodies on matters of common interest and concern.
4. To provide library facilities for Society members and approved members of the public.

Publications
The articles in its journal range over the whole field of local history. Back numbers are available; a list and prices can be obtained on application to the Librarian. Members receive a regular Newsletter covering all aspects of the Society's activities, news of current excavations and fieldwork, and items of topical interest.

The Library
The Library is housed in the Albert Sloman Library at Essex University, Colchester, and is extensive. It aims to include all books on Essex history, and has many runs of publications by kindred Societies. Members may use the Library on any week day during Library opening hours, on presentation of a signed membership card.

Membership
Application should be made to the Hon. Membership Secretary (address inside back cover where a list of other officers can also be found).

Subscribing Societies in Essex
Billericay Archaeological and History Society; Brain Valley Archaeological Society; Chigwell School; Colchester Archaeological Group; Convent of the Sacred Heart, New Hall, Boreham; Essex Local History Recorder Scheme; Essex Society for Family History; The Friends of Historic Essex; Halstead and District Local History Society; Haverhill and District Archaeological Group; Havering and District Archaeology Group; Ingatestone and Fryerning Historical and Archaeological Society; Maldon Archaeological Group; Mayflower High School Billericay; Nazeing History Workshop; Philip Morant School, Colchester; Rochford Field Group; Saffron Walden Historical Society; Waltham Abbey Historical Society; Westcliffe High School for Girls; West Essex Archaeological Group; Woodford and District Historical Society.

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Margaret Ursula Jones, née Owen, 1916 -2001

Margaret Jones, who has died aged 84, was almost the last of the self-taught rescue archaeologists who bridged the eras of amateur and modern institutional and contractual archaeology. The Mucking excavations and Margaret Jones are inexplicably linked in the folklore of the British archaeological world, and those familiar with that world will all know something of this famous 'dig.' Many who worked at Mucking will have had life changing experiences and events to recall; others perhaps will have heard stories and rumours (probably all true) about the legendary excavations and their director, Margaret U. Jones.

Studying geography at Liverpool University in the 1930s, she got her taste for archaeology as a volunteer on a number of hill fort excavations, working for the energetic amateur archaeologist W.J. Varley. It was on these excavations she met Thomas William Jones and they married in 1940. Margaret and Tom were parted for most of the war. When normality returned, they tried their hand at freelance photojournalism. However by 1956 Margaret embarked on an archaeological career, soon to be joined by Tom as assistant supervisor and photographer. Excavations were carried out at Stanton Low, Buckinghamshire, and the Roman Town of Aldborough, Yorkshire. In 1960 rescue work was undertaken at Old Sleaford, in Lincolnshire, and discovered the largest known Iron Age mint in Europe.

In September 1965 Margaret arrived in Thurrock to undertake a six-week excavation of a cropmark site already being destroyed by gravel quarrying. Her career culminated here at Mucking on the north bank of the Thames estuary, in what became 13 years of excavation and seven years of post-excavation work. Although the first couple of seasons saw breaks in the excavation, funding by the 1970s saw all year round excavation, keeping one step ahead of the total destruction wrought by the gravel quarrying. To understand the enormity of this pioneering landscape archaeology, it is necessary to consider the statistics: 44,000 features identified over 45 acres of ground by a staggering 5000 excavators.

The Mucking rescue excavations revealed a palimpsest of land-use and settlement: Neolithic pits and postholes; early Bronze Age activity, barrows and inhumation burials and a field system; a later Bronze Age hill fort and salt industry; Iron Age farmsteads and ditched enclosures; a Roman farmstead and extended field system with wells, pottery kilns, corn driers and five cemeteries; Anglo-Saxon settlements, over 200 *Grubenhauser* and two associated cemeteries; and finally, a medieval windmill.

Margaret was totally dedicated, determined, organised, resourceful, energetic and disciplined. Her influence over the total management of this dig was quiet but profound. While she could be blunt and was thought eccentric by some, being nicknamed Boadicea by the Ministry of Works staff, she commanded respect and even warmth from those working on site.

Margaret was very widely read in archaeological literature, assiduously pursuing parallels for artefacts and feature typology. In 1974, she was elected a Fellow of the Society of Antiquaries. She was however happiest when she had trowel or shovel in hand, eagerly involving herself in observing developing soil marks and interpreting ditch, pit or posthole sections, always making back-up notes in her own set of notebooks. Despite all the other work involved in running such a large excavation, she also ordered equipment, food, and machinery, while having one eye on camp cook, site orderlies and time keeping. She also encouraged the feeding of wholesome food to diggers to give them extra energy on site: honey, peanuts and whole meal bread, sardines and a good cup of tea.

I have had little experience other than gravel archaeology so it would be unfair for me to compare her archaeological field skills. Margaret taught me from my first day as a 12 year old boy with absolutely no knowledge of what was going on, volunteered to help out, as 'an extra pair of hands means more will be rescued'. However I have since observed many archaeologists working in gravels, and feel confident that her sensitivity of eye and

touch with trowel, dustpan and bucket to hand, has not been surpassed.

The final part of the post-excavation work was completed without Margaret. The challenge presented by the huge corpus of material, and differences of opinion, led to Margaret and Tom retiring to their cottage in Hereford. Tom had a stroke and after three years of being cared for by Margaret, he died in 1993. Margaret battled on. Margaret's dying wish was to establish a 'Margaret and Tom Jones Fund' with the Society of Antiquaries. Margaret instructed that the remains of her estate were to be used for this fund, which is to provide grants to individuals researching 'themes related to the methods used or results gained at the excavations at Mucking Essex 1965-78'.

English Heritage have since published two volumes of the 'Excavations At Mucking', 'The site atlas' and 'The Anglo-Saxon settlements'. Others covering the prehistoric and Roman settlement as well as the Saxon cemeteries will hopefully follow.

In total some 5000 diggers from all round the world had a taste of Mucking, some for one day only, others surviving a summer season and a few hardier souls several years. Many who passed through Mucking will remember that Margaret was willing to share her knowledge with all, and in many cases encouraged her volunteers into a career in heritage, museums and archaeology. It was noted in one obituary that to have worked at Mucking under Margaret Jones was to have a badge of honour! I wear mine with pride.

Jonathon Catton

W.J. Petchey, 1935-2001

William John (Bill) Petchey was a Maldon man, brought up in the old London Road Fire Station, where his father was Chief Officer. Conveniently opposite lived the aging Plume librarian, Sydney Deed, whose wife conscripted the agile 'young Petchey' to reach books down from the upper shelves of the Library while her husband compiled his catalogue. From this derived Bill's lifelong fascination with history in all its forms.

Moving on from All Saints School to Maldon Grammar School, the history of which he published in 1958, a scholarship took him to Cambridge and then he went on to a career in teaching. He spent most of his working life at Ripon Grammar School, where he became a housemaster, but during school holidays he was frequently in Essex, gathering material for his Ph.D. thesis on 'The Borough of Maldon 1500-1688'. After getting his doctorate from Leicester University in 1972, his thesis was edited into a book, *A prospect of Maldon 1500-1689*, published by the Essex Record Office, and surely the definitive study of the town in this period.

Retiring early to care for his elderly mother, Bill taught classes on local history for the Workers Educational Association, and after her death returned to his beloved Plume Library as librarian. To be conducted round the library by Bill was to get an insight into the world of the 17th century granted to few. He was actively engaged in a project for computerising the enhanced catalogue at his death. Bill had a wide range of other interests, including heraldry and brass-rubbing, and a fund of anecdote which made him a delightful companion over lunch or a pint of real ale. His knowledge of Maldon's history was always available for other students and for occasional talks in the town. Few of those present will forget a Maldon Society meeting in the Labour Hall when he gave a talk on Beeleigh Abbey in the dark, without a note, during a power failure.

Max and Olive Earnshaw

Our Triple Jubilee:
the Essex Archaeological Society 1852-2002[1]

by W.R. Powell

FOUNDATION

1   The Essex Archaeological Society (since 1985 called the Essex Society for Archaeology and History), was formed at Colchester on 14 December 1852. Essex was by no means the first county to form such an association. For over ten years interest in antiquities had been growing rapidly throughout England, stimulated by the work of the second Record Commission, the foundation of the British Archaeological Association and its rival, the Royal Archaeological Institute, and by the opening of the Public Record Office.[2] Meanwhile the formation of

county-wide associations was being facilitated by the new penny post and the building of the railways. In 1841 there had been only one antiquarian society claiming county status: the Royal Institution of Cornwall, founded in 1818.[3] But to this can be added the Society of Antiquaries of Newcastle-upon-Tyne (1813), the Surtees Society (1834), the Shropshire and North Wales Natural History and Antiquarian Society (1835), the Oxford Society for Promoting the Study of Gothic Architecture (1839, later the Oxford Architectural and Historical Society), and the Cambridge Antiquarian Society (1840).[4] The Newcastle Society embraced Durham as well as Northumberland. The Surtees Society, designed to publish records relating to 'those parts of England and Scotland which had formed the kingdom of Northumbria' was largely concerned with Yorkshire. The Oxford and Cambridge societies were at first devoted mainly to the university towns.

2   Between 1843 and 1851 antiquarian societies were formed in ten other counties, including Hertfordshire (1845), Norfolk (1847), and Suffolk (1848).[5] Essex and five more counties followed between 1852 and 1857.[6] The last of these was Kent, which was goaded into independent action when the Surrey Archaeological Society, founded in 1854, launched a take-over bid by proposing a united society for the two counties.[7] It is clear from this episode that the antiquarian movement had a strong competitive element, for it was pointed out at the time that while each of the surrounding counties of Sussex, Surrey, Middlesex and Essex had its own society, Kent did not.[8]

3   The origins of the Essex Archaeological Society have been traced back to 1850, when the Colchester Literary Institution formed an archaeological association 'to obtain and record faithful accounts of the antiquities discovered in this town and county.'[9] The moving spirit was William Wire, a watchmaker and zealous antiquarian, who had previously attempted to set up a museum at Colchester. He became secretary of the new association, hoping to receive a salary 'which would have assisted me very much in my archaeological studies', but resigned when a local vicar was appointed honorary secretary. Henry Jenkins, rector of Stanway,[10] was elected

president of the new association, and P. Martin Duncan, physician, as vice-president. By November 1850 the association had 18 members paying 5s. a year and 19 paying 2s. 6d. Meetings were held monthly, with an average attendance of seven in the first year, rising to fifteen 'and many others' by June 1852. In September 1852 it was proposed that the association should be transformed into a county society, independent of the Colchester Literary Institution, and in November a provisional committee published 'A Prospectus of the Essex Archaeological Society', together with list of members already enrolled.

4 The formal inaugural meeting was held in Colchester town hall on 14 December, under the chairmanship of the mayor.[11] It was attended by many clergy and gentlemen, including Charles Burney, archdeacon of Colchester, J. Gurdon Rebow of Wivenhoe Park, and Charles Gray Round of Birch Hall. C.G. Round, who also owned Colchester Castle and the adjoining Hollytrees house, was head of a leading Essex family. His brother, James T. Round, rector of All Saints, Colchester, and their cousin George Round, banker, of East Hill, Colchester, also attended the meeting.

5 The inaugural meeting must have been well planned for it immediately elected all its officers and council for the first year. John Disney, of the Hyde, Ingatestone, became president.[12] He was a wealthy collector of antiquities, who had recently founded the Disney professorship of archaeology at Cambridge. Charles Gray Round became honorary treasurer. As honorary secretary the new Society elected Edward Lewis Cutts, a young Yorkshireman who had come to Essex in 1850, as curate of Great Coggeshall. He had been the first to suggest the formation of the E.A.S., had drafted its original prospectus, and can fairly be regarded as the founder of the Society.

6 The inaugural meeting elected as vice-presidents an impressive list of noblemen and gentlemen. The Council of the new Society comprised the president, vice-presidents, and nineteen nominated members. Several Council members had been active in the previous Colchester association. Of the others, Frederic Chancellor and Henry W. King would give the Society long, outstanding service, while William Stubbs, then vicar of Navestock, became a distinguished medieval historian and bishop of Oxford. After the business meeting on 14 December some 35 members of the new Society re-assembled at the Cups Hotel, and 'partook of a bountiful dinner', including a pint of wine, at 7s. 6d. each, a substantial sum indicating the exclusive nature of the Society.

THE FIRST 'JUBILEE': 1852-1903

7 The Society's history falls into three periods, similar in length, but with distinctive features arising from the personalities involved as well as general economic, social and educational changes and two world wars. The first period extends from the formation of the Society to the jubilee celebrations and the resignation of G. Alan Lowndes, the last of the 'timeless' presidents. In this period the membership as recorded in the annual reports, rose from 250 in 1871 to 352 in 1903. The annual subscription throughout was 10s. 6d. (52½ new pence). The members, who had to be proposed and elected at a general meeting, were gentry, clergy, and other professional men.[13] They were interested in traditional antiquarian subjects, particularly churches, their fittings and sepulchral monuments; manorial history, genealogy and heraldry; and in building up the museum at Colchester. Social activities took the form of excursions within the county. Descriptions of meetings, as well as learned articles, were published in the Society's *Transactions*.

Presidents

8 The first president, John Disney, seems to have resigned in 1856, shortly before his death.[14] He was succeeded by Richard C. Neville of Audley End (1856-61, from 1858 Lord Braybrooke), a distinguished archaeologist whose discoveries included the Roman town at Great Chesterford; and Sir Thomas B. Western, Bt., of Kelvedon (1861-73). Neville and Western both took an active interest in the Society, cut short by death. Sir Henry Selwin-Ibbetson, Bt. of Down Hall, Hatfield Broad Oak (1874-6) seems never to have attended any meetings. Sir Thomas Sutton Western, Bt., son of Sir Thomas, was elected president in 1876, but died in the following year. His successor was G. Alan Lowndes, of Barrington Hall, Hatfield Broad Oak (1877-1903).

9 Lowndes, who was a Lancashire man, had inherited Barrington Hall in 1840. This was one of Essex's oldest estates, having descended in the Barrington family from the 12th century to 1832.[15] It had preserved a remarkable series of original records, and Lowndes used these in three articles contributed to the society's *Transactions*.[16] He served as high sheriff of Essex (1861) and as an alderman of Essex County Council from 1889. As president of the Society he 'was a constant attendant at its meetings, no matter in which corner of the county they happened to be held.'[17] He resigned from ill-health in 1903 and died in June 1904.[18] There is little doubt that he had outstayed his welcome, and in April 1904 the annual general meeting resolved unanimously 'that anyone who has been elected president at five consecutive annual general meetings should be *ipso facto* not eligible for re-election to that office until the third annual meeting after his last election.'[19] Lowndes's obituary in the *Transactions* is meagre and cool.[20]

Vice-Presidents

10 At its inaugural meeting the Society elected sixteen vice-presidents, headed by Earl de Grey, the bishops of London and Rochester, the Lords Petre and Rayleigh, Richard C. Neville, later Lord Braybrooke, and John Marsden, Disney professor of archaeology at Cambridge, who was also rector of Great Oakley.[21] They were all *ex-officio* members of Council. They and their successors were still regarded as such in 1881.[22] There were then no fewer than 24 of them, headed by the Earl of Rosslyn, the Lords Petre, Braybrooke, Rayleigh, and Carlingford, the Bishop of St. Albans, and nine M.P.s. By 1896 the list had been slimmed down to 16, headed by the Earl of Warwick, and the vice-presidents were no longer members of Council.[23] In Essex as elsewhere, the main function of the vice-presidents, during this period, was to guarantee the Society's credentials. Only one of them is known to have taken an active part in the Society's work: James Round, M.P., the honorary treasurer, and a vice-president by 1881.

Honorary Secretaries

11 Throughout the first 'Jubilee' the honorary secretary edited the *Transactions* as well as arranging meetings and excursions, keeping records, and correspondence. Edward L. Cutts, the founding secretary, served until 1866, and was mainly responsible for the early success of the Society (Plate 1).[24] He had been educated at Sheffield and at King's College, Cambridge. Coggeshall was his second

Plate 1 Edward Lewis Cutts (1824-1901). Honorary Secretary 1852-66. (From E.A.T. NS xviii, 28).

curacy. He was able, versatile and energetic. Even before coming to Essex he had published the first of many books on ecclesiastical history and archaeology. His career after leaving the county included a visit to the East to report for the Archbishops of Canterbury and York on the position of the Syrian and Chaldean churches. His photograph shows a tall, handsome man with a direct, challenging expression.[25] He was curate of Coggeshall (1850-7) and then of Kelvedon (1857-9) before becoming perpetual curate (vicar) of Billericay (1859-65). He contributed several articles and notes to the early volumes of the Society's *Transactions*. In 1865 he left Billericay for a post in London, but he kept in touch with the E.A.S., was elected an honorary member in 1894,[26] and was a member of council when he died in 1901.[27] His knowledge of Essex history appears in several of his books. His *Colchester* (1888) in Longmans 'Historic Towns' series went into a second edition in 1889. Although it devotes only 15 out of 214 pages to the post-17th-century history of the town, it is still useful for earlier periods. Cutts wrote well for the general reader, summarizing the researches of others, while appreciating the importance of original sources.

12 Cutts was succeeded by Henry W. King, another founder-member of the Society, who served until his death in 1893 (Plate 2).[28] He had been born in 1819, at Vange in Essex, and educated at Maldon. His working life, as a clerk in the Bank of England, was spent in London, but he returned to Essex on retirement in 1877, and lived for the rest of his life at Leigh. An obituary mentions his 'singular energy and persistence ... indomitable industry, patience and accuracy,' and his 'genial and kindly nature.' He published at least 135 items on Essex history (a total surpassed only by John Horace Round)[29] including about fifty in the *Transactions*. He also left to the Society a great collection of unpublished notes on the history of the county, including an illustrated survey, in five volumes, of the structure and contents of Essex churches, entitled 'Ecclesiae Essexienses.' This had occupied much of his leisure over thirty years, and it is particularly valuable as recording items that later disappeared during church restoration. King's collection, now in the Essex Record Office, also contains a profusely grangerized copy of Morant's *Essex*.[30] In later life, with a long grey beard, King looked every inch the venerable antiquary.[31]

13 George F. Beaumont, a Coggeshall solicitor, was secretary from 1893 to 1903. He was an authority on copyhold law and was steward (or sometimes the lord) of many Essex manors.[32] Having joined the Society in 1888, he was elected to Council in 1891. The publication of the first General Index to the *Transactions* (see para. 30 below) was probably carried out under his direction. Beaumont was said by his successor to have 'laid down the lines on which all honorary secretaries must proceed, if

Plate 2 Henry W. King (1819-93). Honorary Secretary 1866-93. (From Essex Review iii, 21).

their work is going to be successfully done.'[33] He may well have introduced the appointment of local secretaries (see para. **58**).

Honorary Treasurers

14   Charles Gray Round (1852-67)[34] was succeeded at his death by his nephew and heir, James Round, M.P., who remained treasurer until 1916.[35] The treasurer was assisted by a collector of members' subscriptions, who was paid on commission. Josiah Parish, collector 1852-83, was succeeded by his widow Sarah, who served until her death in 1902.[36] William Chapman Waller of Loughton, a member of Council, was then appointed honorary receiver of subscriptions, saving the Society £7 or £8 a year. From 1859 to 1867 Frederick Spurrell, rector of Faulkbourne, was financial secretary, a post apparently similar to that of membership secretary.

Museum

15   The E.A.S. on its foundation, took as one of its main objects the formation of a museum.[37] This had been attempted twice during the previous thirty years. The Colchester Philosophical Society (1820-43) had collected a few antiquities, mostly Roman. These were eventually given to the borough council, and in 1846 were placed in the town hall. They were later augmented by a collection of bronzes bequeathed to the town by Henry Vint, a former

mayor. Meanwhile, in 1840, William Wire 'watchmaker and dealer in curiosities,' had attempted to establish a local museum under his own control. Having fitted out a room in his own house in High Street, he invited donations 'either pecuniary or something of interest.' Donors would be entitled to visit the museum. Annual subscribers would 'very much help to forward the views of the proprietor.' This naive attempt to finance Wire's passion for archaeology found little support, and was soon abandoned. He died in 1857.

16   In 1860 the E.A.S. and Colchester Corporation combined to establish a permanent museum in the undercroft of Colchester castle, leased to the Corporation for the purpose by Charles Gray Round.[38] To this were transferred the antiquities in the town hall, and a number already collected by the Society. The castle accommodation did not, however, include proper facilities for the display of antiquities, and it would be many years before these were available. C.G. Round also provided the Society, rent free, with a cottage at the north-east corner of the castle, as a dwelling for the museum curator. The management of the new museum was vested in a joint committee of the Society and the corporation. It was agreed that the Corporation would contribute £30 a year towards the running costs of the museum, while the Society, besides housing the curator, would subscribe £5 towards his annual salary.[39] Charles Gunner, appointed curator in 1869, served until his death in 1885. In 1873 an honorary curator, Revd. Charles Acland, headmaster of Colchester grammar school, was appointed. Gunner then became sub-curator, receiving an additional £5, to provide him with a livery coat and cap.[40] In 1881 his cottage in the castle was condemned as uninhabitable, and a house was rented for him elsewhere.[41] When he died John Horace Round published a tribute to his zeal and efficiency, while suggesting that his death had been hastened by the cold and damp of the castle.[42] Gunner's successor as sub-curator was Frederick Spalding (1885-1902), at an initial salary of £100. Acland was succeeded as honorary curator in 1893 by Henry Laver, who served until his death in 1917.

17   Once established, the museum soon acquired important accessions. In 1861 C.G. Round presented the Colchester and Essex sections of William Wire's collection, which he had bought after Wire's death. In the same year Robert Hills of Colne Park, Colne Engaine, gave seven volumes of manuscripts relating to Essex. Several further accessions, by purchase or sale, are recorded during the following years.[43] A catalogue of the museum's antiquities was published in 1863, and a revised edition in 1869. A new edition, projected in 1877, was well advanced by 1884, but seems never to have been published.[44] *A Catalogue of the Books ... presented to the ... Museum*, written by Henry Jenkins, was published

in 1870, and a *Guide to the Antiquities*, by Henry Laver, in 1893.

18 The joint management committee of the Society and the Corporation, provided for by the museum agreement of 1860 (if it was, indeed, set up then), did not function regularly in the following years. In 1872 the two bodies again agreed on a joint committee, but in 1885, when the museum building was repaired and the new sub-curator was appointed, the arrangements were made by negotiation between separate committees of the two bodies. In 1891 a joint museum committee was again under discussion, and this seems to have led to a permanent arrangement, by which the Society had three seats on the Corporation's museum committee.[45]

19 In the museum agreement of 1860 the Society and the Corporation seem to have ranked as equals. But in the following years the Corporation became the senior partner, bearing most of the modest running costs of the museum. In 1885 it was agreed that the Corporation should pay £65 towards the sub-curator's salary, the balance of £35 being met by the Society. This annual payment of £35 became customary, as the Society's sole contribution towards the museum, and continued unchanged until 1929.[46] In proportion to the Society's resources and its expenses, this was not, at first, unreasonable. Annual subscriptions, the main source of income, had been set in 1852 at half a guinea (10*s.* 6*d.*) per member, and the rate remained unchanged until 1946. In 1903 the total annual income was £175, including £8 10*s.* from investments.

20 In its other activities, besides the museum, the E.A.S. was for long hampered by inadequate accommodation. From the first, it was based at Colchester castle. Some of the castle buildings had been repaired in the 18th century, but they were cold and damp and could not provide proper offices, meeting rooms nor library. The castle keep, its main building, was roofless.[47]

Meetings and Publications

21 In spite of the difficulties described above, the Society, under its capable secretaries, made good progress. Several times a year there were excursions to interesting places around Essex, often combined with business meetings. These events were recorded in the Society's *Transactions*, issued in parts, later gathered into volumes. Five volumes were published between 1858 and 1873. In December 1873 all the back stock of these volumes was destroyed by fire at the warehouse of the printer, the *Essex and West Suffolk Gazette*.[48] The 'Old Series' was therefore terminated, and a 'New Series' began, eight volumes of which had been published by 1903.

22 Many of the articles in the first thirteen volumes of the *Transactions* relate to churches, their architecture, furnishings, and funeral monuments.[49]

If this suggests an old-fashioned, antiquarian view of local history, it was justified in Essex, since Philip Morant, to expedite the publication of his *History*, had included very little information on these subjects in the sections dealing with the four hundred ancient parishes of the county. The main contributor of articles on churches during the first sixty years of the Society was Frederic Chancellor (1825-1918), an architect who had settled in Chelmsford in 1846, and practised there until his death.[50] Confident, capable, and energetic, he acquired wide knowledge of Essex churches through his work as Diocesan Architect for St. Albans. His articles would have benefited from a better understanding of the significance of subinfeudation when discussing the architectural history of medieval buildings, as J.H. Round pointed out in a severe critique published, insensitively, a few months after Chancellor's death.[51] But Chancellor's articles are of great and permanent value, especially, as Round said, in revealing the extent of Norman work in Essex churches.

23 Several valuable articles on church heraldry were contributed to the *Transactions* by Henry L. Elliot (1831-1920), vicar of Gosfield.[52] He was a meticulous scholar who devoted most of a long life to compiling in manuscript an exhaustive Armorial Index for Essex, which he left to the Society. This is now in the Essex Record Office.[53] Elliot joined the Society in 1871, became a member of Council in 1886, and was elected a vice-president in 1917.

24 A notable contributor to the *Transactions* whose articles did not include churches, was Isaac Chalkley Gould (1843-1907) of Loughton.[54] He was a wholesale stationer who built up a national reputation as an authority on ancient earthworks.[55] Several of his articles in the *Transactions* relate to earthworks, others to biography or travel.

25 Outstanding among the early contributors was H.W. King. Of his many articles some deal with churches, some with genealogy (including transcripts of old wills), while others include, from Morant's manuscript, a regicide's letter, fruit trenchers, and Roman remains.

26 Henry Laver, a Colchester doctor, and Lowndes's successor as President,[56] contributed to eleven of the first fifteen volumes of the new series, on subjects ranging from Bronze Age weaving, Celtic earthworks and Roman remains of all kinds, to medieval chapels, pargetting and parish cages. J.H. Round paid warm tributes to Laver's work for the Society.

27 William Chapman Waller (1850-1917), of Loughton, was a wealthy gentleman who joined the Society in 1891 and was elected to Council in 1897. 'He set himself, from the first, to further its interests in every way ... He lived to see a remarkable development in its output of archaeological work, largely due to his own energy.'[57] He contributed

articles and notes to ten successive volumes of the *Transactions*.[58] They include two substantial articles, each published serially, in several of the volumes. One of these contains lists, under hundreds and parishes, of Essex field names in the tithe commutation awards. The other, based on notes by J.C. Challenor Smith, is an annotated edition of additions to Newcourt's *Repertorium*, a work of immense labour, for which Waller receives no credit in the official indexes. Besides his articles in the *Transactions*, Waller was responsible for persuading the Society to publish the *Feet of Fines for Essex*, and he himself edited the 75-page index to volume I (1910). His important collection of materials for the history of Loughton, originally published in the parish magazine, was later bound into a 230-page volume, fully indexed, which testifies to his industry and his mastery of original sources.[59]

28   John Horace Round, a contemporary and friend of Waller, was by 1903 already one of the leading contributors to the *Transactions*. But his greatest years as writer, critic, and leader still lay ahead, and are therefore reserved for discussion in the following section. R. Miller Christy, another contemporary, is similarly reserved.

29   Early volumes of the *Transactions* were helped forward by occasional articles from distinguished writers, including William Stubbs, his fellow-historian Edward A. Freeman, the archaeologist C.H. (later Sir Hercules) Read,[60] George Buckler, authority on Essex churches, and the campanologist Cecil Deedes. 'Miss Fry', who contributed three valuable articles on Domesday tenants-in-chief, was Katherine, eldest daughter and biographer of Elizabeth Fry.

30   In 1900 the Society published a General Index covering the five volumes of the Old Series and the first five volumes of the New Series (1858-95). The indexer was Charlotte Fell Smith (1851-1937), better known as an author and as editor of the *Essex Review*.[61] The index was published by subscription as a separate volume. Among the 214 subscribers were the National Museum of Sweden, Trinity College, Dublin, New York Public Library, Harvard University; many English libraries; the bishop of St. Albans, Lord Hawkesbury, Lord Iveagh, and Lord Tredegar. The index, comprising 87 pages, was compiled in accordance with the rules ' approved by the Congress of Archaeological Societies in union with the Society of Antiquaries.'

31   The Jubilee of the Society's inauguration was celebrated on 25 June 1903 at a meeting in the Moot Hall, Colchester, followed by lunch at the Cups Hotel, a tour of the town, and tea, provided by the mayor at the town hall.[62]

THE SECOND 'JUBILEE', 1903-53

32   This period terminated with the centenary celebrations and G. Montagu Benton's retirement after thirty years as honorary secretary. The membership increased to 400 in 1914, fell slightly during the First World War, but then rose rapidly to an all-time peak of 849 in 1930. It was 704 in 1939, 546 in 1945 and also in 1953. The annual subscription remained at 10s. 6d. until 1946, when it was raised to 15s. (75 new pence). In 1946 there were 104 life members who had compounded for their subscriptions, and four honorary members. Life membership, previously costing £5 5s., was in that year raised to £10 10s. It was suspended in 1952, without prejudice to existing members. The annual subscription was further raised in 1953, to £1.

33   As in the first 'Jubilee' the members of the Society, still subject to election, were mostly gentry and members of the learned professions. Clergy, well represented at the start of the period, later fell sharply in numbers, from 75 in 1923, to 25 in 1955. The reasons for the decline - far greater in proportion than that in the total membership - is not clear. Perhaps they should be sought in the churches rather than in the Society. The Society's interests and social activities continued during the second 'Jubilee' on traditional lines. The standard of the *Transactions* was raised and broadened under the influence of J. Horace Round and Robert C. Fowler, but publication was delayed by both world wars.

34   At the suggestion of the president, Revd. G.M. Benton, the Society's centenary was celebrated by a 'Medieval Feast', held in Colchester Moot Hall on 1 May 1953.[63] Those attending were expected to wear medieval dress, though Benton himself impersonated Cardinal Wolsey. The guests included Sir Mortimer Wheeler (an old friend of the Society and an honorary member), and Dr M.E.S. Cutts, great-grandson of E.L. Cutts, the Society's founder. The fare included a boar's head, ale, mead, and Malmsey wine. The profit from the feast was put towards the purchase of a presidential badge, designed by Kenneth R. Mabbitt, and worn for the first time by Benton on 9 June 1955.[64]

Presidents

35   The presidents holding office during this period were subject to the five-year rule introduced in 1904, and all, with the exceptions noted, served the full term. Henry Laver (1903-8) a Colchester doctor, had joined the Society in 1876 and its Council in 1877. He presided over the jubilee celebrations in 1903, and gave active support to the Society until his death in 1917. J.H. Round, in a warm tribute, emphasised his work for the museum as well as his contributions to the *Transactions*.[65] Laver was a strong character, kindly, but sometimes rough in manner. He ranks high among the Society's worthies. Frederic Chancellor (1908-11) was eighty-three when elected president, and had to retire from office through ill-health. He died in 1918, the last

surviving founder-member of the Society and of its Council.

36　Thomas Stevens (1911-16), had joined the Society in 1891, when vicar of St. John's, Stratford, in West Ham. He was appointed archdeacon of Essex in 1894 and suffragan bishop of Barking in 1901,[66] when he also became a vice-president of the Society. A burly, bearded figure, he attended the Society's meetings regularly for many years, with an informed interest in church architecture. He was a capable and popular president, and until his death in 1920 he continued to take the chair as deputy for his successor.

37　John Horace Round (1916-21), at the time of his election, was nearing the end of his career as an Anglo-Norman historian of international standing, an authority on Domesday Book, and a leading contributor to the *Victoria History of the Counties of England*.[67] He had joined the Society in 1884, having already published some forty items, including a book on *Colchester Castle* and a study of the Domesday of Colchester. He was lord of the manor of West Bergholt, near Colchester, and though he did not live in Essex, was deeply attached to the county. In the Society he was from the first among friends. His favourite cousin was James Round, owner of Colchester Castle, and the Society's honorary treasurer. Horace already knew many of the gentry and clergy who then formed the backbone of the membership. He was elected to Council in 1885, and in 1887 published his first paper in the *Transactions*. During the following years he threw himself into the Society's work, reading papers, recruiting members, and labouring to improve the *Transactions* both through his own writing and by pointing out the errors of others. He was elected a vice-president in 1907.

38　By 1916 Round was an invalid, living in Brighton, and during his presidency he was unable to attend the Society's meetings. But he was more than a figurehead. He was proud of his office, and gave much thought to the Society's welfare. The addresses which he sent to be read at each annual general meeting contain some of his best writing, as well as distilling a lifetime's experience. He kept up his campaign to raise the standards of the *Transactions* by direct criticisms, and took the lead in contriving the appointment as editor of the capable Robert Fowler, in place of the ineffective George Rickword.[68]

39　On completing his presidency in 1921 Horace Round sent a graceful farewell letter to be read at the A.G.M.[69] After thanking the Society for the 'kindness and forebearance' which had enabled him to serve his full term, he recalled the recent deaths of Bishop Stevens, Frederic Chancellor, Henry Laver and other stalwarts, and ended with some ideas for future activities. During the following years, on his sick-bed, he concentrated increasingly on articles

and notes for the *Transactions*.[70] Many of them are brief, but several are substantial, including a brilliant paper tracing the 12th-century origin of the town of Brentwood.[71] His contributions to the *Transactions*, totalling over 150 items, appear in every volume published between 1887 and 1937.

40　Canon Francis William Galpin (1921-6) was a gifted musician and a leading authority on ancient musical instruments. Having come to Essex in 1891 as vicar of Hatfield Broad Oak, he joined the Society in 1892, and was elected to Council in 1898. He was vicar of Witham, 1915-21, and rector of Faulkbourne, 1921-33. Besides many private publications, he contributed several articles to the *Transactions*, and was co-author, with G.M. Benton and W.J. Pressey, two other members of the Society, of the authoritative *Church Plate of Essex* (1926). He was a handsome man with a dignified bearing, who 'never discarded the clerical frock-coat and broad-brimmed hat [of the Victorian age].' As president he was zealous and efficient.[72]

41　George F. Beaumont (1926-28) was the first president who had previously served as honorary secretary (para. 13 above). Ill-health forced his resignation shortly before his death.[73]

42　Charles F.D. Sperling (1928-33), of Ballingdon Hall, Sudbury (Suff.), had joined the Society in 1884, and had served on the Council since 1893. He was an authority on the history of north-west Essex, and contributed several articles to the *Transactions*. For the *Essex Review* he wrote valuable accounts of the early Essex historians, including his ancestor Philip Morant. Though said to have been 'diffident almost to the point of humility' he held many public offices.[74]

43　Philip G. Laver (1933-8) was the son of Henry Laver (president 1903-8), and formerly his partner in medical practice at Colchester. He had joined the Society in 1897, and was elected to Council in 1916. He took part in several excavations at Colchester, made many donations to the museum, and published a few articles in the *Transactions*. But his most important work for the Society was the development of its library.[75]

44　F. Wykeham Chancellor (1938-44) was the son of Frederic Chancellor (president 1908-11), and became partner in his Chelmsford architectural practice. Due to the war he agreed to continue as president for a year beyond the statutory five. He had joined the Society in 1915, and had served on Council since 1918. He had wide experience of restoring ancient buildings, including Layer Marney Towers, Leighs Priory, and the chapel of St. Peter-on-the-Wall at Bradwell-juxta-Mare. He published two articles and several notes in the *Transactions*, and a short *History of Chelmsford Cathedral*. He is said to have inherited 'to some extent the outlook and limitations of the Victorian architects.' His obituarist adds that 'owing to his intrepidity he

suffered several accidents,' the most serious of which, in 1937, left him permanently crippled, and limited his activities as president. He bequeathed to the Society a large collection of Essex books and manuscripts.[76]

45 Canon Thomas H. Curling (1944) had been the Society's honorary secretary (1903-23, see para. 50 below). He was elected president on 31 October 1944. Then seriously ill, he was thought to be recovering, but he died on 13 November.[77]

46 T. Denis S. Bayley (1945-50), who had served as acting president after Curling's death, was elected president in July 1945.[78] He had come to Essex in 1927 as curate-in-charge of Bradfield and from 1930 to 1957 was rector of Pebmarsh.[79] Having joined the Society in 1930, he served as excursions secretary 1934-53, on Council from 1936, as honorary museum curator from 1949, and as a trustee from 1950.[80] He published a scholarly history of *Pebmarsh Church* (1946) and several other items.[81] To the *Transactions* he contributed a sensitive memoir of his friend Benton.[82] He died in 1970.

47 Gerald Montagu Benton (1950-55), vicar of Fingringhoe, had been an officer of the society continuously since 1922, and was still editor as well as honorary secretary (Plate 3). During the Second World War he had been the mainstay of the Society, but by 1950 he was in poor health and had become very slow. He was nominated as president in the hope that this well-deserved honour, embracing the Society's centenary, might encourage him to retire from his other offices. He gratefully accepted the

Plate 3 The Revd. Gerald Montagu Benton, M.A., F.S.A., President 1950-1955, with Sir Mortimer Wheeler, President of the Society of Antiquaries, inspecting the recently acquired President's badge. (From E.A.T. NS xxv, 290).

presidency, but continued as secretary until 1953, and as editor until his death in 1959. T.D.S. Bayley, in his memoir, comments that Benton was not, in his view, reluctant to hand over to a suitable successor, but that 'those most anxious to relieve an old man's shoulders of his mantle are usually equally zealous that it falls not on their own.' Bayley adds that Benton 'did not, perhaps, understand the new men; for him the "inspired amateur" was the ideal; and he frankly disliked the conception of archaeology as a remunerative occupation.' On the other hand the present writer gratefully recalls Benton's interest and encouragement during his work for the *Victoria County History of Essex* in the 1950s. And before that, Benton had 'highly prized' his friendship with Sidney C. Ratcliff of the Public Record Office, who had completed, for the Society, R.C. Fowler's edition of *Feet of Fines for Essex*, volume III.[83]

Vice-Presidents[84]

48 In 1903-4 there were 15 vice-presidents, including Lord Eustace Cecil, brother of Lord Salisbury the prime minister,[85] the Lords Braybrooke, Rayleigh, Hawkesbury, Lord Claud Hamilton, the Bishops of St. Albans and Colchester, and four M.Ps. Among these personages there were now three closely associated with the Society's work: James Round, the honorary treasurer, G. Alan Lowndes, past-president, and Thomas Stevens, Bishop of Barking, a future president.

49 The number of vice-presidents was usually 15 or 16 until 1917; after which it gradually fell. In 1934-5 there were nine, including Lady (Catherine) Rasch, wife of Sir Frederick Carne Rasch Bt., and previously widow of Lord Petre. She had been appointed in 1921, and was one of the first two women officers of the Society.[86] In 1955 there were seven vice-presidents: Lord Braybrooke, the Bishops of Chelmsford and Colchester, T.D.S. Bayley and G.M. Benton, past-presidents, Duncan W. Clark, Council member for many years, and Sir Mortimer Wheeler. It will be seen that the 'decorative' vice-presidents were now outnumbered by those appointed in recognition of long active service. Equally significant is the decline in numbers of vice-presidents. By now well established, the Society evidently felt less need for such embellishments.

Honorary Secretaries

50 G.F. Beaumont's successor as honorary secretary was Thomas H. Curling, who had come to Essex in 1901 as rector of Bradwell-juxta-Coggeshall and diocesan inspector of schools.[87] He had joined the Society in 1902, on Beaumont's nomination.[88] Friendly, buoyant, and decisive, he proved an excellent secretary. He was curate-in-charge of Christ Church, Colchester, 1906-10, vicar of St. Osyth 1910-12, vicar of Halstead 1912-44, rural dean

of Halstead 1925-35, and honorary canon of Chelmsford from 1931.

51 Like his predecessors, Curling was required to plan and lead excursions. Before motor transport was widely available, that was difficult, 'yet he never failed.' He was, however, able to delegate the task of editing the *Transactions* in 1907, when a separate editorial secretary was appointed. Curling steered the Society through the First World War, and organized its post-war expansion. From 1927 he was also the Society's honorary museum curator, a sinecure which he held until his death. When he retired as secretary in 1923 the recorded membership of 614 was the highest so far.

52 Curling published two articles in the *Transactions*, and several items elsewhere.[89] He also collected material on the history of Halstead. Having retired as honorary secretary he continued as excursions secretary, but he gave this up in 1925 on his appointment as rural dean.[90] The Society then presented him with a case of Georgian silver.[91] Curling was elected to Council in 1925,[92] and in 1929 became a trustee.[93]

53 Curling's successor as honorary secretary was G.M. Benton, who had become assistant secretary during Curling's illness in 1922.[94] He served for thirty years (1923-53), a record for the Society. Born in 1881, he had graduated at Fitzwilliam House, Cambridge, in 1910.[95] He is said to have acted, after graduation, as secretary to the theologian Baron Friedrich von Hügel. But chronology suggests that he did so before going to Cambridge, since he entered Bishop's College, Cheshunt, in 1910, aged 29, and in 1911 was ordained as assistant curate to the vicar of Saffron Walden, Canon John T. Steele.[96] Benton was already a knowledgeable antiquarian, Steele had similar interests, and together they made many bicycle tours of local sites and buildings. In 1913 Steele, himself a member of the E.A.S., sponsored Benton for membership.[97] Benton, evidently unambitious, remained curate at Saffron Walden until 1922, when at last he received preferment to the vicarage of Fingringhoe near Colchester. In that poor living, which did not even have a parsonage house, he remained until his death in 1959. Meanwhile, however, he had in 1919 been elected to the E.A.S. Council.[98] He became a trustee in 1929.[99]

54 When Benton became secretary the Society was flourishing, with a record membership, no doubt due to the good work of Curling and that of R.C. Fowler as editor of the *Transactions*. When Fowler died, in 1929, Benton took over the editorship, which he was to hold until his death.[100] He might then have been wise to concentrate on it, by retiring as secretary. But most of the Society's Council - the main recruiting ground for officers - were elderly,[101] and the constitution then made no provision for bringing in new blood. Benton did, however, start

looking for a new excursions secretary,[102] and one was eventually appointed in 1932.[103] Though relieved of that task, Benton shouldered another in 1941, on the death of the librarian, Philip Laver. He continued as acting librarian until 1949.[104] In 1949, also, David C. George of Writtle was appointed honorary assistant secretary, but he held the post only until 1953.[105]

55 Among notable achievements during Benton's years as honorary secretary were the removal of the library to Hollytrees and the acquisition of many books, manuscripts, photographs, slides and other items, some of which are mentioned below. Most of them came by gift or legacy, indicating the good reputation of the Society. One gift was not accepted. In 1926 Miss Margaret Tabor offered the Society her windmill in Church Street, Bocking, but Council thought that the cost of upkeep would be too great.[106] There were good reasons for that decision, as the later history of the windmill shows.[107] But with more enterprising leadership the Society might have seized the opportunity to make the mill an important and attractive feature of its work.

56 Benton's literary work for the Society is discussed below (para. 78). He was a good scholar within his own fairly narrow range of interests, and a meticulous editor. He was not, perhaps, a very effective manager nor a natural leader. But he kept the Society going throughout the depression of the 1930s and the Second World War. In his report for 1945 he notes that he had 'endeavoured by means of voluminous correspondence to maintain contact with members.'[108] This was characteristic of the man who, as his obituarist says, gave 'to the welfare and work of the Society ... the large part of his life and the whole of his heart.'[109] In 1969 an oak door in the south chapel of Fingringhoe church was dedicated as the Society's memorial to Benton.

Excursions Secretaries

57 The honorary secretary, T.H. Curling, arranged all the excursions up to his resignation in 1922, and continued to do so until 1925, when the task reverted to the new honorary secretary, G.M. Benton. In 1932 Dr. E.P. Dickin became excursions secretary. When he resigned from ill-health in 1934, T.D.S. Bayley and Laurence King of Brentwood, the well known church architect, undertook to help with the excursions, and from 1935 to 1953 they were officially joint excursions secretaries.[110]

Local Secretaries[111]

58 These shadowy figures existed by 1897, when fifteen are listed in a group as officers of the Society, based on Braintree, Brentwood, Billericay, Bishop's Stortford, Chelmsford, Coggeshall, Colchester, Halstead, Haverhill, Horndon-on-the-Hill, Loughton, Maldon, Romford, Saffron Walden, and

Southminster. The appointment of town representatives continued until 1917 or later, though their numbers eventually fell to nine. By 1921 there were 23 local secretaries, one for each of the hundreds of Essex (two each for Hinckford and Lexden), Colchester borough, and Havering liberty. Their appointments continued at least until 1935, but seem to have ceased with the Second World War. The local secretaries were often, but not always, members of Council. Harlow hundred was represented from 1921 by Mrs E.M. Bourke (later Bourke-Borrowes).[112] Witham hundred was represented from 1934 by Miss T.M. Hope of Crix, Hatfield Peverel, daughter of Collingwood Hope, Q.C., D.L., chairman of Essex Quarter Sessions.[113] The present writer remembers her attending the Society's meetings in the 1950s in a chauffeur-driven Rolls Royce.

59 The function of the local secretaries is unclear. Presumably they were intended to be liaison officers between the localities and the Society's main officers and Council. Whether their services were of any great value seems doubtful.

Honorary Treasurers

60 James Round continued as honorary treasurer until his death in 1916. From 1905, however, William Chapman Waller, as honorary vice-treasurer, did most of the work. In 1917 he was elected treasurer, but he died three months later.[114] He was succeeded by Christopher W. Parker of Faulkbourne Hall (1917-29), who had joined the E.A.S. in 1889, and had been elected a vice-president in 1906.[115] In 1920 Parker rendered a great service to archaeology by restoring the 7th-century chapel of St. Peter-on-the-Wall at Bradwell-juxta-Mare, and presenting it to the Chelmsford diocese for re-consecration.[116] Henry W. Lewer of Loughton, a paper-maker's agent, was vice-treasurer 1917-29, then treasurer from 1929 until his death in 1949.[117] He had joined the Society in 1902, was elected to Council in 1912, and became a trustee in 1929.[118] He was joint-author, with J. Charles Wall, of *Church Chests of Essex* (1913). Though he contributed only one article to the *Transactions*, he made several generous gifts to the E.A.S., including books and MSS, and he met all the honorary treasurer's postal expenses out of his own pocket. For many years, up to 1939, the Society's Council meetings were held at his office in Fleet Street, London. Isobel L. Gould of Chigwell was acting treasurer from 1949 until 1950, when Oswald E.R. Alexander, rector of Great and Little Henny, became treasurer.[119]

Trustees

61 In 1929 G.M. Benton, T.H. Curling, and H.W. Lewer were elected trustees of the Society.[120] These three evidently survived an attempt, in 1938-9, to establish an Essex Archaeological Trust registered under the companies Acts.[121] The trust was empowered to hold the Society's property 'without the necessity of frequent re-arrangement of trustees.' It was to include any member of the Society who wish to join it. Each trustee was to pay an annual subscription of 10s., and accept a maximum liability of £1. The trust was approved by the Board of Trade in 1939, but was suspended at the outbreak of war. It seems never to have been revived. In 1950 Council recommended that no action should be taken in connexion with it.[122] At the same meeting Benton pointed out that since Curling and Lewer were both dead, he himself was now the only trustee. Council thereupon recommended the appointment of T.D.S. Bayley, and of Duncan W. Clark, a Colchester architect and a leading Council member.[123] Both were still serving in 1953.[124]

Museum and Library

62 By 1904 Colchester's 'Corporation Museum' as it was now called, was managed by a twelve-man committee, of whom three represented the E.A.S. and two others, alderman Henry Laver and W. Gurney Benham, were members of the Society as well as the borough council. Laver was then the Society's honorary curator of the museum as well as its president.[125] The running cost of the museum for the year ending 31 March 1905 was £324 14s. 8d., including £140 8s. for the salary of the sub-curator, Arthur G. Wright, and £46 16s. for his assistant, Theobald Smith. The Society was still contributing £35 towards the sub-curator's salary. With this modest outlay the museum had attracted 28,408 visitors during the year. Arthur Wright, who had come to Colchester in 1902 from the London Guildhall museum, served until 1926, from 1918 with the title of curator and librarian. Besides building up and re-classifying the museum collections, he contributed a number of articles and notes to the *Transactions*. On his retirement the Society raised £101 for a testimonial, and elected him an honorary life member.[126] His successor was M. Reginald (Rex) Hull (1927-63). Meanwhile, the Society continued to nominate an honorary curator, presumably to assert its rights in the museum rather than to supervise the professional curator. The post was held, after Henry Laver's death, by T.H. Curling (1917-44), H.W. Lewer (1945-9) and T.D.S. Bayley (from 1949).

63 In 1913, at Council's request, W.C. Waller presented a report on 'the debated question of the relations between the Essex Archaeological Society and the Corporation of Colchester' in respect of the museum. Having examined the Society's records, he commented that relations had always been ill-defined, though, at times, attempts had been made to clarify them.[127] He noted that each fresh expenditure had been subject to bargaining between

the two bodies, and 'that no fixed contribution was ever settled, except that towards the curator's salary.'

64 Waller went on to make the following points. The Corporation had legal possession, under an agreement to which the Society was not a party, of the part of the castle occupied by the museum. The Society's books and papers, stored in the museum, were so crammed together that they were difficult to use, and there was no room for readers. The museum curator was looking after the library *ex gratia*, as far as possible. Under the existing arrangements, the Society, in return for £35 a year, was receiving from the Corporation accommodation and custody for its property. As against this, the Society owned many of the items exhibited; in 1879 these had comprised over half the items in the museum catalogue. This important loan collection was not, however, mentioned by the Corporation in its more recent catalogues. There was nothing to prevent the Society from withdrawing its collections and library from the museum, nor from withholding its annual payment of £35. The Corporation, on the other hand, could at any time require the Society to remove its property. But as the E.A.S. collections formed part of the attraction of the museum, that was unlikely.

65 Waller concluded by suggesting that the Society should sell its museum collection to the corporation, and find other accommodation for its library; the payment of £35 could then cease, and the money could be used to employ a librarian. In April 1914, after analysing comments on his report, Waller put forward new proposals, 'adopting ... the line of least resistance.'[128] He now suggested that the Society should present its museum collection to the Corporation, on condition that none of it should be disposed of without the Society's consent. The Society should in future have two representatives on the museum committee. The annual payment of £35 should cease. In view of 'the absolute failure of the recent negotiations with the library authorities of Colchester', the Society should seek library accommodation in Chelmsford. To discuss his proposals with Colchester Corporation Waller nominated a sub-committee, to report back to Council not later than 31 July. But by then the First World War was imminent, and it was decided 'to let matters rest as they are at present.'[129]

66 Negotiations were resumed in 1920.[130] By then Colchester Corporation had acquired the freehold of the castle, together with Hollytrees, the 18th-century house adjoining.[131] These were valuable assets, but would be expensive to maintain. Museum costs had also escalated: the curator was now receiving £300 a year. In July 1920 the Corporation requested the E.A.S. to increase its annual contribution to his salary. The Society, with financial problems of its own, was reluctant to do so without

a *quid pro quo*. In 1926 it was at last agreed that the collections of the Corporation and the Society should be permanently amalgamated, under the Corporation's control, in the 'Colchester and Essex museum' as it would now be called.[132] The Society's contribution towards the museum curator's salary would remain unchanged; its representatives on the Corporation's museum committee would number at least one third of the total. The Society's library would remain its own property; and the Corporation hoped later to suggest suitable housing for it. The hope was realized in 1929, when the Corporation granted the Society the use of three rooms in Hollytrees, one of which was to be a reading room for E.A.S. members and for non-members who were students. The Corporation would provide lighting, heating, and cleaning. The Society would in future contribute £60 towards museum expenses. The agreement was terminable by six months' notice on either side.[133]

67 The library's move to Hollytrees, and its subsequent development, were directed by Philip Laver, who in 1928, soon after retiring from medical practice, had been appointed honorary librarian. He had already given the Society the archaeological library built up by his father and himself. He remained librarian until his death in 1941, and made the library his main interest. Many new books were bought; publication exchanges were negotiated with most British and some foreign societies, and a bookbinding programme was established. Laver was constantly donating items to the library and prompting others to do the same. During his librarianship the Society acquired the books and papers of J.H. Round (1929), J.L. Glasscock (1929), C.F.D. Sperling (1938) and R.C. Fowler (1938), the photographic collections of Harrington Lazell (1931), F. Gregson (1931), and Frank Girling (1938), Percival Boyd's index to Essex marriage registers (1938), and other items.[134]

68 Appreciating the historical value of ephemeral reports, programmes and publicity leaflets, Laver collected them for the library, where they were gratefully noted by the present writer when compiling the *V.C.H. Essex Bibliography* (1959). Laver also instituted a card-index catalogue, welcomed students to the library and encouraged enquiries.

69 With his neat beard, Philip Laver resembled King George V. He is said to have been impatient, quick tempered and sometimes fiercely outspoken. But he inspired respect and affection, admirably expressed by G.M. Benton in his obituary.[135]

70 After Laver's death Benton, already honorary secretary and editor, acted as librarian, with Mrs. R.C. Fowler as deputy (1943-6), until 1949, when William R. Saunders, rector of Mount Bures became librarian (1949-55).

71 In 1942 Canon John L. Fisher, rector of Netteswell, was appointed honorary archivist (1942-55).[136] He reported in 1944 that the library contained 3,000-4,000 deeds, and that he had already calendared 2,500.[137] About that time the Society began to deposit selected documents and papers on loan in the Essex Record Office. In 1967-8 the process was accelerated, and it was stated that among many recent deposits were the Morant MSS, and the H.W. King collection.[138] John S. Appleby served as archivist, 1955-72, as well as honorary secretary (from 1959). Since 1972 the honorary librarian has been responsible for the documents still remaining in Colchester.

Meetings

72 The Society's annual programme, already well established by the 1890s, comprised the general meeting in April, and three or four excursion meetings between May and September (Plate 5, Fig. 1). The year 1904 provides a good example.[139] The A.G.M. was held in Colchester on 14 April. After the routine business J. Horace Round read a paper on 'The Forestership of Essex'.[140] The meeting then elected ten 'candidates' as members of the society. The process of election, reflecting the somewhat exclusive character of the Society, was still in use in 1955, but was not required by the new rules of 1964.[141] On 14 May 1904 more than 100 members and friends visited north Essex, to see Halstead church, Dynes Hall at Great Maplestead, Little Maplestead church, and Castle Hedingham church and castle. At Dynes Hall the party was given lunch by the tenants, Lord and Lady Deerhurst.[142] At Castle Hedingham tea was provided by the vicarage. It was a busy day: at each place features of interest were pointed out by one and sometimes two speakers. Castle Hedingham church was described by (Sir) William St. John Hope, an old friend and later honorary member of the Society.[143] During the day seven new members were elected, including Lady Deerhurst.

73 On 4 August 1904 the Society turned north-west, to Lindsell, Great Bardfield, Great and Little Saling, and Rayne. They were entertained to lunch at Park Gate, Great Bardfield, by the owner, Thomas Bradridge, himself a member of the Society, and to tea by Rayne rectory. Besides the churches, the party visited Saling Hall, in Great Saling, and Rayne Hall. Their guides were Frederic Chancellor, and another member, William Minet, who gave a talk on 'The Capells at Rayne.'[144] Eight new members were elected that day.

74 The last excursion of the year, on 24 September, went south-east, to Rochford church and Hall, and the churches at Great Stambridge, Canewdon, Ashingdon, and Hawkwell. Since no free hospitality was available, members ate their own sandwiches at Great Stambridge rectory, and took tea at the King's Head Hotel, Rochford. Frederic Chancellor read papers on each of the six buildings visited.[145] At Ashingdon, I. Chalkley Gould also gave a talk on the battle of *Assandun* (1016). Two new members were elected. A report on the visit to Rochford church and Hall, in the *Transactions*, was illustrated by A. Bennett Bamford, a well-known topographical artist and a member of the Society.[146]

75 The Society's programme continued on the same lines until the First World War. During the war the A.G.M. was held every year, but the number of excursions declined, and none was held after 1916.[147] When peace returned, the Society sprang into action. In 1919 there were three all-day excursions and two evening meetings, as well as the A.G.M.[148] Similar programmes, occasionally supplemented by excursions to neighbouring counties, were arranged up to 1939. During the Second World War no meetings, apart from the A.G.M., were held, except one excursion, in 1941.[149] After the war excursions were resumed and increased in number, and from 1950 there were also one or two lecture meetings.[150] The importance of excursions was emphasised in the report for 1950:[151]

> Without interesting excursions - they are certainly more than pleasant outings - the membership would undoubtedly fall by nearly half, and the finances of the Society would thereby suffer seriously in consequence.

Any attempt to evaluate excursions (unless based on detailed questionnaires) is open to doubt. But such social activities, besides being attractive to many people, are useful to a society in identifying future officers and Council members. In 1950 the Society held five excursions and two lecture meetings; in 1951 six excursions and two lectures; and in 1952 five excursions and one lecture. In 1953 there were three excursions, the medieval feast, and an extended A.G.M. celebrating the centenary.

Publications

76 In 1907 the task of editing the *Transactions*, previously shouldered by the honorary secretary, was delegated to George Rickword, as 'editorial secretary.' He was a former cabinet maker who had become Colchester's first borough librarian. He had joined the Society in 1897.[152] In 1917 the president, Horace Round, commented in a private letter that Rickword was 'well-meaning, but neither in social position nor in learning has he a strong enough status to "deal faithfully" with papers [for the *Transactions*], and when we have gone to the expense of printing them it is too late for *me* to do anything.'[153] A few weeks later Round remarked, to the same correspondent, that he was 'keen on bracing up our *Transactions*, though I have had to take drastic methods.'[154] Those methods evidently included criticising, in the *Transactions*, some recent articles in its pages. In 1916, on becoming

president, Round had pleaded for higher standards in the journal, and had singled out for censure a paper which had been based largely on secondary sources, used inaccurately and without acknowledgement.[155] In 1918, following these and other criticisms, Rickword resigned, and was replaced by Robert C. Fowler, an assistant keeper at the Public Record Office, and an old friend of Round (Plate 4). Fowler had a stronger position than Rickword, being designated 'editor of the *Transactions*' and retaining his seat on Council. He had joined the Society in 1900, on Round's nomination, and was elected to Council in 1913.[156] As editor up to his sudden death in 1929 he published, in parts, four volumes, each of some 350 octavo pages, which reached a high standard and earned Round's approval. Experienced, businesslike, and hard-working, Fowler was able to draw upon the resources of the Record Office. And he was greatly assisted by Round himself, who between 1921 and his death in 1928, contributed to the *Transactions* no fewer than 18 articles and 29 notes. Fowler also attracted some notable contributors from beyond Essex: Francis Haverfield (vol. xv), (Sir) Mortimer Wheeler (xv and xvi), C. Hunter Blair (xvi), Vivian H. Galbraith (xvi, xvii) and Miss M.V. Taylor (xvii). Among older members still contributing were A. Bennett Bamford (xvi, xvii, xviii) and Miller Christy (xvii, xviii). Among new ones were Percy H. Reaney (xvi, xvii) and Harold Smith (xvii, xviii).[157]

77   R.C. Fowler himself made many contributions to the journal, based on original sources. Two particularly useful articles are 'Essex Chapels' (xvi. 105) and 'Fulk Basset's Register and the Norwich Taxation' (xviii. 15). Fowler also took over the editing of *Feet of Fines for Essex* after Waller's death, and he left in manuscript abstracts of all the later fines up to 1574. He contributed to *V.C.H. Essex* a masterly section on the 'Religious Houses'. For the Canterbury and York Society he edited the earliest registers of the bishops of London.

78   G.M. Benton, who succeeded Fowler, was editor from 1929 to 1959. During those years he published, in parts, six volumes of the *Transactions*, each of some 350 octavo pages, and most of a seventh. Four of the volumes (xix-xxii), all with general indexes by Benton himself, were completed by 1940. Volume xxiii was completed in 1945. Its index, by Benton, assisted by Geoffrey and Janet Martin, appeared in 1954. Volume xxiv was completed in 1951 and xxv in 1960; their indexes were issued in typescript in 1973. The slower rate of production after 1940 was partly due to the war. An additional cause, after 1945, may have been publication of three occasional papers (para. 81, below) which diverted money and editorial time from the *Transactions*. It must be added that the Society was ill-equipped to meet the increasing cost of goods and services caused by the war, for in 1953

Plate 4   Robert Copp Fowler (1867-1929). Editor 1918-29. (From *E.A.T. NS* xix, 328).

the annual income, for all purposes, was only £570.[158] Printing costs, which varied from year to year, averaged £350 over the eight years 1946-53.[159] They were met from the Society's regular income, supplemented by occasional donations and small receipts from sales. In 1945 the Essex Record Office, no doubt prompted by the county archivist, Frederick G. Emmison, a good friend to the Society, and later president, granted £25 towards the publication of an occasional paper.[160] That was a good augury, though it would be many years before grants from public funds became a substantial part of the Society's income.

79   The figures in the previous paragraph, while difficult to interpret, show some of the constraints under which Benton worked. On the positive side, it can be said that the *Transactions* which he edited are beautifully produced, with meticulous attention to detail. Most of the articles relate to the medieval and Tudor periods, and particularly to churches and family history. Notable contributors from beyond Essex include Hilary Jenkinson and E. Thurlow Leeds (xix), Ernest W. Tristram (xxi, xxii), Christopher F.C. Hawkes (xx, xxi), Montagu R. James (xxi), (Sir) James G. Mann (xxii), William O. Hassall, Neil Ker and John Harvey (xxiii), Jocelyn M.C. Toynbee, Francis C. Eeles, and Clive Rouse (xxv). Several of J.H. Round's posthumous papers appear in volumes xix-xxi. Among new local

1 R. Garraway Rice, F.S.A., London . . . . R.A.I.
3 W.G. Wiles, S.John's St., Colchester . . . . . E.A.S.
4 Thomas Brown, 89 Holland Road, W.. . . . . R.A.I.
5 Mrs. Thomas Brown, 89 Holland Rd., W.
6 W. Bruce-Bannerman, F.S.A., Croydon . . . . R.A.I.
7 H. Plowman, F.S.A., Steele Rd., N.W.. . . . R.A.I.
8 F. Fountain, Croom's Hill, Greenwich . . . . . R.A.I.
10 H.E. Harrison, Junior Carlton Club, S.W. . . R.A.I.
11 Canon Buckley, Victoria Docks, E. . . . . R.A.I.
12 J. Parkinson, 36 Regent St., Lancaster . . . . . R.A.I.
13 Andrew Oliver, 2 Queen's Gardens, W. . . . . R.A.I.
14 Horace Wilmer, C.E., Woodford Green . . . . R.A.I.
15 A.G. Wright, Curator, Colchester Museum.
16 P. Hale (brother of Hon. Sec. R.A.I.)
17 General Fagan, Topsham Road, Exeter . . . . R.A.I.
18 William Alexander, Ipswich.
20 Mrs. Preece, Colchester . . . . E.A.S.
21 H.E. Williams, Colchester . . . . E.A.S.
22 Mrs. Howard-Flanders, Latchingdon
23 Howard-Flanders, Latchingdon . . E.A.S. & R.A.I.
24 G.P. Cox, Stone House, Godalming . . . . R.A.I.
26 M.J. Walhouse, Hamilton Terrace, N.W. . . . R.A.I.
27 George Rickword, Colchester . . . . E.A.S.
28 Francis R. Round, Witham . . . . E.A.S.
29 Rev. J.W. Kenworthy, Braintree . . . . E.A.S.
30 Major A.B. Bamford, Chelmsford . . . . E.A.S.
31 C. Lynam, F.S.A.,
     Stoke-on-Trent . . . . E.A.S. & R.A.I.
32 Miss A.D. Hope, Havering Grange,
     Romford . . . . E.A.S.
33 Rev. T. Auden, F.S.A., Condover, Salop . . . R.A.I.
35 Mrs. Berkeley, Spetchley Park, Worcester . . . R.A.I.
37 R.V. Berkeley, Spetchley Park, Worcester . . . R.A.I.
38 Rev. F.J. Eld, F.S.A., Polstead . . . E.A.S. & R.A.I.
39 Reporter, *Essex Standard*.
40 H.L. Etherington Smith, F.S.A., Chelsea . . . R.A.I.

41 Reporter, *Essex Telegraph*.
42 E.B. Baker, Lexden Road, Colchester.
43 Miss Layard, Rookwood, Ipswich . . . . R.A.I.
44 Friend of Miss Preece.
45 Miss Wilmott.
46 Miss O'Grady, Lexden, Colchester . . . . E.A.S.
47 Sir Kenelm Digby, K.C.B., Colchester . . . . E.A.S.
48 Miss Digby.
49 W.J. Andrew, F.S:A., Whaley Bridge . . . . . . R.A.I.
50 Mrs. Andrew, Whaley Bridge.
51 O.E. Pritchett, F.S.A., Bishops Stortford . . . E.A.S.
52 Walter Rowley, F.S.A., Meanwood, Leeds . R.A.I.
53 Rev. F. Parrell.
54 C.A. Parker, Riffhams, Danbury . . . . E.A.S.
55 Miss H.G.E. Ashwin, Dedham . . . . E.A.S.
56 Mrs. C.A. Parker, Riffhams, Danbury . . . . . E.A.S.
57 Lieut. O.H. North, Jun. Nav. and Mil. Club. . . . .
60 P.M. Martineau, Littleworth, Esher . . . . R.A.I.
62 Miles Tilley, Coombe-in-Teignhead . . . . . . R.A.I.
64 Rev. J.B. Wilson, F.S.A., Knightwick . . . . . R.A.I.
65 A.M. Jarmin, East Hill, Colchester . . . . E.A.S.
66 Mrs. A.M. Jarmin, East Hill, Colchester.
67 Mrs. Du Boulay Hill, East Bridgford Rectory.
68 J.F.M. Palmer, M.B. Streatham
     Park, S.W. . . . . R.A.I.
69 Miss Maisie Sparling.
70 Mrs. de Home, Cumberland Place, N.W. . . R.A.I.
71 Miss Brabrook, 178 Bedford Hill, Balham.
72 A.T. Richardson, Barnard Castle . . . . R.A.I.
74 T. Dyer Edwardes, Prinknash Park,
     Stroud . . . . R.A.I.
75 Judge Baylis, K.C., Kensington
     Gardens, W. . . . . R.A.I.
76 Rev. T.H. Curling, Colchester,
     Hon. Sec . . . . E.A.S.
77 G.M. Brierley, Pyon House, Hereford . . . . . R.A.I.

78 Philip Norman, 45 Evelyn Gardens, S.W. . . R.A.I.
79 Dr. HENRY LAVER, F.S.A., Colchester . . . R.A.I.
     President E.A.S.
80 Mrs. Bartleet, The Rectory, Dursley.
81 F.F. Fox, Yate House, Yate S. O. . . . . R.A.I.
82 Mrs. Wilson, Knightwick Rectory, Worcester.
83 Canon Bartleet, F.S.A., Dursley,
     Shrewsbury . . . . R.A.I.
84 Dr. R.B. Macbean, Lancaster . . . . R.A.I.
85 Rev. A. Du Boulay Hill, E. Bridgford,
     Notts . . . . R.A.I.
86 Sir E. Brabrook, O.B., V.P.S.A., Balham . . . R.A.I.
88 Miss Ward, Bouverie Road, Folkestone . . . . R.A.I.
89 Miss Etherington Smith, Chelsea.
90 Mrs. W. Hamilton, Clapham Common . . . . R.A.I.
91 Miss E. Blyth, Lexden, Colchester . . . . E.A.S.
92 Mrs. Garraway Rice, Cyril Mansions, S.W.
93 E. Herbert Fison, Stoke House, Ipswich . . . . R.A.I.
94 Miss Josephine Rouse, St.John's, Ipswich.
95 Mrs. C.H. Master, Southampton.
96 Lady Howorth, 30 Collingham Place, S.W.
97 Miss Esther Vigors, Holloden, Bagenalstown.
98 J. Horace Round, LL.D., Brighton . . . . E.A.H.
99 Sir HENRY HOWORTH, F.R.S., F.S.A.
     London . . . . President R.A.I.
100 Rt. Hon. James Round, Colchester . . . . . . .E.A.S.
101 Judge LeGros, F.S.A., Seafield, Jersey . . . . R.A.I.
102 W.H.S. John Hope,
     Burlington House, W. . . . . R.A.I.
103 Humfrey Howorth, 30 Collingham
     Place, S.W. . . . . R.A.I

2, 9, 19, 25, 34, 36, 58, 58a, 59, 61, 63, 73, and 87
are unidentified

Fig 1   Key to Plate 5

Plate 5   Joint meeting of the E.A.S. and the Royal Archaeological Institute, Colchester Castle, 26 July 1907. (Photo: E.A.S.).

contributors are M. Reginald Hull of Colchester Museum (xxi, xxiv, xxv), John L. Fisher (xxii-xxv), F.G. Emmison (xxii-xxv), and Francis W. Steer (xxiv, xxv).

80   Most numerous of the learned contributions to the *Transactions* during Benton's editorship, and indeed during his forty-six-year membership of the Society, are those from his own pen. They appear in volume xiii (1915) and every volume from xv to xxv (1921-60), totalling 110 items, of which 30 are articles and the remainder notes, usually brief.[161] Twenty two of the articles relate to churches, especially their wall-paintings (Plates 6-8). The other topics include a Bronze Age burial, early wills, ancient bridges, 15th-century woodwork from a house, religious gilds, domestic wall-paintings, and an account of the origins of the E.A.S. and of Colchester museum. Benton's notes in the *Transactions* are only slightly broader in scope than his articles. It must therefore be admitted that he was an antiquarian with limited interests. The present writer was once told that Benton was not a palaeographer, and this is confirmed by his writings, which rely on printed sources when quoting medieval documents. But in spite of these limitations, his contributions to the *Transactions* are notable. So is his work as joint author, with F.W.

Galpin and W.J. Pressey, of *The Church Plate of Essex* (1926). He also published about a dozen articles in the *Essex Review*, and a couple in other journals.

81   Besides the *Transactions*, the Society, during its second 'Jubilee', published a number of occasional papers, all relating to historical records. The calendar of *Feet of Fines for Essex*, launched in 1899, was published in parts, eventually gathered into volumes, over the next fifty years. The first volume, for the years 1182-1272, was completed in 1910. It was edited by Richard E.G. Kirk, and indexed by W.C. Waller with help from J.H. Round and R.C. Fowler. The second volume (1272-1326), edited by Fowler, was completed in 1928. Volume three (1327-1422), completed in 1949, was edited by Sidney C. Ratcliff of the Public Record Office, a member of the E.A.S. Council, from Fowler's transcripts. It was indexed by A.C. Wood, also of the P.R.O. The first part of volume four, issued in 1947,[162] also from Fowler's transcripts, was eventually superseded by the complete volume (1423-1547), published in 1964.

82   *The Cartularium Prioratus de Colne* (Cartulary of Earls Colne priory), edited by Canon John L. Fisher, was published in 1946 as the Society's 'Occasional Publications, No. 1.' The Essex

Record Office and Reuben Hunt, of the modern Colne Priory, contributed to the cost of production. The medieval priory, founded 1101 x 1107, was a cell to the Benedictine abbey of Abingdon (Berks.). The cartulary, which contains 107 items dating from the 12th century, is the source for its early history.[163] Canon Fisher (d. 1969), a Yorkshireman, was rector of Netteswell in west Essex (1918-54, with Little Parndon, 1921-54). He had joined the Society in 1919, was elected to Council in 1938,[164] and was honorary archivist from 1942 to 1955. He contributed many papers to the *Transactions*, and wrote independent histories of *The Deanery of Harlow* (1922), and *Harlow New Town* (1951). His *Medieval Farming Glossary*, published in 1968, was based on many years research into manorial documents in the Essex Record Office.[165] During the 1950s he drafted several parish histories for *V.C.H. Essex*, and the present writer came to know him fairly well. John Fisher was modest, companionable, and did not take life, or himself, too seriously. As a young man he had excelled as a sportsman, and he was said to be 'equally at home at Twickenham, Lords or Wimbledon.'[166]

83 John Fisher's edition of the Earls Colne cartulary comprises a full Latin transcript, followed by abstracts and notes in English, a pedigree of the Vere family, founders of the priory, a sketch map of Earls Colne parish, and indexes of personal names and of places. It adds little to Fowler's history of the priory in *V.C.H. Essex* (ii. 102), since Fowler had been able to use an 18th-century transcript of the cartulary in the British Museum.[167] But the original, here printed in full for the first time, is a useful addition to Essex sources for the 12th century. The dating of the charters could sometimes be improved.

84 The illustrated *Guide to the Essex Quarter Sessions and other Official Records*, edited by F.G. Emmison (Occasional Publication No. 2, 1946) was a reprint of one of the Essex Record Office's publications, made possible by the loan of the type and blocks.

85 *Essex Sessions of the Peace, 1351, 1377-1379*, edited by Elizabeth Chapin Furber (Occasional Publication No. 3, 1953), was published with the aid of contributions from the Bridges Bequest, the Essex Record Office, F.G. Emmison, and two anonymous donors.[168] These important rolls are among the few surviving medieval records of the justices of the peace. Mrs Furber, of Mount Holyoke and Wisconsin Universities, U.S.A., was working under the guidance of Dr Bertha H. Putnam, the leading authority on the Peace Rolls.

Excavations

86 Between 1927 and 1929 the Society excavated part of the meadow behind Hollytrees house, finding fresh evidence on the layout of Roman Colchester. The work was funded by a public appeal, and

Plate 6   An apostle or evangelist, wall painting in Little Easton church, c.1175. (From E.A.T. N.S. xxii, frontispiece).

directed by P. G. Laver, assisted by the newly appointed museum curator, M.R. Hull.[169] From 1930 the E.A.S. was represented on the Colchester committee, sponsored by the Society of Antiquaries, which in the following years excavated the pre-Roman settlement of Camulodunum, under the direction of Hull and Christopher F.C. Hawkes.[170] In 1934 the E.A.S. joined with the Antiquaries to excavate the supposed site of Edward the Elder's *burh* at Witham.[171]

THE THIRD 'JUBILEE': 1953-2002

87 The membership figures during this period, when given in the annual reports, are not always reliable, and between 1969 and 1982 they are not recorded. During the 1950s and 1960s the total seems to have remained fairly steadily at around 500. In 1986/7, after a careful check and the deletion of lapsed subscribers, it was 419. During the following years it rose, to 521 in 1993, but since then has fallen, to 464 in 1999, including 307 individual and family members, 105 institutions, 9 life members, 8
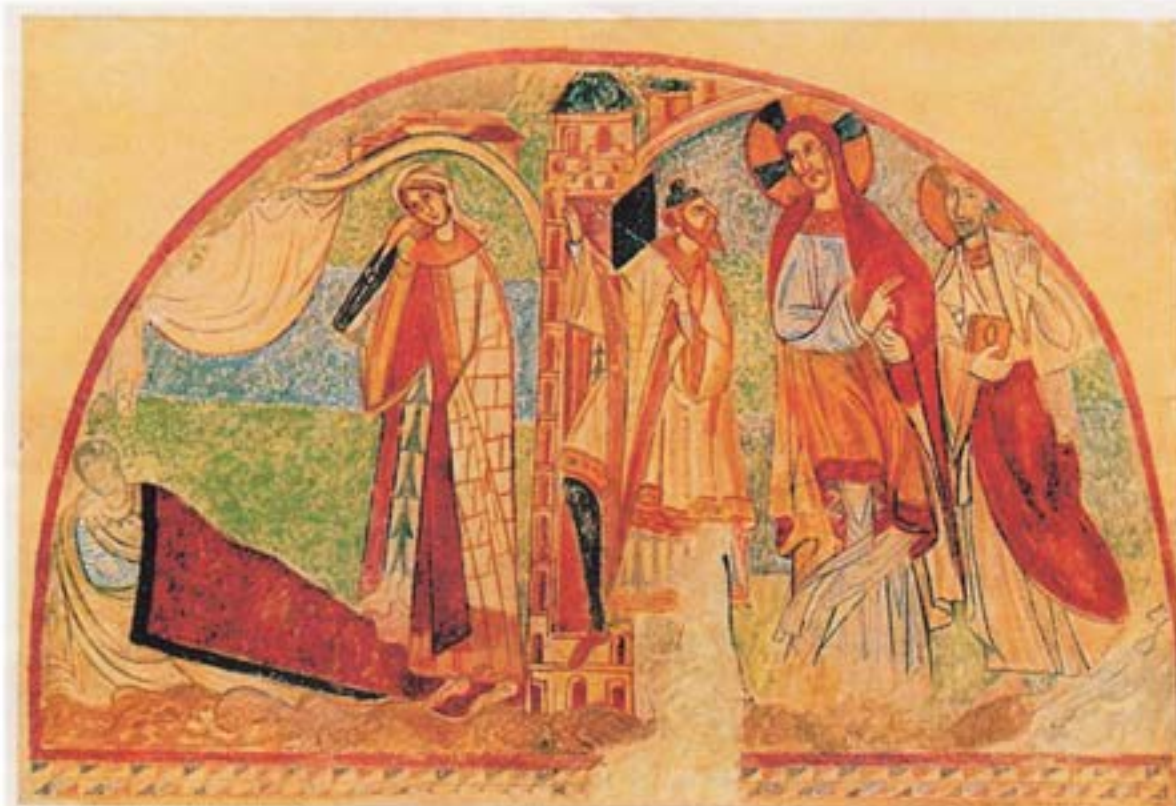
THE RAISING OF JAIRUS'S DAUGHTER
WALL-PAINTING IN COPFORD CHURCH, c.1150

Plate 7   The raising of Jairus' daughter, wall painting in Copford church, c.1150. (From E.A.T. N.S. **xxi**, frontispiece).

THE BETRAYAL
WALL-PAINTING IN FAIRSTEAD CHURCH, THIRTEENTH CENTURY

Plate 8   The betrayal, wall painting in Fairstead church, 13th century. (From E.A.T. N.S. xxii, 214).

honorary members, and 35 associates. Life membership, suspended in 1952, was re-opened in 1963, but was finally abolished in 1972. One of our present life members, Kenneth Walker, joined as far back as 1935, and was for many years active in the Society.

88 The annual subscription of £1 for individuals, set in 1953, was raised in 1973 to £2.50, to £5 in 1980, £7.50 in 1984, and £9 in 1989. Since 1989 there have been small increases every two or three years. In 2000 the individual subscription was £18 (£20 for two members at one address), £20 for institutions, and £8 for associates. Life membership cost £10 10s in 1952 and £25 in 1963-72.

89 The character of the membership has changed considerably during the past fifty years. Since 1964 members have not been required to seek formal election, but merely to send in application forms with subscriptions. Clergy, once the mainstay of the Society, have almost disappeared: only six were listed in September 1999, and one of them, the bishop of Chelmsford, was an honorary member *ex officio*. But at least 67 individuals in that list were professionally engaged in (or retired from) archaeology, history, archives or librarianship,[172] and 20 of them were Council members, out of a total of 31.

90 Since 1964 continuous service on Council has been limited to three years. In 1969 the Society set up four committees: public relations; library and records; *Transactions* (styled 'an editorial board'); and fieldwork, research and museums.[173] The last of these, concerned mainly with the Society's excavations (below) was discontinued in or about 1985. The other three still survive, as programme, library, and publications committees. A finance and membership services committee was set up on 1988 to advise Council. It is chaired by the president, and consists of all the officers, and all past-presidents who are current members of Council. The place-names committee was formed in 1996 to direct the Essex place-names project (see para. 143).

91 During the past forty years the Society has received much financial aid from public funds, particularly for excavations and excavation reports. This has made it possible to publish the *Transactions* (now called *Essex Archaeology and History*) more often, at greater length, and to a higher standard than ever before, though with a smaller proportion of historical (as opposed to archaeological) contents.

92 During these years, and particularly since the 1970s, women have come to take an important part in the Society's work. That they did not do so earlier was not due to their lack of numbers. In 1955 the recorded membership of 546 included 207 women, of whom 30 had joined in or before 1925. A few women, like Katharine Fry and Mrs Archibald Christy, had contributed to the *Transactions*, but they were exceptional. Mrs Sarah Parish served as collector of subscriptions (1883-1902), after her husband's death, but she was an employee. The first women officers of the Society were both appointed in 1921: Lady Petre (later Rasch) as a vice-president, and Mrs E.M. Bourke (later Bourke-Borrowes) as a local secretary. Miss T.M. Hope became a local secretary in 1934. Mrs R.C. Fowler, widow of the Society's former editor, was deputy librarian 1943-6, and also served on Council 1944-52.[174] Only three other women were elected councillors up to 1970. Since then their numbers have gradually increased, a process made easier by the new rule (1964) requiring councillors to retire after three years. Women are still a small minority on Council: in 1999 only six out of 31. But this underrates their activity, for three of them were then officers, and two others were chairing committees.

93 Three women have served as social (later excursions) secretary (1973-87, 1987-95, 1995 to date); two as honorary secretary (1978-84, 1984-6), three as membership secretary (1974-9, 1979-85, 2000-), and others as administrative secretary (1986-8), assistant secretary (1987-9), and programme secretary (1987-90). The Society's first woman president, Dr Jennifer Ward, served her three-year term from 1993 to 1996, and in 1997 became a trustee.

94 At the Annual General Meeting held at Blackmore on 8 June 1985 it was proposed that in future the Society should be called 'The Essex Society for Archaeology and History.' It was hoped that the new name, emphasising the fact that the Society was concerned with medieval and modern history as well as prehistoric archaeology, might attract more members. The resolution was passed, though not without considerable opposition from those who wished to keep the old and honoured name.

Presidents

95 The five-year rule restricting the president's term of office remained in force until 1964, when a new constitution reduced it to three years.[175] Denis A.J. Buxton (1955-60) was the last president to hold office continuously for five years. He had joined the Society in 1931, and was elected to council in 1944.[176] During the First World War he had fought at Gallipoli; in the Second he commanded R.A.F. balloon squadrons in London and Coventry. In 1924 he took part in neolithic excavations on the estates of (Sir) Lewis Namier in Poland. When elected president he was living at Chipping Ongar, where he owned the mount and bailey of the Norman castle. He was a deputy lieutenant and a former high sheriff of Essex. In 1955 he moved to Caister castle in Norfolk and he later became president of the Norfolk and Norwich Archaeological Society. He died in 1964.[177]

96 John G.S. Brinson (1960-64 and 1972-73), of Barnston, had joined the Society in 1946, and had served on Council since 1955 (Plate 9).[178] Before and after the Second World War he worked in the Land Agent's office of Essex County Council.[179] During the war, after escaping from Dunkirk, he fought in north Africa, and later in Italy, where he also raised a mobile unit to carry out archaeological rescue excavations. In 1946, with the encouragement of M.R. Hull, he formed the Roman Essex Society, a small group which in 1946-8 excavated sites at Chelmsford, Great Chesterford, Rivenhall and elsewhere. Brief reports on these were published in *V.C.H. Essex*, iii (1963). In 1955 Brinson merged the Roman Essex Society with the E.A.S.[180] He had long felt that the county society needed to be invigorated, and that this could best be done by a programme of excavations. As a member of Council, then as president, and the Society's director of excavations, he vigorously advanced this policy.[181]

97 Brinson's first presidency ended in 1964, but during the following years he promoted a number of excavations on behalf of the Society, became honorary secretary of the Colchester excavation committee, and founding chairman of the Chelmsford excavation committee. From 1969 he also chaired the Society's new fieldwork, research and museums committee.[182] In 1972, following Emmison's illness, Brinson was again elected

Plate 9 Major John G.S. Brinson (1911-73). President 1960-64 and 1972-73. (From E.A.H. 1, frontispiece).

president. Later that year he wrote personally to all members outlining recent work and future plans. But he fell ill soon after, and died in November 1973.[183]

98 (Sir) William W. Addison (1964-7) had joined the Society in 1946 and was elected to Council in 1949.[184] Born in Yorkshire, he had settled in Essex in 1929, as owner of a bookshop at Loughton. He became a leading magistrate, a verderer of Epping Forest, the author of several popular books, such as *Essex Heyday and The English Country Parson*, and the chairman of many local bodies, including the *Victoria History of Essex*. Confident, friendly, and wise, his style was to preside rather than to lead, while never failing to support and encourage his executive officers, and to counsel them when necessary. He died in 1992.[185]

99 Kenneth R. Mabbitt (1967-70) had joined the Society in 1932, and had served on Council since 1945.[186] About 1930 he and his brother Harold had set up a wood-carving business in Colchester.[187] Kenneth remained active for over fifty years, completing his last work in 1987. Examples of the firm's craftsmanship can be seen in over 200 Essex churches, and beyond the county in Canterbury cathedral, Lancing college, and elsewhere. Kenneth was already assisting the Society *c.*1931, when he sent Benton information on his firm's recent work in Great Bromley church.[188] About 1935, at Benton's suggestion, he contributed to the *Transactions* a scholarly article on Berechurch church, Colchester.[189] He became a trustee of the Society in 1961,[190] and was later chairman of the public relations committee, on which his wife Christine also served. As president he wore the badge which he himself had designed for the Society's centenary. Kenneth Mabbitt died in 1989, aged ninety. His father, Thomas, had been born in 1833, and had captained a sailing clipper.

100 Frederick G. Emmison (1970-72 and 1973-5) had joined the Society in 1946, and was elected to Council in 1959.[191] Having come to Essex in 1938 as the first county archivist, he appreciated the mutual benefit to be gained from a close relationship between the Record Office and the Society. From 1938 onwards he published in the *Transactions* many articles and notes based on E.R.O. records or listing new accessions to the Office.[192] After the war the Record Office allowed the Society to reprint the *Guide to the Essex Quarter Sessions Records*, and contributed to the cost of publishing two other occasional papers (see paras 82, 84, 85 above). In 1964 Emmison arranged for the County Council to meet half the cost of publishing the fourth volume of the Society's *Feet of Fines for Essex*. He and his friend Marc Fitch later assumed full responsibility for editing and publishing volumes five and six of the *Fines*.

101 During Emmison's years as county archivist (1938-69), the E.A.S. deposited on loan in the E.R.O. many historical documents accumulated since 1852. These included, besides hundreds of original records, the Holman MSS, upon which Philip Morant's *History of Essex* was based.[193] Emmison's first period as president of the Society was cut short by a breakdown in health. After recovering, he was able to serve for two years after Brinson's death. He died in 1995 after a distinguished career in archives and related fields.[194]

102 A. Charles Sparrow Q.C., of Stock (president 1975-8), has been the Society's honorary legal adviser since 1972. John E. Sellers (1978-81) had previously been honorary secretary. In his election as president a novel procedure was followed. Having failed to decide who should be nominated to succeed Charles Sparrow, Council invited four suggested candidates, including Sellers, to stand in an unofficial election, held privately at a Council meeting. Sellers won this 'presidential primary' and was then nominated unanimously for formal election at the A.G.M.[195]

103 William H. Liddell (1981-4) of Billericay was a resident history tutor for London University's extramural department. Andrew B. Phillips (1984-6) of Colchester was a history lecturer at the Colchester Institute. He later became the Society's honorary librarian. Owen Bedwin of Chelmsford (1986-7) later served as honorary editor. He is an archaeologist with Essex County Council. W. Raymond Powell of Brentwood (1987-90) had been editor of the *Victoria County History of Essex* (1951-86). He was membership secretary of the Society (1990-93) and became a trustee in 1990. John S. Appleby of Great Horkesley (1990-93) had previously been honorary secretary, and, from 1961, also a trustee. Jennifer C. Ward of Brentwood (1993-6) was a lecturer at Goldsmiths College, University of London. She has been a trustee since 1997. John Hunter of Thaxted (1996-9) had recently retired as assistant county planner and a landscape historian with Essex County Council. David G. Buckley of Chelmsford (1999-2002) is Essex county archaeologist. He became a trustee in 2000.

104 It will be seen that since 1970 most presidents have been professional historians or archaeologists. Such officers can bring to the Society, besides their technical skills, the occasional use of offices, libraries, and other facilities, and sometimes also grants, in cash or in kind, from sympathetic employers. But in a county society such benefits need to be balanced by consideration for the requirements of the wider membership. This applies particularly to publications, in which narratives are of greater appeal than lists of artefacts or technical arguments.

Vice-Presidents [196]

105 From 1953 to 1965 the number of vice-presidents ranged from 5 to 8. In 1965 five out of eight had given long service: T.D.S. Bayley and D.A.J. Buxton as presidents, M.R. Hull as curator of Colchester museum, P.H. Reaney as a place-name expert and Council member, and Sir Mortimer Wheeler. In 1966 three more were added: Marc Fitch, a life-member and generous benefactor of the Society, and the masters, *ex officio*, of the two colleges where Philip Morant had graduated, Pembroke, Oxford, and Sidney Sussex, Cambridge. Lord Alport, a long-standing member of the Society and previously M.P. for Colchester, was elected in 1968. From 1966 to 1999 the total number ranged from 10 to 14. Most of those elected during those years were working members of the E.A.S. but two were the mayors of Southend-on-Sea and Maldon, *ex-officio*, who had been hosts to the Society for the A.G.M.s of 1972 and 1975 respectively. No other Essex town has held a vice-presidency.

106 The election of vice-presidents has always been subject to annual review, and in 2000 it was decided not to reappoint those representing institutions, while retaining the others, and adding two more. This produced a list of six: Drs. Arthur F.J. Brown, and Geoffrey H. Martin, Margaret U. Jones, Lord Petre, John S. Appleby, and W. Raymond Powell.

107 There is no evidence that the vice-presidents, as such, have ever played an active role in the Society. But a situation might arise when they could do so - perhaps as arbitrators - and then it would be invaluable if they included a strong element of persons whose devotion to the Society had been proved by long experience of its work. This seems to have been one of the main reasons for the reorganization of 2000.[197]

Honorary Secretaries

108 Francis W. Steer (1953), senior archivist in the Essex Record Office, and a member of the Society since 1946[198] seemed an ideal choice as Benton's successor. He was a self-taught scholar with a lifetime's devotion to Essex. As a young man, unable to afford to buy Morant's *History*, he had transcribed it in full from a borrowed copy.[199] Unfortunately for the E.A.S. he had to resign as secretary within a few months, on appointment as county archivist of Sussex. Lt. Col. Robert J. Appleby (1953-9), of Colchester had fought in both world wars, and had taken part in archaeological excavations at home and abroad. At the medieval feast in 1953 he acted with gusto as 'general-marshal'. As secretary he strove to increase membership by good publicity. But his poor record-keeping caused problems for his successor. He died in 1975. John S. Appleby (1959-72) of Elmstead and

later of Great Horkesley, had been a naval officer during the Second World War, and was later for many years a primary school headmaster. He had joined the Society in 1947, became a trustee in 1961, and served as president from 1990 to 1993.[200] During his years as secretary, under five presidents, the Society was labouring to improve its activities, its management and its publicity. All this meant increasing work, which Appleby shouldered with help from his large and growing family. From 1964 to 1967 he also served as honorary secretary of the newly formed Essex Archaeological Congress, itself a demanding task.

109 John E. Sellers (1973-8) of Chelmsford had been assistant secretary from 1972 to 1973.[201] He was an electrical engineer who had served with R.E.M.E. during the Second World War. He joined the Society in 1959. During the 1970s, with energetic support from wife Elizabeth, he was prominent in rescue archaeology in Essex, took part in several excavations for the Society's research and fieldwork committee, and represented the E.A.S. on the Council for British Archaeology and other bodies. He was a founder member in 1968 of the Chelmsford excavation committee and was later its chairman. He edited *E.A.H. News* 1973-83, and, with his wife, was also responsible for its distribution. He served as president (1978-81), and as a trustee from 1982. He died in 1994.

110 Sellers was succeeded as honorary secretary by Isobel M. Thompson (1978-84), of Belsize Park, London, who had previously assisted him as 'minute secretary' (1977-8). Mrs. Lesley Cooper (1984-6) had no immediate successor as honorary secretary. Some of the duties of the office were undertaken by Elizabeth Sellers (1986-8), as 'administrative secretary,' while others were subject to temporary arrangements. Victor Gray, county archivist, was honorary secretary (1987-90), with his colleague, Janet Smith, as assistant (1987-9). Nicholas Wickenden, of the Chelmsford museum, served jointly with Gray (1989-90), and then alone (1990-94). His successors were Christopher Thornton (1994-9), of the *Victoria County History of Essex*, and Michael Leach (from 1999), of Ongar, a retired doctor.

Excursions, Social, and Programme Secretaries

111 In 1954 John Woods of Stanway was appointed excursions secretary,[202] but no later record has been found of him, and the duties of the post once again fell upon the honorary secretary until 1973, when Margaret Cornwall of Copford Green was appointed social secretary. She organized the Society's programmes until 1987, with the active support of the public relations committee. In 1987 Janet Cooper, editor of *V.C.H. Essex*, became programme secretary (1987-90), in charge of overall planning,

with June Beardsley of the Essex Record Office as excursions secretary (1987-95), both reporting to the newly constituted programme committee. David Andrews, of Essex County Council's planning department was programme secretary (1990-2000). His successor was John Walker of Lower Layham, Suffolk. Patricia Ryan of Danbury became excursions secretary in 1995.

Honorary Treasurers

112 O.E.R. Alexander (1950-55) was succeeded as treasurer by C.W. Nunn of High Roding (1955-6), and by James Williams (1956-9) and Malcolm Bennett (1959-60) both of Colchester. John B. Bennett (1961-71) had joined the Society in 1938, and was active in it after his retirement to East Mersea.[203] He became a trustee in 1961.[204] While treasurer he also served as honorary librarian. He died in 1983, aged 91. He was followed by Kenneth V.A. Oxborrow (1961-4) of the County Council treasurer's department. Michael S. Crellin of Maldon served as treasurer 1964-84.[205] He became a trustee in 1985, and has continued to advise the Society on investments,[206] His successor as treasurer was a business colleague, Martin O'Connor (1984-7), also of Maldon. Richard W. Fuller (1987-95 and 1997 onwards) of Feering, a banker, was succeeded by D. Anthony Davies (1995), of Chelmsford, who resigned from pressure of work. William A. Hewitt of Gidea Park, a retired banker, served as acting treasurer, 1995-7. Richard Fuller then took over again as treasurer, with William Hewitt as assistant. Together they have reorganized the Society's finances.[207] Richard Fuller became a trustee in 2000.

Membership Secretaries

113 Since 1974 annual subscriptions have been collected by the following: Patricia Monk (1974-8) of Roxwell, Olive Daynes (1978-85), of Abbess Roding, Richard Coleman (1985-90) of Southend-on-Sea, W. Raymond Powell (1990-93) of Brentwood, Paul W.J. Buxton (1993-5) of Ongar, James Kemble (1995-2000) of Ingatestone, and Ann Turner of Great Bentley (from 2000).

Trustees

114 In 1961 Council nominated as trustees the honorary secretary (J.S. Appleby), the honorary treasurer (J.B. Bennett, d. 1983), and K.R. Mabbitt (d. 1989). They succeeded T.D.S. Bayley as well as D.W. Clark (d. 1958) and G.M. Benton (d. 1959). J.E. Sellers, appointed in 1982, died in 1994. M.S. Crellin (1985), W.R. Powell (1990), P.W.J. Buxton (1992), Jennifer C. Ward (1997), D.G. Buckley, R.W. Fuller and P.M. Leach (all 2000), along with J.S. Appleby, are the present nominated trustees. They are, in effect, a permanent sub-committee of Council.[208]

Museum and Library

115 The agreements of 1926 and 1929, by which the Society's archaeological collections in Colchester museum were amalgamated with those of the Corporation, and the Society was granted the use of three rooms in Hollytrees (Plate 10), to house its library, continued in force until 2000, subject to certain alterations. In 1963, for the museum's convenience, the library was moved from the first floor to the second and third floors,[209] and in 1991, the Society vacated one of the third floor rooms in exchange for a basement room in the museum's resource centre in Ryegate Road adjoining the castle.[210]

116 The 1926 agreement provided that the Society's representatives on the Corporation's museum committee should number at least one third of the total. By the 1950s the Society was regularly nominating four members of the museum and muniments committee. In 1966 they surrendered one place to Essex County Council, which was contributing to the salary of the museum's schools officer.[211] From 1970 the E.A.S. had three seats on Colchester's cultural activities committee, which now had charge of the museum. In 1974, under new local government legislation, the Society's representatives were reclassified as co-optative. Finally, in 1986, Colchester borough abolished all such co-options. The Society was advised that it had insufficient legal grounds to contest this decision.[212] To have done so might, in any case, have caused the borough greatly to increase the annual payment of £60 which the Society was still paying, under the 1929 agreement, for accommodation, lighting, heating, and cleaning in Hollytrees.

117 Meanwhile, the Society was beginning to consider seeking greater library accommodation elsewhere. A decision was eventually forced upon them in 2000, when the museum decided to install a lift in Hollytrees, reducing the shelf-space and closing the library for two years. The Society thereupon transferred its library on permanent deposit to the Albert Sloman library of Essex University at Wivenhoe Park, Colchester. The university undertook to house, maintain, catalogue, and insure the library without charge, and to make it freely available to members of the Society. The members will also have access to all items in the Albert Sloman library. The E.A.S. library will remain the property of the Society, and will be kept as a separate collection.

118 The agreement with the university applies only to the Society's books housed at Hollytrees. The Society retains the use of the room in the museum's resource centre in which are stored the back-stock of its publications, and a few rare or duplicate books. By arrangement with the museum, the Society can also hold occasional meetings in Hollytrees, and it will have a room there for the use of the Honorary Librarian.

119 The Society's library includes the principal histories of the county, its places, regions and topics, many pamphlets, some standard works of reference, and various other books, unrelated to Essex, acquired by donation over the years. Most important of all are the periodicals, which form one of the largest archaeological collections in the country outside the national and older academic libraries. They comprise some 290 titles, of which 55 relate to Essex, 140 to other counties or regions of the United Kingdom, and 40 to foreign countries; the remainder deal with general topics.[213] Fifty of the periodical files are complete from the first volume. Among them are the journals of the London and Middlesex Archaeological Society (from 1856), the Society of Antiquaries of Scotland (from 1855), the Surrey Archaeological Society, and the Sussex Archaeological Society (both from 1858). Also complete is *The Ancestor* (1902-05) a short-lived but brilliant genealogical magazine published by Constable and edited by Oswald Barron in association with J. Horace Round. In 1999 the Society was receiving 39 periodicals under reciprocal arrangements with other organizations.

120 W.R. Saunders was succeeded as honorary librarian by James R. McCullum (1955-63), rector of Alresford, who had previously been librarian of Ripon Hall, Oxford,[214] J.B. Bennett (1964-7), who was also honorary treasurer, and John M. Sims of Colchester (1972-4). Peter B. Boyden (1974-80), of Walton-on-the-Naze, compiled the excellent *Catalogue* (1980) of the Society's records which has been frequently used in writing the present survey. He and John Mead (1981-4) of Boxford (Suff.), planned a new scheme for reclassifying and

Plate 10 Hollytrees, Colchester. (Photo: Avril H. Powell).

cataloguing the library. This was carried out by Essex County Library staff, with the aid of a Pilgrim Trust grant. Reciprocal loans were also arranged with the County Library. John Bensusan-Butt (1984-6) of Colchester, was succeeded by Andrew Phillips, previously president, who negotiated the library's move to Essex University.

Meetings

121 During the mid-1950s the number of social events increased. In 1955 there were five excursions and five lectures in addition to the A.G.M. In 1956 there were four excursions, six lectures, the A.G.M., and the 'Morant dinner', a new event, with a guest speaker, which has been held annually ever since. There were eleven events in each of the years 1957 and 1958. In the 1960s there were fewer excursions, and in 1969-72 there seem to have been none at all. Lectures numbered four or five in most years, and occasionally more. But insufficient efforts were made to ensure that they would be well attended.[215] Two successful events were held in association with the Friends of Historic Essex: an Elizabethan Feast (1961) commemorating Elizabeth I's first progress through Essex in 1561, and a Mayflower Dinner (1970), marking the 350th anniversary of the Pilgrim Fathers.

122 Between 1973 and 1987 excursions, vigorously promoted by the new social secretary, became once more the main feature of the programme, numbering between three and five in most years, and no fewer than eight in 1978-9, and seven in 1979-80. Occasional lectures were now interspersed with open days in the library, and informal receptions. An all-day seminar in 1979, though inadequately advertised and poorly attended, produced three substantial papers for the *Transactions*.[216] In 1984 an annual 'Morant lecture' was introduced.

123 Since 1988 there have been three or four excursions each year, as well as the A.G.M., the Morant dinner, occasional receptions, and meetings connected with the Publications Development Fund and the Essex Place Names Project.

Publications

124 When Benton died in 1959, the second part of the *Transactions* Centenary volume (N.S. xxv), delayed by his illness, had at last appeared.[217] He was succeeded as editor by Leonard H. Gant, author of a history of Berechurch, and a member of the Society since 1949. The final part of the Centenary volume was published in 1960, and it was then decided to terminate the New, octavo-sized, series, to launch the Third series in quarto, and to aim at publishing one part each year. To save printing costs the Third series volumes, from the start, were limited to articles, notes, obituaries and reviews. The reports on the Society's activities, which had been a standard feature in the earlier series of the *Transactions*, were relegated to a Newsletter, issued several times a year. The Third series retained the title of *Transactions* for its first three volumes, published in eight parts (1961-71). From volume four (1972) it has been styled *Essex Archaeology and History*, and each volume is issued entire, not in parts.[218]

125 In the 40 years since 1961 thirty-two volumes of the Third series have appeared, as compared with the twenty-five volumes of the New series published in the eighty two years from 1878 to 1960. Leonard Gant, (editor 1959-72) was succeeded by David T-D. Clarke (1972-87), curator of Colchester museum. Dr Owen Bedwin (editor 1987-2000), had been president of the Society in 1986-7. He is deputy county archaeologist. Before coming to Essex he was for some years editor of the Sussex *Archaeological Collections*. Dr David Andrews, editor from 2000, is also on the county archaeological staff. He had been the Society's programme secretary, 1990-2000. Volume 10 of *Essex Archaeology and History* (1980) was edited by Peter J. Huggins, then chairman of the publications committee.

126 The good progress of the Third Series has been made possible by generous financial aid. Every volume, except the second and twelfth, has received donations from public funds towards the costs of publishing particular articles. The principal donors have been the Department of the Environment, the Council for British Archaeology, English Heritage, and, increasingly, Essex County Council (planning department). Their grants have been almost entirely restricted to archaeology, and particularly to reports on rescue excavations. This has inevitably shaped the content of the volumes. Its effect was described in 1979 by Peter Huggins in his editorial to volume 10.

> Rescue archaeology receives a 75 per cent publication grant from the Department of the Environment, so that a purely historical article costs the Society four times as much as a rescue archaeological one of the same length ... One way out of this dilemma is for the historian to become more concerned with the historical researches needed by the medieval and post-medieval archaeologist; this way historical matter receives the 75 per cent grant.

127 David Clarke had a better appreciation of historical writing. As editor of volume 12 he reminded members of the Society that, thanks to the Department of the Environment's grants, 'the recent volumes which they have received have in many cases cost far more than their *total* individual subscriptions for the year.' But he pointed out that the absence of historical articles was due to the scarcity of suitable copy as well as the lack of grants. He added:

... there are good signs that this [scarcity] is ending, as the present [J.H. Round memorial] volume demonstrates. While, therefore your [Publications] Committee are resolved not to abandon proper standards of reference and criticism, they are equally resolved to maintain a proper balance between the various aspects of material and documentary history.

128 As the Third Series has developed, grants have been found for historical as well as archaeological articles. Some have come from the authors themselves, their employers or associates. Most have been occasioned by the articles' subject matter. 'Colchester: a smaller medieval English Jewry' (volume 16), received publication grants from Colchester borough council and the local Jewish community. Colchester, with its long and interesting history, has in recent years received much attention from historians, and many of their articles in the Series have been supported by the borough council. 'The medieval hospitals at East Tilbury and West Tilbury' (vol. 19) , attracted a grant from Thurrock borough council. 'Beyond the Morant Canon: some English parish historians' (26), which included a study of J.P. Shawcross's *History of Dagenham*, was subsidized by Barking and Dagenham London borough council. Grants were given by Essex University towards 'Gentry factions and the Witham affray, 1628' (10), by the Colchester Engineering Society, for 'Early Colchester foundries' (14), by the Augustine Courtauld Trust, for 'the textile industry in 12th and 13th century Essex' (20) and by *Newport News*, for 'the hospital of St. Leonard's at Newport.'(20) Among other benefactors have been the Friends of Historic Essex (5), the Chelmer Institute (11 and 13), the Harwich Society (21), Nottingham University (26), and several individuals interested in the topics dealt with or in their authors (20, 21).

129 The grants given for historical articles in the series, while valuable and much appreciated, have tended to be smaller and more difficult to secure than those for archaeology. In 1993, therefore, Council launched a Publications Development Fund, the interest from which would subsidize the publication of particular articles, especially (though not exclusively) those based on documentary sources. Grants were to be given, in the first instance, for a number of articles written by J. Horace Round, and left to the Society in manuscript at his death. Those who planned the scheme had only modest hopes for it. They were reminded that a somewhat similar scheme, some years earlier, had been a failure, and were warned that the new fund was unlikely to exceed £5,000. But the members' generosity, and the hard work of William (Bill) Hewitt, honorary secretary of the Fund, raised over £9,000 in the first year, and by 31 December 2000 the total stood at £21,004. This figure included many

personal contributions, gifts from several societies and Essex County Council, and annual grants from the general funds of the Society to protect the real value of the Fund against inflation. By the same date twelve articles in the Series had received a total of £3,975 from the Fund. Four of the articles were by J.H. Round. Another was a *Revised Bibliography* of his writings (volume 29), which was offprinted and later marketed under an attractive cover designed by Roger Massey Ryan and Michael Leach.

130 Volumes 1 to 30 of the Third Series (1961-99) contain 206 articles devoted to archaeology, and 113 to history. These categories (which exclude short notes) are not mutually exclusive, for many of the archaeological articles include information from documentary sources, while some of the historical articles contain evidence from excavation or fieldwork. It should also be emphasised that the archaeological articles, often describing in detail the objects found or the features noted during excavation, are generally much longer than those devoted to history, where references to sources can be given briefly in footnotes.

131 The information in the archaeological articles can be analysed roughly as follows: Iron Age and earlier, 25 per cent; Roman 25, Saxon 10; medieval (to 1500) 28; post-medieval 10.[219] Of the historical articles 35 per cent relate to the Middle Ages and 65 to later periods. Many of these articles relate respectively to Colchester, Waltham Abbey, and the Chelmsford district. Braintree and Maldon each figures in several articles, while places appearing in two or three articles include Chadwell St. Mary, Grays Thurrock, Harwich, Heybridge, Mucking, Nazeing, Southend, Stebbing and Saffron Walden. Among the medieval articles are reports on the excavations of Chelmsford's Dominican friary (volume 6), St. Nicholas's church, Ingrave (9), a farm at Purleigh (17), St. Leonard's hospital, Newport (20), Stebbing church (28) and the Carmelite friary at Maldon (30).

132 Most of the archaeological articles were written by scholars working professionally in Essex, particularly for the excavation committees at Colchester, Chelmsford and Mucking, Essex Archaeological Society, and Essex County Council's planning department. Among these writers were B.R.K. Dunnett, P.J. Drury, Warwick Rodwell, Christine Couchman, Philip Crummy, M.U. Jones, D.D. Andrews, Maria Medlycott, Deborah Priddy, Ralph M.J. Isserlin, N.J. Lavender, and Paul Sealey. Peter J. Huggins, an engineer, did much work on Waltham Abbey. One article was contributed by Professor Christopher Hawkes (volume 14).

133 The information in the historical articles ranges widely in both time and topic. It can be analysed chronologically as follows: 19 per cent before 1300; 16 for the period 1300-1499; 14 for the 16th century; 13 for the 17th; 13 for the 18th; 16 for

the 19th; and 9 for the 20th.[220] The first period includes an article on 'The Vikings in Essex, 871-917' (volume 27). There are many studies relating to Domesday Book and feudal topography, (e.g. vols. 1, 4, 12, 16, 21, 25, 27, 29). Among other topics are the Anstey case - a celebrated 12th-century lawsuit (15)- the textile industry in the 12th and 13th centuries (20), the rectors of Peldon (7), Essex markets before 1300 (13), the Colchester Jewry (16), the hospitals of East and West Tilbury (19), the Liberties of Colchester borough (24), the taking of venison in Epping forest (26), St. Mary, Maldon and St. Martin-le-Grand, London (28), the counts of St. Pol in Essex and Kent (27), and peasants in Essex, c.1200-1300 (29).

134 In the period 1300-1499 Colchester figures prominently, with articles on gaol delivery (volume 2), the constitution (13), courts (17), fields (19), bailiffs (21), town clerks (24), and the siege of the town by Leo de Bradenham in 1350 (22). Among other topics are biography and family history (6, 8, 16, 26), farming and landscape (2, 9, 25), churches (28, 29), and buildings (25). Volume 2 (part 3) contains three contrasting studies: on Chingford field names, original documents in the Morant MSS, and 'Essex and a Crisis in English Society', which deals with the rebellion of January 1400 against Henry IV. The value of manorial descents is discussed, with Stebbing as a test case (30).

135 Sixteenth-century studies, as in the previous period, include several on Colchester: the Plague, 1579-1666 (volume 4), the Reformation, 1528-53 (15), wealth and family (21), wills and religious mentality (22). Others relate to the Cooke family of Gidea Hall, Romford (9), politics in Thaxted (8), and Old Copped Hall, Epping (17).

136 The political history of the earlier 17th century figures in articles on the 'Essex alarum' of 1625 (15), the 'Witham affray', 1628 (10), Sir Thomas Barrington and the Puritan revolution (2), Parliament and Essex, 1643 (2), and Hezekiah Haynes, Cromwell's major-general (1). Seventeenth-century industries appear in articles on John Ennows, clay-pipe maker of Colchester (15), and mills and ferries along the lower Lea (23). 'Silas Taylor of Harwich' (25) traces the life of a man who fought against Charles I, served Charles II as a naval executive, and wrote the first Essex town history.

137 Several 18th-centuries studies relate to the great Audley End estate (9, 11, 13, 23, 24). Others describe the conflict between the antiquaries Philip Morant and Richard Gough (20); William Mayhew and the recovery of the Colchester charter in 1763 (18); Francis Smythies, attorney and political broker (19); the Adam church at Mistley (1); Dutch cottages in Essex (22), and the Gosfield Hall estate, 1715-1825 (25).

138 Nineteenth-century articles include two relating to Essex's defences against Napoleon: fire beacons, volunteers and militia (15), and the Harwich gun battery (25). There are two articles on the architect Frederic Chancellor (5, 26); another provides a checklist of Essex architects, 1834-1914 (24). John Belcher, designer of Colchester's town hall (5) does not appear in the checklist, since his office was in London. No architect seems to have been employed in the rebuilding, 1822-8, of three houses in Thorpe and Kirby-le-Soken, for which detailed accounts are printed (2). A study of Essex farming in 1801 (5) is based on the national crop returns in the Public Record Office. Also related to agriculture is an account of the enclosure of Old Heath common, Colchester, 1811-18. (27) Early-19th-century industry figures in an article on Colchester foundries (14), and in one on poor women's employment during the Napoleonic wars (27). The development of Clacton-on-Sea as a business venture, 1864-1901 (16), the career of Richard Stokes (1788-1875), founder and head of Ongar academy (29), and the tithe commutation maps of Essex (25), are among other topics receiving substantial treatment.

139 The Society's symposium on J. Horace Round, held in 1979, produced three articles for *E.A.H.* (12), relating to his work, c.1880-1928. One of them describes his services to the Society, particularly in the later years of his life. Twentieth-century history can also be found in articles on the Fambridge colony (an experiment in land reclamation by unemployed Londoners) (18), local government planning papers as sources for the local historians (19), and modern woodwork by H.&K. Mabbitt in Birdbrook church (22).

140 Most of the historical articles in *E.A.H.* have been 'home grown'. Frequent contributors have been David Andrews and John Hunter (Essex County Planning), Jennifer Ward (Goldsmiths College, London, and Brentwood), John D. Williams (Chelmer Institute and Brentwood), and W.R. Powell (*Victoria County History of Essex* and Brentwood). Contributors from outside Essex have included R.H. Britnell (Durham University), B.W. Quintrell (Liverpool University), David Crook (Public Record Office), J. Enoch Powell M.P., Michael Gervers (Toronto University, Canada), Laquita Higgs (Michigan University, U.S.A.), and Marjorie McIntosh (Boulder University, Colorado, U.S.A.).

Excavations [221]

141 In 1958 members of the Society interested in excavations were invited to communicate with the honorary secretary. In the following year John Brinson was appointed as the Society's 'excavations organizer'. He held this post, later styled 'honorary director of excavations', until his death. Under his leadership the Society put in hand an ambitious programme of excavations at the Norman castle of Pleshey, initially directed by Philip Rahtz, assisted

by Brinson himself, and financed by grants from the Carnegie Fund. The Pleshey excavations lasted for many years.[222] Meanwhile, the Society was carrying out other rescue excavations, with the aid of government grants, as at Kelvedon, Rivenhall, Boreham, Braintree, Witham, Maldon, Dunmow, Coggeshall, and Heybridge, in 1970-73.[223] It also assisted the Colchester excavation committee, and in 1968 was largely responsible for setting up the Chelmsford excavation committee, of which Brinson became chairman, and John Sellers honorary secretary. In 1969 the Society formed a 'fieldwork, research and museums committee', also chaired by Brinson. With his death in 1973 the Society lost the driving force behind its excavations. To what extent the programme might otherwise have continued is in any case doubtful, for in 1972 the planning department of Essex County Council had formed an archaeology section which, with ample resources, took over responsibility for most of the rescue and other excavations within the county with the exception of those in Colchester and Chelmsford.[224]

142 In 1974 the Society reported that its application to the Department of Environment for grants for rescue work in 1975-6 had been unsuccessful. It went on:

> This is a serious matter, because the Society, together with the Chelmsford excavation committee, had maintained an efficient digging team of professional excavators over a number of years. The inevitable result of the present situation will be the dispersal of this team, indeed this has already happened to some extent.

The report for 1977-8 took a more realistic view of the situation:

> It is apparent that grant-aided excavation through this Society is likely to be the exception in the future, since the type of excavations which have previously been organized through the Society, such as Kelvedon, are now being directed by staff from County Hall.

The Essex Place Names Project

143 This Project, proposed in 1995 by Dr James Kemble, was adopted by the Society in 1996. Its purpose is to record, for each parish, field and other minor place-names in historical documents, and to investigate on the ground, visible remains corresponding to the names. In the first phase of the work, volunteers were recruited to search tithe and inclosure awards, and by 2001 over 20,000 names had been entered on a database, and booklets published for 40 parishes. A pilot study, on Cressing parish, has drawn on a variety of sources. Since 1997 annual seminars have been held, led by guest speakers. The Project has received generous grants from Essex County Council and the Essex Heritage Trust, as well as regular funding from the Society.

Summary and conclusions

144 In 1852, when the E.A.S. was founded, the Crystal Palace, recent home of the Great (and profitable) Exhibition was being removed from Hyde Park to Sydenham. On 2 December, twelve days before our inaugural meeting, Louis Napoleon had been proclaimed Emperor of France. In the U.S.A., Harriet Beecher Stowe's *Uncle Tom's Cabin*, published in the previous March, was already a best seller. In Essex, Colchester, still the largest town, had within the past decade seen the arrival of the railways, and of a new town hall (since then rebuilt) in which the Society first met.[225]

145 Such things now seem remote, yet the Society's existence can be measured by no more than three overlapping lives. For example John Appleby, a member since 1947 and president 1990-93, joined the Society in the time of G. Montagu Benton, a member 1913-59, and president 1950-55, who had himself known Frederic Chancellor, founder member, 1852-1918, and president 1908-11. Such continuity and long service are particularly valuable to a voluntary society. In this history special attention has therefore been paid to long serving officers such as Cutts, King, Frederic Chancellor, Beaumont, James and J. Horace Round, Curling, Fowler, Henry and Philip Laver, Benton, Brinson and Sellers, while leaving future writers to assess those still living. The Society's constitution, social activities, publications and finances have also been considered in some detail.

146 From the outset the Society embraced the whole of the ancient county, from Harwich to the river Lea, and from Southend-on-Sea to Saffron Walden and the Cambridgeshire border. This had practical difficulties, especially in the years before the completion of the railway network. Chelmsford, the centrally-placed county town, would have been a more convenient base, as the Church decided when forming its new diocese in 1914. But Colchester, with its ancient history and Norman castle, was far more attractive to antiquarians, and already had an archaeological association to form the nucleus of the county society. Its choice was thus virtually inevitable. It must be admitted that Colchester's location at the northern end of Essex has tended to discourage potential members from the south, and has limited the use of the E.A.S. library. It is likely, also, that the adoption of Colchester as the Society's base has inhibited the growth of interest in other important places in the county. But the close links between the Society and Colchester museum have been of great mutual benefit, while the Society's officers have always been careful, in planning meetings, to cover all parts of the county.[226]

147 During its first hundred years the E.A.S. remained somewhat exclusive in admitting members and selecting leaders. T.D.S. Bayley recalled his first

impressions of the Council, which he joined in 1936, when in his 30s:

> Nearly all the other members were about twice my age; the discussions at meetings, then held in Fleet Street, reached a very high level, and Benton was firmly established as an institution.[227]

The cosy little club thus depicted met in the London office of H.W. Lewer, who had been elected to Council in 1912 and served as honorary treasurer for 20 years until he died in 1949 at the age of 90.[228] Although he and his fellow officers and councillors were efficient as well as devoted, they tended to be complacent and lacking in foresight, especially in relation to the Society's finances. The annual subscription set in 1852 remained unchanged until 1946, and no serious attempt was made, before 1992, to build up substantial reserve funds. In both cases the need for action was probably obscured by the personal generosity of some of the officers: Lewer, as treasurer, did not claim postal expenses, while Philip Laver, as honorary librarian, gave many books to the Society.

148 The restriction of continuous Council membership to three years (1964) and the formation of committees (1969) has widened the active membership. But the reduction of the president's term of office from five years to three, also in 1964, is more difficult to justify. None of the other officers is subject to a fixed term of office. Such a rule, when applied to the presidency, ensures that the Society will not be saddled indefinitely with someone unequal to this important role, and guarantees regular opportunities of selecting and honouring those who are worthy. For these purposes a five-year term seems appropriate; but three years is scarcely long enough for a president who is willing to act as chief executive as well as chairman.

149 For many years the clergy formed a substantial proportion of the E.A.S. membership, but by 1999 they had almost disappeared from the Society, having been replaced, as its leaders, by archaeologists, historians, and similar professionals. This new dispensation has raised the standard of the Society's publications. During the past forty years it has also helped to secure much financial aid from public funds. While these grants are much appreciated, the Society has since 1992 begun to strengthen its own resources through the Publications Development Fund, which is designed to provide a permanent income from inalienable capital.

150 It is impossible to say whether the Society's change of name in 1985 has, as hoped, attracted more members. The membership, which is influenced by a number of factors, has not altered significantly since then. One disadvantage of the change is that the Society is more easily confused with the Essex Archaeological and Historical Congress.

151 An important development in recent years has been the Essex Place Names Project. Besides producing useful information this enables members of the Society to undertake research, under guidance, at various levels.

152 In the previous pages some of the failings of the E.A.S. have been touched upon. To these must be added the insufficient attention paid to the publication of original records. The Society's calendars of *Feet of Fines* are, indeed, of great value. The *Register of Colchester School*, 1637-1740, the *Cartulary of Colne Priory*, and *Essex Sessions of the Peace* are substantial and useful books, while the *Transactions* contain a number of brief but important items such as 'Bequests relating to Essex in the Court of Husting', (xiii, xiv), and 'Fulk Basset's Register and the Norwich Taxation' (xviii). But Essex has not yet matched counties like Suffolk and Wiltshire, where the archaeological societies have established branches entirely devoted to publishing records. Another failing has been inadequate indexing of the *Transactions*. A general index to the Third Series, *Essex Archaeology and History*, volumes 1 to 20, is in preparation. When that has been completed, it is hoped that the existing indexes to the individual volumes of the New Series (xvi-xxv) can be subsumed into a single sequence. Meanwhile, *E.A.H.*, advancing steadily, has already reached volume 32 without any indexes to unlock the treasures of recent years.

153 We must not end on a critical note. To have survived for 150 years, through two world wars, periods of rapid inflation and social change, is a great achievement in itself. The Society has produced 62 volumes of articles with some 18,000 pages of research on all periods of Essex's past. It was largely responsible for the foundation and development of Colchester museum, has directed or assisted in many excavations, and held a watching brief on the preservation of ancient buildings. Its library, now in Essex University, includes an excellent collection of British and foreign archaeological journals. It has institutional members throughout the United Kingdom, and in Canada, the U.S.A., Sweden, France, Germany, Holland and Australia. And not least, it has given pleasure to thousands of people, by helping them to learn more about Essex and to meet others who share their interest and their love of the county.

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Footnotes

Among abbreviations in the footnotes the following many need elucidation.

Ann. Rep.	*Annual Report of E.A.S.*
Co. Mins.	Minutes of E.A.S. Council
D.N.B.	*Dictionary of National Biography*
E.A.H.	*Essex Archaeology and History* (E.A.S. Transactions, 3rd Series)
E.A.S.	Essex Archaeological Society
E.R.	*Essex Review*
E.S.A.H.	Essex Society for Archaeology and History
Mins.	Minutes of E.A.S. or E.S.A.H.
News	*Newsletter of E.A.S., later E.S.A.H.*
NS	*Transactions of E.A.S.,* New Series

1   The term 'Triple Jubilee' has been used for this paper because it is more euphonious than 'sesquicentenary' and also because it fits the theme. Unless otherwise stated the paper is based on the following sources: W. C. Waller, 'Our Diamond Jubilee', *NS* xiii.1; G.M. Benton, 'The Early History of the Society and of the Colchester and Essex Museum', *NS* xviii. 276; P.B. Boyden, *A Catalogue of the Minute Books and other Records of the Essex Archaeological Society.* 1980. [Published TS. Includes lists of Officers]; *E.A.S. List of Members, 1955.*

2   J. Cantwell, *The Public Record Office*; R.A. Humphreys *The Royal Historical Society,* 1868-1968, App. I, 'The Camden Society', by C. Johnson.

3   *English County Histories*, ed. C.R.J. Currie and C.P. Lewis, 89.

4   Ibid. 305, 436, 343, 334, 203.

5   Lancashire (ibid. 229); Lincolnshire (251), Hertfordshire (192); Sussex (390); Buckinghamshire (56), Norfolk (285); Suffolk (370); Cheshire (82); Herefordshire (184); Somerset (351).

6   Essex (ibid. 148); Wiltshire (420); Surrey (384); Leicestershire (235); London and Middlesex (264, 275); Kent (212).

7   F.W. Jessup. 'The Origin and First Hundred Years of the [Kent Archaeological] Society', *Archaeologia Cantiana*, lxx (1956), 1. I am grateful to Dr. Michael Leach for this reference.

8   Ibid. 3.

9   For the Colchester Literary Institution see *V.C.H. Essex Bibliography* (1959), 316.

10   *Crockford's Cler. Dir.* 1865.

11   *NS* xviii. 282, quoting *Essex Standard* 17 Dec. 1852.

12   *D.N.B.* s.v. Disney, John (1779-1857).

13   In 1903 eight out of the twenty-four Council members were clergy.

14   *NS* xiii. 2.

15   *V.C.H. Essex*, viii. 166.

16   *NS* i. 64; ii. 117; iii. 155.

17   Ibid. ix. 234.

18   Ibid. 182, 234.

19   Ibid. 235. It is possible that the new rule was also aimed at the new president, Henry Laver, a forceful character.

20   Ibid. 235.

21   *NS* xviii. 282. For Earl de Grey see: *Complete Peerage*, iv. 117; *D.N.B.* He had published, in 1845, *A Life of Sir Charles Lucas.* For Marsden see *D.N.B.*

22   *NS* ii (3), endpaper.

23   Ibid. vi (1), endpaper.

24   *D.N.B.* s.v. Cutts, E.L. (1824-1901).

25   *NS* xviii. 281.

26   Ibid. v. 185.

27   Ibid. viii. 385.

28   *E.R.* iii. 19. See also *NS.* iv. 30.

29   *E.A.H.* xii. 31.

30   *NS* v. 65; *Guide to E.R.O.,* 200.

31   *E.R.* iii. 21.

32   *NS* xix. 13.

33.   Ibid. xvii. 139.

34   For C.G. Round see *V.C.H. Essex, Bibliog.* (1959), 123.

35   For James Round: *NS* xiv. 273; *E.R.* xxvi. 31.

36   *NS* ix. 185; xiii. 5.

37   For the origin of the Colchester and Essex Museum: *NS* xviii. 283; *V.C.H.* Essex, ix. 300.

38   For the museum accommodation see *V.C.H. Essex*, ix. 247.

39   *NS* v. 123.

40   Mins. 4 Feb. 1873.

41   Ibid. 23 Apr. 1881; 1 Feb. 1882.

42   *Essex Standard* 2 May 1885.

43   *NS* v. 124-5.

44.   Ibid. 126-7.

45   *Colchester Corporation Museum Report, 1904-5.*

46   See below, para. 66.

47   *V.C.H. Essex*, ix. 246. The keep was roofed in 1934-5, but as late as the 1950s the museum curator, M.R. Hull, used to wear an overcoat in his office during cold weather.

48.   *NS* xx. 302. From 1874 the Society's printers were Wiles & Son Ltd.

49   See *General Indexes* up to *NS* xv, 2 vols. 1900, 1926.

50   *NS* xv. 85: obituary, including list of his papers in *Transactions* (1858-1917); K.D. Box, 'The Chancellor Collection ... in the Essex Record Office,' *E.A.H.* 5, p. 202; A. Holden, 'The Life and Work of Frederic Chancellor,' ibid. 26, p. 205.

51   *NS* xv 128-37.

52   Ibid. 320; xvi. 50.

53   E.R.O., D/DHt Z36.

54   *NS* x. 260.

55   I.C. Gould contributed an article on 'Ancient Earthworks' to *V.C.H. Essex*, i. 275.

56   See para. 35 below.

57   *NS* xiv. 356: obituary by J.H. Round.

58   Ibid. v to xiv (1895-1918).

59   Only 12 copies exist, including those in the British Museum, the Guildhall Library, London, and the Essex Record Office.

60   For Stubbs, Freeman and Read see *D.N.B.*

61   *E.R.* xlvi. 133.

62   *NS* ix. 187.

63   Ibid. xxv. 274.

64   Ibid. 289-90.

65 Ibid. xv. 82, 155; xvi. 60.

66 Ibid. xiv. 194; 264; 368; xv. 319; G. Hewitt, *Hist. Diocese of Chelmsford*, 81.

67 For Round's career see J.H. Round, Family Origins, ed. W. Page, p. ix; *D.N.B.*; W.R. Powell, 'Norman Essex and its Historian', *Essex Jnl.* xviii. 33; W.R. Powell, 'The County Historian', *E.A.H.* 12, p. 25; W. R. Powell, 'Revised Bibliog. of Publications of J.H. Round,' ibid. 29, p. 155.

68 See para. 76 below.

69 *NS* xvi. 60.

70 No fewer than 48 appeared between 1921 and Round's death in 1928.

71 *NS* xvii. 69.

72 Ibid. xxiv. 172; xviii. f.p. 153; *Who was Who* (1941-50), 419.

73 *NS*. xix. 137.

74 Ibid. xxi 181; xxii 366; *E.R.* iii. 27, 254, 261.

75 See below, para. 67.

76 *NS* xxiv. 170, 188.

77 Ibid. 166, 187.

78 Ibid. 198. 200.

79 *Crockford's Cler. Dir.* 1947; G. Hewitt, *Hist. Dioc. Chelmsford*, 196.

80 *NS* xx. 143; xxii. 172, 184; xxv. 285; Co. Mins. 17 Jan. 1950.

81 *V.C.H. Bibliog.* (1959), 60, 69, 155, 257.

82 *NS* xxv. 379.

83 *Feet of F. Essex*, iii, pp. v-vi.

84 This section is based on *NS* endpages, and *Ann. Reps.* from 1953.

85 *Burke's Peerage* (1967), 2214.

86 Sarah Parish served as collector 1883-1902: see para. 14 above.

87 *NS* xxiv. 166.

88 Ibid. viii, 380.

89 *V.C.H. Bibliog.* (1959), index.

90 *NS* xvii. 140, 283.

91 Ibid. 137, 139.

92 Ibid. 276.

93 Co. Mins. 25 Nov. 1929.

94 Co. Mins. 30 Oct. 1922; *NS* xvi, 312, 318.

95 *NS* xxv. 379 (obit. good on character but short on facts); *Crockford's Cler. Dir.* (1947).

96 *Crockford's Cler. Dir.* (1947). For von Hügel see *D.N.B.*

97 *NS* xiii. 150.

98 Ibid. xv. 162, 166; xxv. 381.

99 Co. Mins. 25 Nov. 1929.

100 From 1929 to 1949 H.W. Lewer was nominally joint editor, but Benton seems to have done most of the work.

101 *NS* xxv. 380: T.D.S. Bayley's comments.

102 Ibid. xx. 129.

103 Ibid xvi. 185; xxii. 172.

104 Ibid. xxv. 132.

105 Ibid. 132, 285.

106 Co. Mins. 29 Nov. 1926; 28 Mar. 1927.

107 K.G. Farries, *Essex Windmills*, iii. 50.

108 *NS* xxiv. 233.

109 Ibid. xxv. 381.

110 Ibid. xxii. 172, 179; xxv. 285.

111 This section is based on lists printed on the endpapers of unbound parts of *NS* which often disappear during binding.

112 Probably of Feltimores, Harlow, cf. *Kelly's Dir. Essex* (1922).

113 *V.C.H. Essex, Bibliog.*, (1959), 163.

114 *NS* xv. 356. For Waller's other work for the Society see para. 27 above.

115 *Officers and Council 1919-20*; *NS* x. 62.

116 *NS* xvi. 107; xx. 107.

117 *Officers and Council 1912-20; NS* xxv. 120.

118 *List of Members 1919-20*; *NS* xii. 357; Co. Mins. 25 Nov. 1929.

119 *NS* xxv. 129, 132.

120 Co. Mins. 25 Nov. 1929.

121 Ibid. 21 Mar., 18 July 1938; 20 Mar., 1939; *NS* xxiii. 221; ibid. 235.

122 Co. Mins 17 Jan. 1950.

123 For Clark (d. 1958) see *NS* xxv. 378.

124 *Ann. Rep.* 1953.

125 *Colchester Corporation Museum Rep., 1904-5.*

126 *NS* xviii, 304, 308; xix. 67.

127 Co. Mins. 1913.

128 Ibid. 1914.

129 *NS* xiv. 131.

130 Co. Mins. 23 July 1920.

131 These properties were sold to the Corporation by Charles J. Round at a bargain price, to serve as a war memorial. The price was paid by Weetman Pearson, Viscount Cowdray, high steward of Colchester.

132 Co. Mins. 24 Feb. and 26 July 1926; *NS* xviii, 136.

133 Co. Mins. 18 Mar. 1929.

134 AGM and Co. Mins.

135 *NS* xxiii. 196.

136 Ibid. 398.

137 Co. Mins. 20 Sept. 1944.

138 *Ann. Reps.* 1967, 1968.

139 *NS* ix. 235-7, 295-6.

140 This paper remained unpublished at Round's death. Part of it is printed in *E.A.H.* 31 (2000), under the title 'The Earls of Oxford and the Forestership of Essex.'

141 *Ann. Rep.* 1955; *E.A.S. Rules* 1964.

142 George W. Coventry (1865-1927), styled Viscount Deerhurst, was son and heir of the earl of Coventry: *Complete Peerage* iii. 474; xiv. 212.

143 For Sir William St. John Hope see *D.N.B.* and *NS* xv. 244.

144 Printed in *NS* ix. 243.

145 *NS* ix. 296-310 (summaries).

146 Ibid. facing pp. 296, 298. For Bamford (1857-1939) see article by C.J. Whitwood, *Romford Record*, vii. 30. Other Bamford drawings appeared in NS around 1904.

147 *NS* xiv. 130, 264, 369; xv. 107, 166.

148 Ibid. xv. 162, 164, 248, 258.

149 Ibid. xxiii. 381, 392, 397; xxiv. 190, 201, 232.

150 Ibid. xxiv. 248, 254, 273; xxv. 131, 141, 148, 280, 284. (Reports for 1946 to 1953).

151 *NS*. xxv. 142.

152 *List of Members 1919-20.*

153 Sussex Arch. Soc. LFS 90, J.H.R. to L.F. Salzman, 2 June 1917.

154 Ibid. 11 July 1917.

155 *NS* xiv. 218.

156 Ibid. xix. 327.

157 For Miller Christy see *V.C.H. Essex Bibliog.* (1959), 73. For Bamford and Reaney see *V.C.H. Essex Bibliog. Suppl.* (1987), 57, 78. For Smith: *E.R.* xlv. 183.

158 *Ann. Rep.* 1953. Figure calculated, with certain deductions, from Income and Expenditure account.

159 *NS* xxiv. 257, 277; xxv. 135, 151, 287. The 8-year total was £2,796.

160 *NS* xxiv. 233.

161 The total omits a few 'follow-up' notes.

162 *Feet of F. Essex*, iv, Preface.

163 G.R.C. Davis, *Medieval Cartularies* (1958), 32.

164 *NS* xxii. 411.

165 Second Edition, revised by Avril and Raymond Powell, with biographical note on J.L Fisher, published 1997.

166 G. Hewitt, *Hist. Dioc. Chelmsford* (1984), 195.

167 Now B.L., Add. MS. 5860.

168 *NS* xiv. 233, 249.

169 Ibid. xix. 156, 348; xx. 131, 318; xxi. 164.

170 Ibid. xx. 271; xxi. 164, 300; xxii. 173; 189, 401; 418; xxiii. 222.

171 Ibid. xxii. 173.

172 This figure is based on personal knowledge. A comprehensive survey might reveal a few more.

173 *News* 32 (Sept. 1969); *Ann. Rep.* 1969.

174 *NS* xxiv. 187; *Ann. Rep.* 1952.

175 *E.A.S Rules* 1964.

176 *NS* xx. 333; xxiv. 187.

177 Inf. from Mr. Paul Buxton; *NS* xxv. 289, 301.

178 *Ann. Rep.* 1956.

179 *E.A.H. 5* (1973), 3-5.

180 *NS* xxv. 291.

181 See para. 141 below.

182 *Ann. Reps.* 1970, 1971; *News* 38 (Feb. 1972).

183 *Ann. Rep.* 1973-4; *E.A.H. 5* (1973), 3-5 (obit.)

184 *NS* xxiv. 271.

185 *The Independent*, 5 Nov. 1992; personal knowledge.

186 *NS* xxi. 159; xxiv. 198.

187 *E.A.H.* 21 (1990), 5; ibid. 3 (1972), frontispiece; C. Mabbitt, 'Modern woodwork in Birdbrook church by H. & K. Mabbitt,' *E.A.H.* 22 (1991), 132.

188 *NS* xx. 296. See also xxii. 127, 128, 130.

189 Ibid. xxii. 87. This appears to be Mabbitt's only contribution to the *Transactions*.

190 Co. Mins. 30 Oct. 1961.

191 *AGM Agenda* 1960, cf. 1959.

192 *NS* xxii. 221, 361-3; xxiii. 133, 173, 181-91, 356, 361-8: xxiv. 61, 161-2.

193 *Guide to E.R.O.* (1969), 194, 199; *Ann. Reps.* 1968, 1969.

194 *The Times* 1 Dec. 1995.

195 Personal knowledge. A similar 'primary', with two candidates, was held in 1981.

196 This section is based on *Ann. Reps.*

197 In 2000 one vice-president had been a member since 1947, and three others since 1951, 1952 and 1953.

198 *E.A.H. 7* (1975), 71 (obit).

199 Personal inf. to present writer.

200 Co. Mins. 30 Oct. 1961.

201 *News* 120 (Sept. 1994), obit.

202 *NS* xxv. 283.

203 *E.A.H. 16* (1984-5), 6.

204 Co. Mins. 30 Oct. 1961.

205 *AGM Agenda* 1985.

206 Personal knowledge.

207 Co. Mins. 6 Jan. 1996; personal knowledge.

208 Under the Charities Act, 1992 all members of ESAH council are *ex officio* trustees.

209 *Ann. Rep.* 1963.

210 Ibid. 1991.

211 *AGM Agenda* 1966; *Ann. Rep.* 1967.

212 *EAH* 17, p. 6 (editorial). The Society still receives the open agenda of the committee.

213 The figures are estimated from an 'Index of Technical Publications: Essex Archaeological Society' compiled on computer by Essex County Libraries in 1986. This index lists 346 titles, of which 58 are parish magazines and reports of other bodies not primarily concerned with archaeology. There have been few changes in the Society's holding of periodicals since 1986.

214 *Ann. Rep.* 1971.

215 At one lecture, in September 1965, the audience numbered only five, including the chairman: personal knowledge.

216 'The life and work of J. Horace Round'. Papers by D. Stephenson, P.B. Boyden and W.R. Powell, published *E.A.H.* 12 (1980), 1-38.

217 Unless otherwise stated this account of the publications 1953-2002 is based on the *Annual Reports* and the volumes themselves.

218 Volume 3 contains only one part.

219 This analysis is based on 144 of the principal archaeological articles. The exact percentages are: Iron Age and earlier 24·30; Roman 26·39; Saxon 10·42; medieval 27·78; post-medieval 11·11.

220 This analysis is based on all the historical articles. The exact percentages are: Middle Ages 35·75; later periods 64·25. A more detailed analysis is as follows: early Middle Ages (to 1300), 20·29; later Middle Ages (1300-1500), 15·46; 16th century, 14·01; 17th century 12·56; 18th century 13·04; 19th century 15·94; 20th century 8.7.

221 This section, unless otherwise stated, is based on the Society's *Annual Reports*.

222 For reports on the Pleshey excavations see *V.C.H. Essex, Bibliog. Supplement* (1987), 175.

223 See also *News* 38 (Feb. 1972); 40 (Sept. 1972). In 1971 the Society received excavation grants totalling £5,253, of which £4,551 were spent at seven sites: *Ann. Rep.* 1971, Excavations Accounts.

224 Inf. from Dr. O. Bedwin.

225 *V.C.H. Essex*, ix. 236, 275.

226 See, for example, the published indexes of *NS* under the name of Frederic Chancellor, the guide on many excursions.

227 *NS* xxv. 380

228 Ibid. 120.

INDEX OF PERSONS

This index refers to the paragraph numbers printed **bold** in the text. It includes officers, members, and benefactors of the Society, and the authors of items in the Society's publications.

The following abbreviations have been used: And., Andrew; Ant., Anthony; Art., Arthur; bp., bishop; Chas., Charles; Chris., Christopher; Cl., Council; Dav., David; Eliz., Elizabeth; Fran., Francis; Fred., Frederic(k); Geo., George; Geof., Geoffrey; Hen., Henry; hon., honourable; Jan., Janet; Jas., James; Jn., John; Ken., Kenneth; Ld., Lord; Marg., Margaret; Mart., Martin; Mic., Michael; Nic., Nicholas; Pat., Patricia; Pet., Peter; Phil., Philip; Ric., Richard; Rob., Robert; Thos., Thomas; Univ., University; w., wife; Wm., William.

Prehistoric settlement and burials at Elms Farm, Heybridge

by M. Atkinson and S. Preston
with contributions by N. Brown, C. Duhig, H. Martingell and R. Tyrrell

Prehistoric activity on this multi-phase site includes Neolithic settlement, Bronze Age funerary activity, and less well-defined early and middle Iron Age occupation of this river valley/estuarine location. The excavated evidence, particularly from the 1993 site, correlates with that of the adjacent Crescent Road and Langford Road sites. Together, they shed light on the early use of the upper gravel terrace and hint at activity on the lower, alongside the marshland, river and Blackwater estuary. They attest to relatively dispersed settlement, agricultural exploitation and funerary uses of the landscape, perhaps taking a more settled form in the Iron Age with the imposition of recognisable land division, including field systems.

Introduction

The site at Elms Farm is located on the western periphery of Heybridge, Essex (Fig. 1), to the north-west of Maldon, and at the head of the Blackwater Estuary (TL847082). 21ha, of a total development area of 29ha, were subject to archaeological investigation in two phases in 1993 and 1994/5 ahead of by-pass and housing construction.

The 1993 site, located to the north of the 1994 site, was an 8ha area west of Crescent Road (Fig. 1). It lay adjacent to the Langford Road site subsequently investigated by the Cotswold Archaeological Trust (Langton & Holbrook 1997). All features were sampled across this area. The 1994 site was a 13 ha triangle of land, subdivided by hedged ditches into four fields of rough pasture. All areas were stripped of topsoil and planned, and excavation was undertaken on a selective basis.

A substantial settlement spanning the late Iron Age to early Saxon period (roughly 1st century BC to 5th century AD) and largely overlying the earlier prehistoric occupation was the main focus of the excavations. This settlement is published elsewhere, together with a full description of the excavation strategy and methodologies (Atkinson and Preston 1998 and in prep.).

Topography & geology

The site occupied the gently sloping river terraces on the north side of the river Chelmer close to its junction with the Blackwater. It straddled two of these terraces below the 5m contour, and the step between them marked the division between the two phases of excavation; the 1993 site lay on the upper terrace and the 1994 site the lower (Fig. 1). The southern limit of the 1994 site coincided with the next step in the terracing down toward the river Chelmer some 400m further south. The north end of the development area was at an altitude of c. 4.4m OD, stepping down to c 2.5m OD at the south.

Until recently, land use reflected the local topography; the upper terrace was cultivated land and the lower, pasture. The land to the south was, and remains, marshy. The surface geology comprised river gravels with pockets of brickearth.

Excavation

Approximately 0.3-0.4m of topsoil was removed by machine revealing archaeological features and deposits either cut into or overlying natural gravel or brickearth. Across the 1993 site post-medieval ploughing had completely removed all traces of features within its topsoil. However, the main late Iron Age and Roman settlement activity did not extend this far north, and the field boundaries of these periods had relatively little detrimental effect on prehistoric features cut into the subsoil. Although the 1994 site was far less disturbed by recent agricultural practice, very intense late Iron Age and Roman settlement had largely removed earlier prehistoric features. The majority of *in situ* earlier prehistoric features and stratified artefacts therefore derived from the 1993 site (Fig. 2). Earlier prehistoric material from the 1994 site was largely residual in later features, and where *in situ* prehistoric remains were encountered, they were fortuitous survivals. The partial excavation of the 1994 site, where excavation was limited to an estimated tenth of all features and deposits, introduced further bias. No doubt some prehistoric features simply went undiscovered. The major prehistoric features are described and discussed in
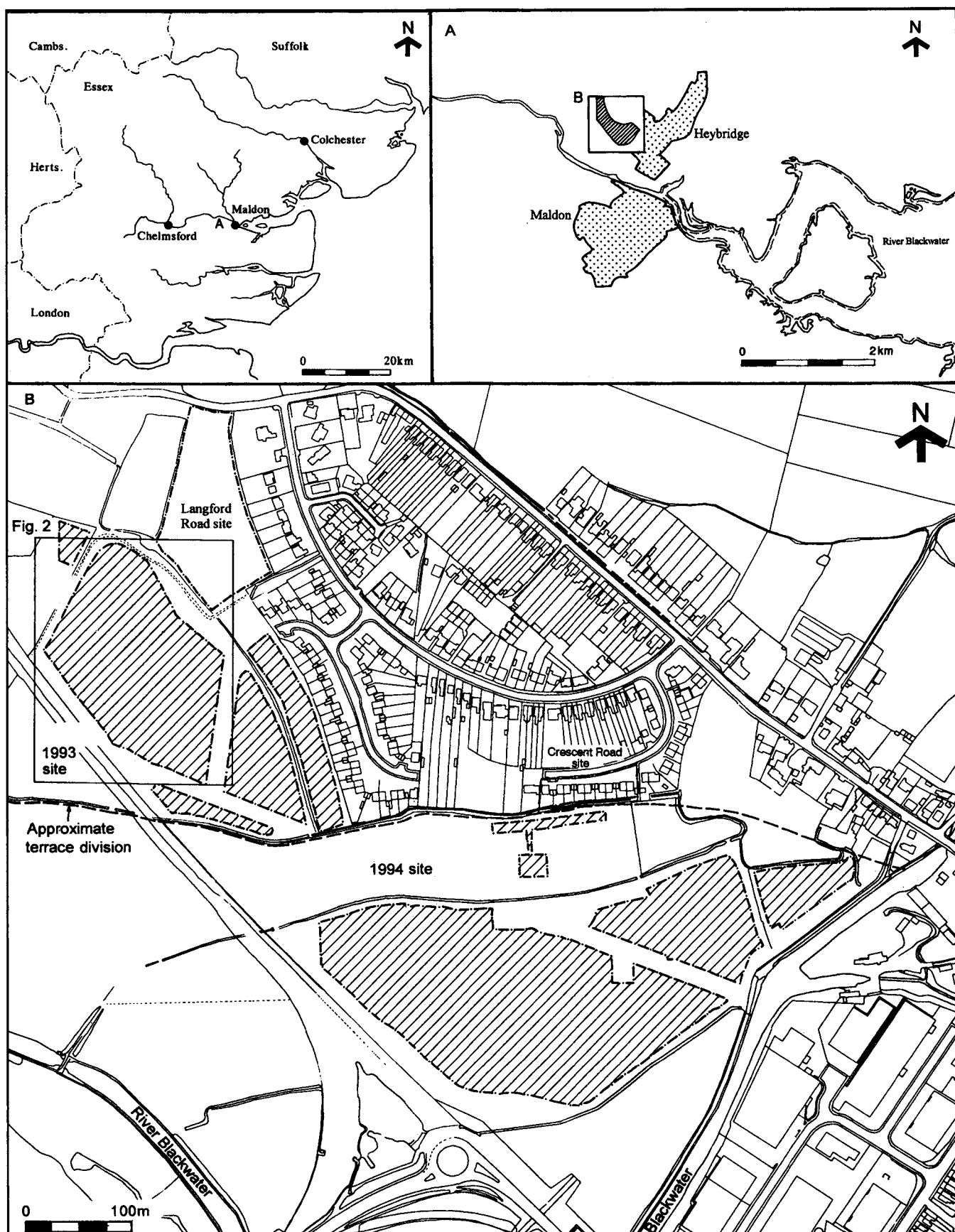
Fig. 1   Elms Farm, Heybridge, location plan. (© Crown Copyright Ordnance Survey. All rights reserved MC100014800)

Fig. 2 Northern part of 1993 site, showing major features.
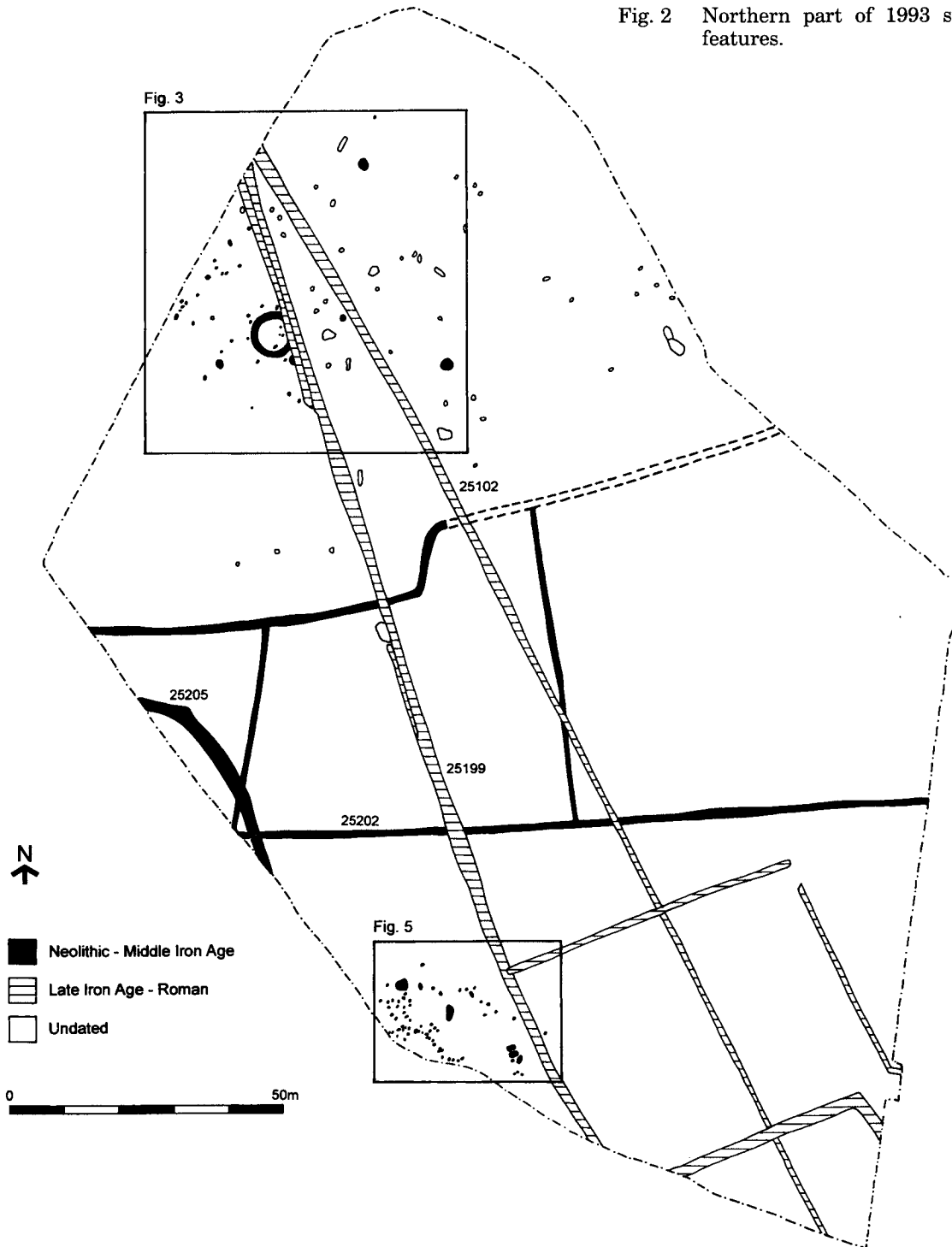
this report; full details of all features and deposits can be found in the archive (currently held by Essex County Council Field Archaeology Unit).

Neolithic

Early Neolithic

The major features of this period were two pits 2656 and 2856 (Figs. 3 and 4). Both produced large quantities of early Neolithic pottery. Pit 2656 was located at the northern end of the 1993 site and was the largest of the prehistoric pits, steep sided and flat based with a diameter of 2.14m and, surviving depth of 0.8m (Fig. 3 and 4). Its complex fill sequence (Fig. 4) included a black rubbish deposit (2678), which yielded large quantities of pottery and worked flint. It is possible that the top fill (2653) represents a recut into the top of the feature. The other, an oval sloping-sided pit 2856, was 2.3 by 1.6m and 0.55m deep (Figs. 3 and 4) and also yielded substantial amounts of both pottery and worked flint. An apparently 'natural' feature, 2102 (Fig. 3), probably a tree bole, was found to contain a few sherds of early Neolithic pottery including a decorated neck sherd (Fig. 13.3) and an end scraper

Fig. 3   Neolithic pits, Bronze Age ring-ditch and other features, 1993 site.

Key
- Prehistoric features
- L.I.A-Roman features
- Undated
- Natural features

0 _____ 20m
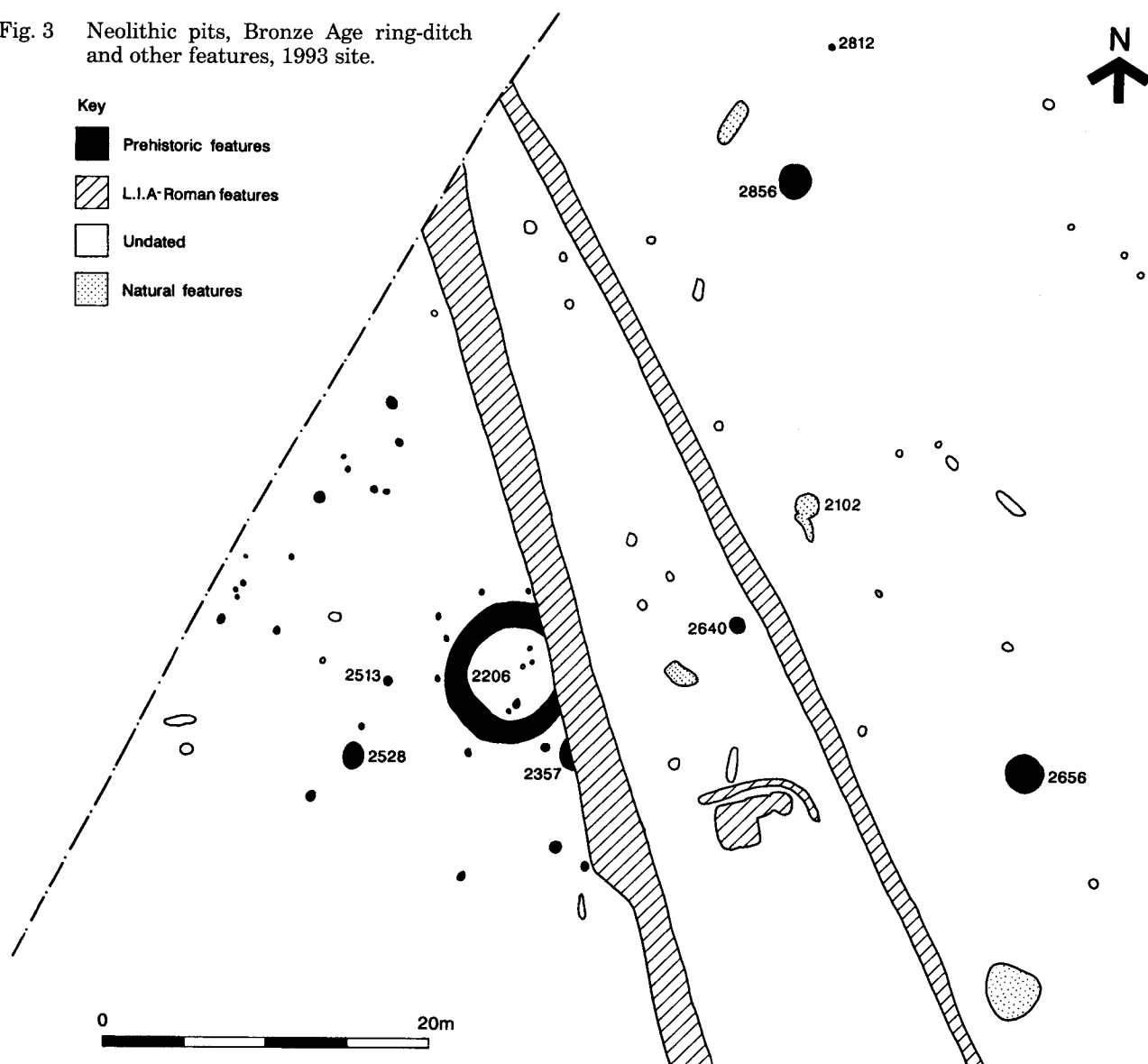
(Figure 10.3). In addition there were a number of ephemeral irregular features and burnt deposits on the surface of the natural gravel, which may have been the remains of an undulating prehistoric landsurface.

Along the south-western edge of the 1993 site was a concentration of shallow post-holes and small pits (Fig. 5). All but two of these yielded artefacts of some kind, although on the whole the material recovered is not closely datable. Only two pits, 2374 and 2691, have been dated to the Neolithic with any confidence; 2691 yielded a small assemblage of Peterborough Ware (Figs. 14 and 15).

A number of tentative alignments can be discerned amongst the cluster of 65 post-holes. These may be parts of a number of timber structures and associated fences, although detailed plans are hard to define, and it is probable that these features are not all contemporary. While some of these features yielded worked and burnt flints and occasional small sherds of prehistoric pottery, only

post-hole 2633 produced closely datable material, Late Neolithic Grooved Ware.

Late Neolithic and Early Bronze Age

In addition to post-hole 2633 and possibly some of the other nearby features, one other feature on the 1993 site, pit 3750, produced Grooved Ware and a possible Beaker sherd (Fig. 15.39-42) together with two, crudely shaped, clay balls (Fig.18). A total of three small Late Neolithic/early Bronze Age pits, 10772, 8713 and 8732, were encountered within the 1994 site along with two layers, 5967 and 5968, cut by a slight gully 5969 (Fig. 9). Though too sparse to show any patterning, the presence of these features shows that Late Neolithic activity was widespread across this gravel terrace landscape.

A small oval pit, 2528, on the 1993 site (Figs. 6 and 7) measured 1.5m x 1.3m and was 0.4m deep. A centrally placed 'shaft' 2933, had been cut into the single backfill of the pit, at the bottom of which was a complete 'East Anglian-style' beaker lying on its

45
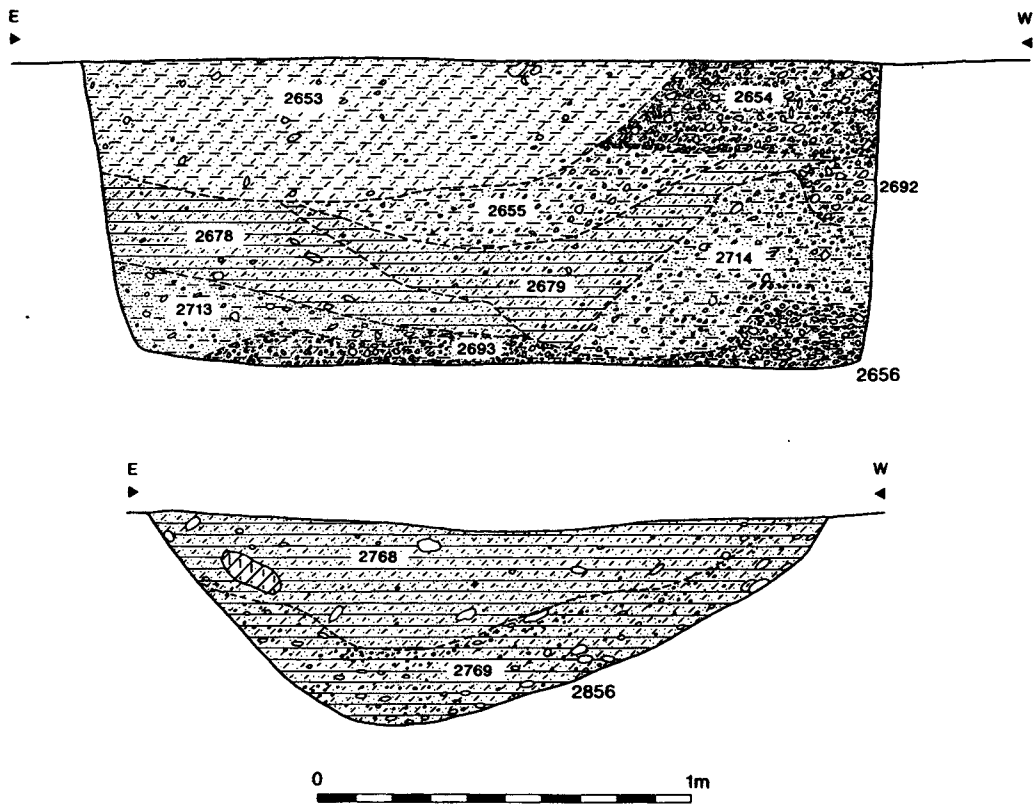
Fig. 4   Neolithic pit sections, 1993 site.

Key

● Pot (undetermined prehistoric)

▲ Flint

■ Late Neolithic pottery
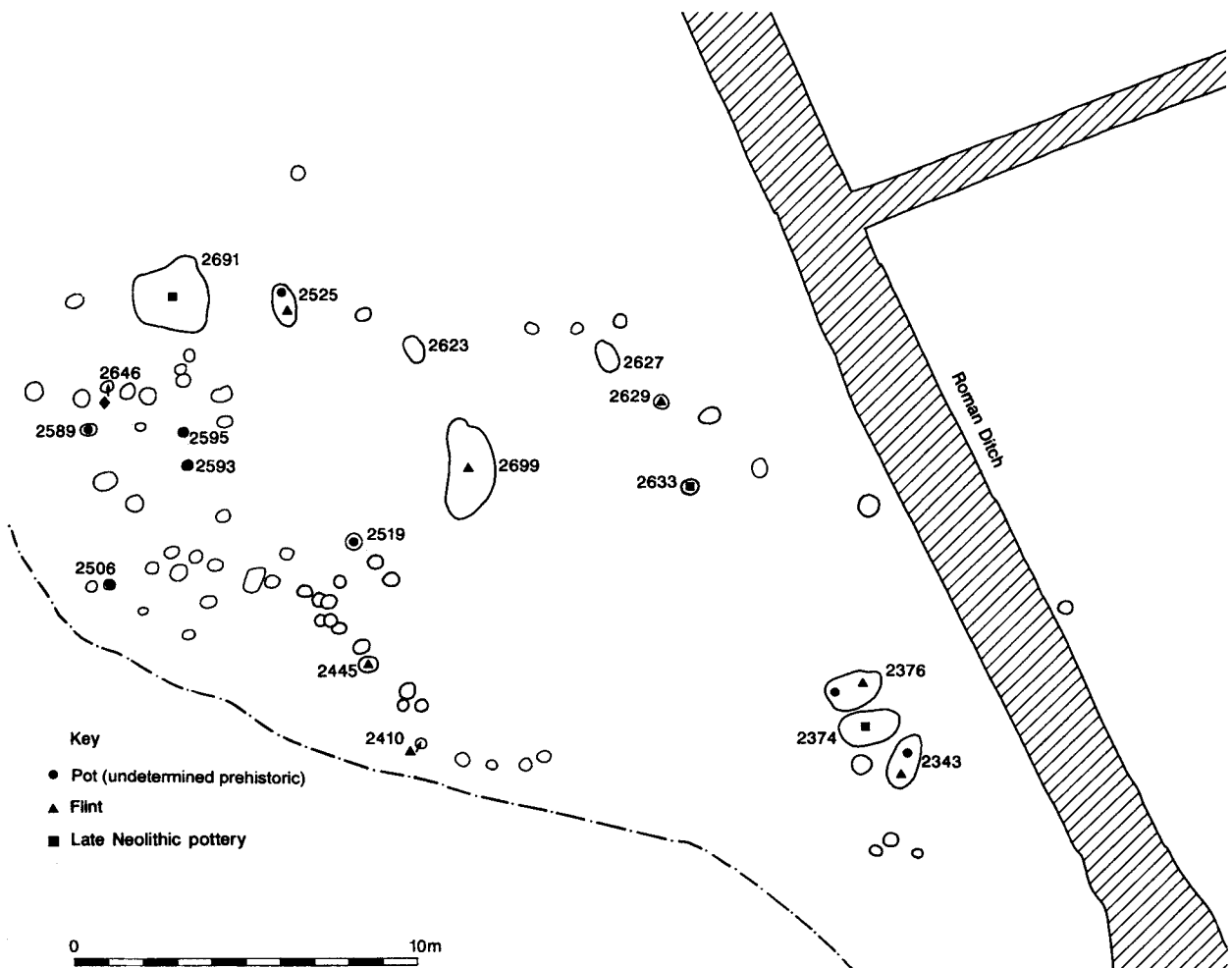
Fig. 5   Prehistoric features in the south-western part of the 1993 site.
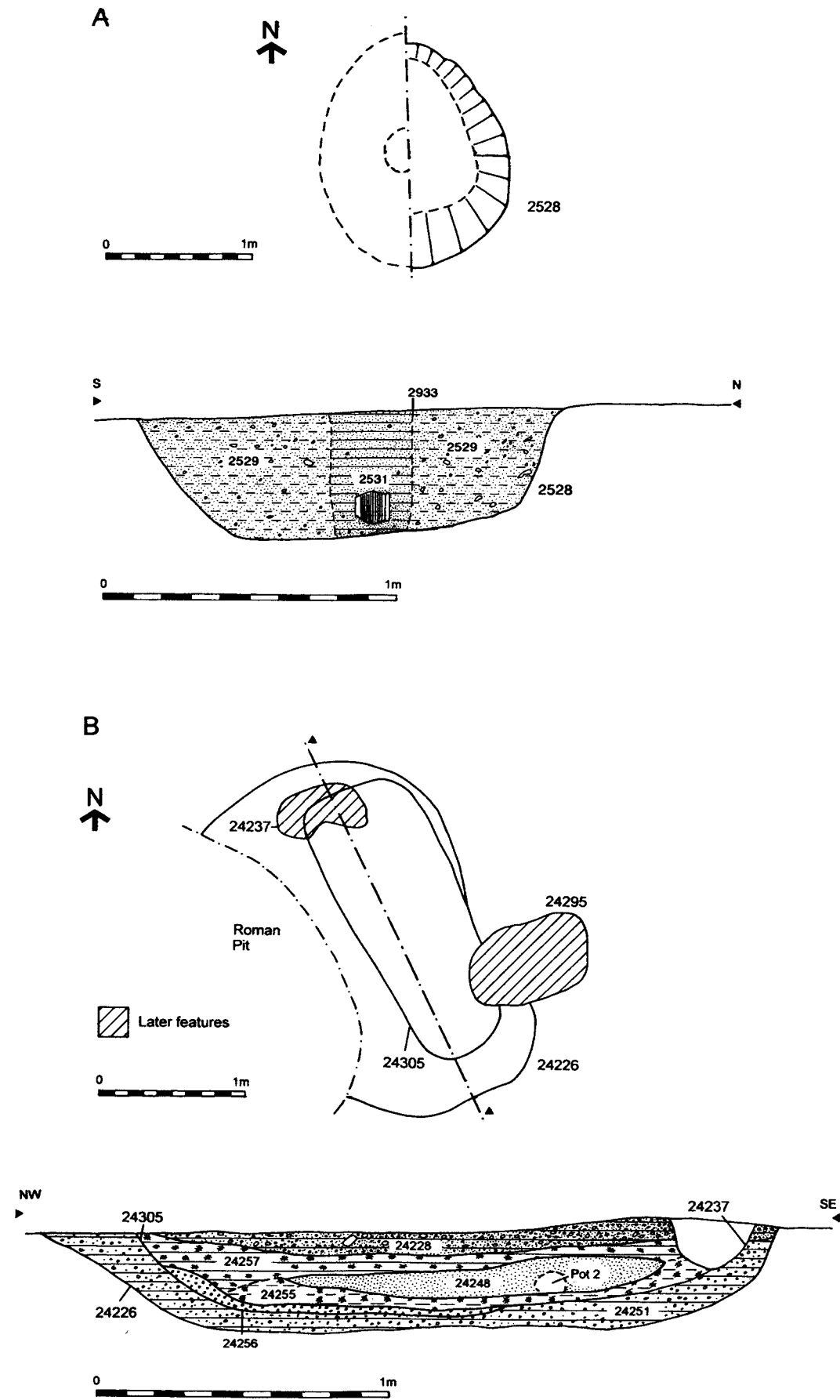
Fig. 6   Beaker features: a, 1993 site; b, 1994 site.

side (Figs. 6 & 15.45). On the southern edge of the 1994 site, a large shallow pit, 24226, was overlain by a second, smaller, pit 24305 (Fig. 6). Fill 24248 of the later pit was found to contain a near-complete beaker (Fig.15.44) along with parts of a second vessel.

Both 2528 and 24226 may well have been burials, though the very acidic nature of the gravels precluded survival of the inhumations themselves. The backfills of the original cuts were of uniform gravel, very similar to the surrounding natural and indicative of rapid infilling. In addition, their shape and dimensions were comparable to other examples in which evidence of crouched inhumations survived (e.g. Mucking, Jones 1975).

Bronze Age

Middle Bronze Age

The principal feature recorded was a small ring-ditch 2206, c.8m diameter. It occupied the relatively high ground of the north end of the 1993 site, though still only at c.4.0m OD (Figs. 3 and 7). Within the interior of the ring-ditch was a single definite cremation burial 2773 in an inverted urn of Middle Bronze Age date (Fig. 15.46). Four other heavily truncated features, (2718, 2726, 2734, 2737), contained dark, charcoal-rich fills. The fills of 2718 and 2737 yielded small amounts of cremated human bone, while those of 2726 and 2734 did not, but could still have been the remnants of severely truncated cremation deposits. While 2737 seems to have been a primary cremation burial alongside 2773, the other interior features are more likely to conform to McKinley's 'formalised [cremated] deposits in an intentionally cut feature' (1997, 139).

There was a general scatter of post-holes across the 1993 site, with a slight concentration in the vicinity of the ring-ditch. Of these, post-holes 2866, 2904, 2418, 2428, 2438, 2824 and unexcavated feature 3066 appear to be the remnants of a circle around the ring-ditch, the eastern part having been removed by a Roman ditch (Fig. 7). Post-hole 2438 and unexcavated feature 3066 were larger than the others and slightly offset, perhaps representing an entrance to the post-circle. The ditch sections (Fig.
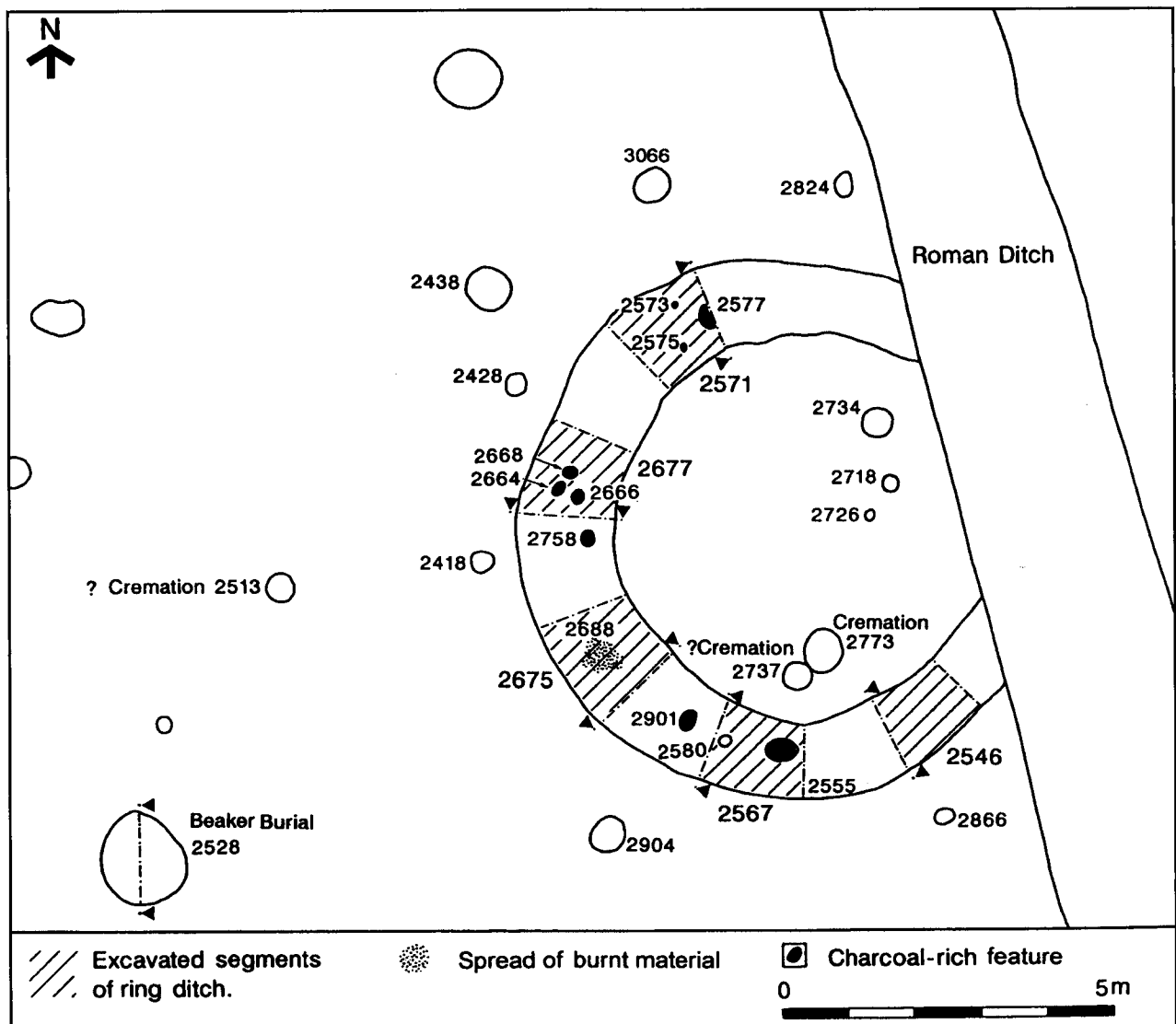
Fig. 7   Plan of ring-ditch 2206, showing excavated segments, associated features and cremations.

8), with their initial deposits of clean sand slumping down from the interior face, indicate the presence of an internal mound or perhaps a bank. The poor survival of features within the ring-ditch interior may suggest that cremations and other features were inserted into a mound.

A further possible cremation burial, 2812, was found some 44m north-east of the ring-ditch (Fig. 3). Although severely truncated by ploughing, it included the substantial lower-part of a globular urn (Fig. 16.47) which contained a charcoal-rich fill, but without cremated bone.

On the 1994 site, the Middle Bronze Age was represented by a group of five substantial post-holes below what became the site of late Iron Age shrines and a Roman temple (Fig. 9). These averaged 0.6m in diameter and 0.5m depth and possibly formed part of a circular structure, which occupied a slight gravel rise on the terrace before the step down, into marshland alongside the Chelmer river.

Late Bronze Age
Following the initial erosion of the postulated mound, ring-ditch 2206 appears to have been allowed to silt up gradually. Within the silty sand upper fills of the ditch, eight small charcoal-rich deposits were identified (Fig. 7). The more substantial of these, 2555 and 2901, yielded small amounts of cremated bone. Though most contained undiagnostic, if any, prehistoric pottery, that from 2758 (Fig. 16.53-54) has been dated to the Late Bronze Age, which suggests that a similar date is possible for the rest.

In addition, feature 2513 contained a small quantity of burnt human bone in its charcoal-rich fill and lay less than 4m to the west of the ring-ditch (Fig. 7). Two large sherds of a Late Bronze Age jar were recovered from this feature (Fig. 16.55), but it is not clear whether this assemblage represents a cremation burial. Regardless of their precise function, all of these features demonstrate a degree of continuity in ritual/funerary use of this monument and its vicinity between the Middle and Late Bronze Ages.

Early to Middle Iron Age

Located within the 1993 site, to the north of the Late Neolithic features and west of the Bronze Age funerary activity, was a curving ditch 25205 (Fig. 2). Aerial photographs show it extending south and west and, although obscured by the railway embankment, it appears to join with other cropmark features to form an elongated lozenge-shaped enclosure. Though 3m wide and at least 0.7m deep, its fills did not contain diagnostic material. Overlying the curving ditch and extending east-west across the main area of the 1993 site, was a rectilinear system of relatively narrow and shallow
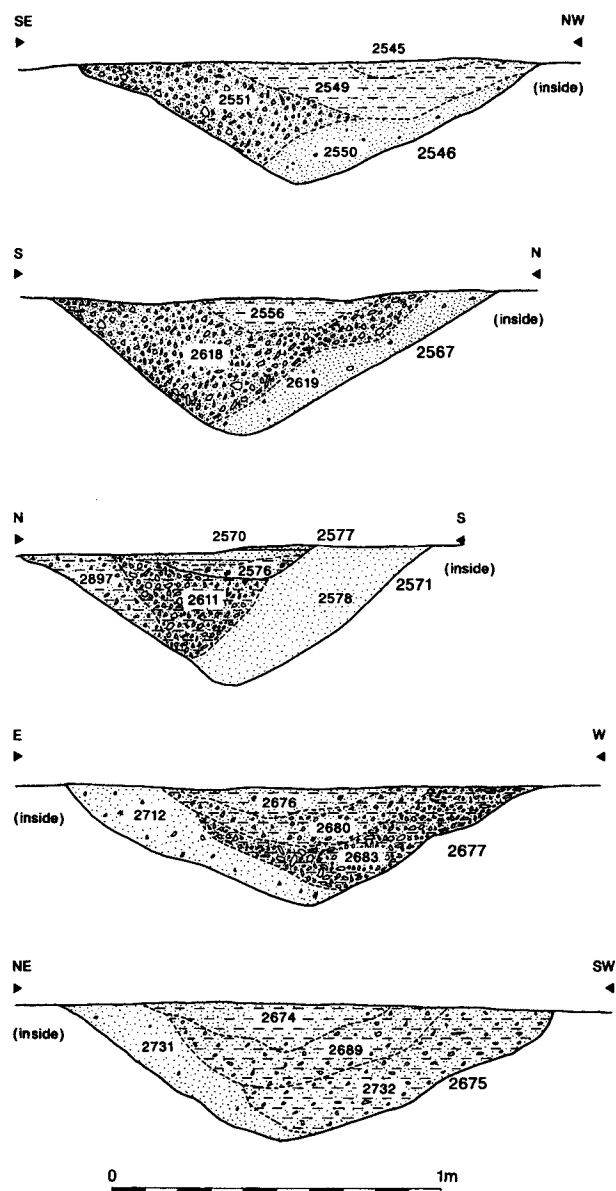
Fig. 8   Ring-ditch sections.

ditches, 25202 (Fig. 2). These defined three fields, though only one was wholly within the area of excavation. This was a roughly rectangular area of c.60 x 50 m. Again, no dating material, apart from a few worked flints and an intrusive copper alloy coin, was retrieved. Both the curving ditch and rectilinear fields have stratigraphic positions below, and morphological differences with, succeeding late Iron Age and Roman field systems. This would appear to suggest a prehistoric date, and whilst regarded as Early to Middle Iron Age they may have earlier origins.

Early Iron Age features were confined to four small pits, three of which were intercutting, on the southern edge of the 1994 site. Within the 1993 site, the only other Middle Iron Age features were found in its south-east corner and comprised a small
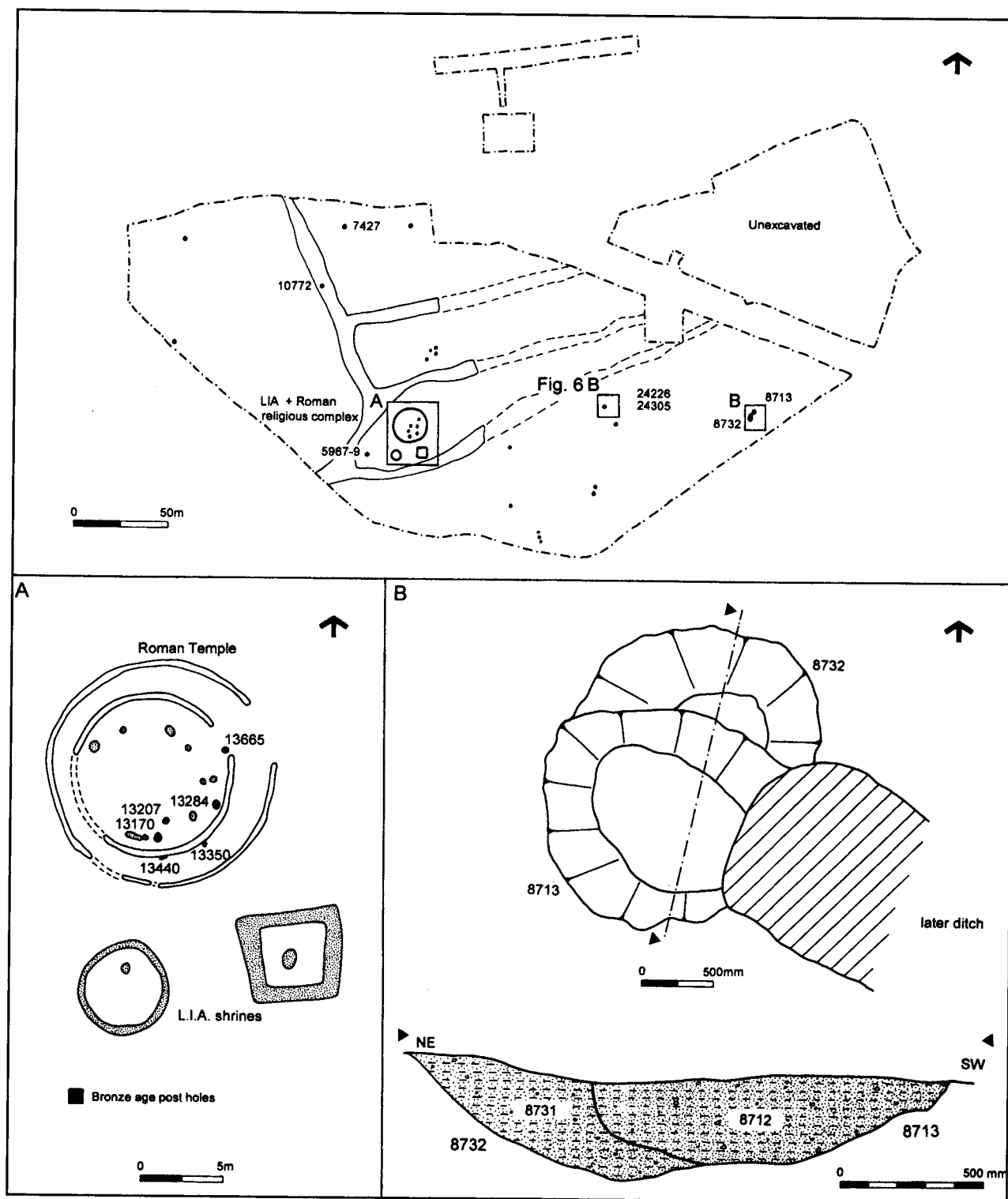
Fig. 9   Location of main earlier prehistoric features on 1994 site.

number of post-holes and shallow pits, none of which displayed any patterning.

Flint artefacts

H. Martingell

A total of 2361 pieces of worked flint was recovered from the two phases of excavation. These are listed in Table 1, which reveals the composition of the flint assemblages to be markedly different between the two sites. The 1993 site has a restricted variety of retouched artefacts based on scrapers (18) and fine edge retouched flakes and blades (30) some of which are serrated. In contrast, the 1994 site had a remarkable variety of retouched pieces that included arrowheads, scrapers, fabricators and serrated flakes and blades, representing all prehistoric periods from the Palaeolithic to the Iron Age. The Elms Farm site is one of about 30 sites and find spots

around the head of the Blackwater estuary. The two closest to Elms Farm are Langford Road (Langton and Holbrook 1997) and Crescent Road (Wickenden 1986). Langford Road is immediately adjacent to the 1993 site and has a similar flint assemblage (Walker 1997). Similarly Crescent Road is close to the 1994 site and has a broadly similar assemblage (Healey 1986), though it should be noted that 13 piercers were recorded from Crescent Road whereas only 4 in total were identified from Elms Farm and Langford Road combined. A full descriptive catalogue of all flint artefacts is deposited in the archive.

To avoid unnecessary repetition of the basic data relating to Neolithic and later Prehistoric lithic assemblages, the background to this report, the descriptions, and typology used, may be found in Healey and Robertson-MacKay 1987, Clark 1960, and, on Tranchet Derivative Arrowheads, Clark 1935.

The worked flints from the 1993 and 1994 sites are discussed separately. The artefacts from the 1993 site were from excavated features, almost all prehistoric, whereas the majority of those from the 1994 site were from later, Iron Age and Roman contexts, and machining layers, and many are residual. However, the large number of uncommon 'special' pieces recovered from the 1994 site, in particular the transverse arrowheads from the same locations as Grooved-ware pottery, merits comment.

The 1993 site

832 worked flint artefacts (excluding 294 'other waste' pieces) were recovered from 114 features. The majority derived from prehistoric settlement and burial features, mainly pits and post-holes, but also from the ring-ditch. Further worked flint occurred in Iron Age and Roman features, ditches and pits and cremation deposits.

No Mesolithic or earlier artefacts were recognised in this assemblage. Only three waste flakes and one blade are patinated white or slightly blue (patination is sometimes an indicator of early date). The remaining pieces are made of black flint from the chalk and grey flint from river cobbles, some stained to various shades of brown. The Neolithic would therefore appear to be the earliest date for continuing activity on this land.

Early to Middle Neolithic

Pit 2656 contained large assemblages of flint and Early Neolithic pottery. 298 flint artefacts were recovered from five fills, 2653, 2654, 2655, 2678 and 2679, by far the greatest number from any one feature on the site. All fills contained flakes and four of these cores and blades as well. Fills 2653, 2655 and 2678 also contained retouched pieces. Fill 2678 differed from the others in having some burnt flint material. The retouched pieces were serrated flakes

Table 1. Comparison of the composition of the 1993 and 1994 flint assemblages (quantified by type)

Type	1993	1994
Arrowhead, undiagnostic fragments	-	2
Arrowhead, barbed and tanged	-	1
Arrowheads, oblique, inc. fragments	-	2
Arrowheads, transverse, inc. fragments	-	8
Axe sharpening flake	1	-
Backed blade, large 'knife'	-	1
Bifacial fragment, large	-	1
Blade flakes	27	-
Blades and bladelets and parts of	91	164
Blades irregular	22	-
Blades with edge retouch	2	-
Blades with serrated edges, microdenticulates, saw	6	-
Core tablets & rejuvenation flakes	3	5
Core/bifacial piece	1	1
Cores for squat flakes	3	3
Cores, all other	33	32
Denticulates	3	3
Disc/core, both surfaces flaked	-	1
Fabricators	-	2
Flake blades	10	-
Flake blades with serrated edges, microdenticulates, saws	3	-
Flakes and blades with marginal retouch	-	33
Flakes with distal edge retouch	3	-
Flakes with serrated edges, microdenticulates, saws	10	-
Flakes with side edge retouch	6	-
Flakes, flakelets, chippings	567	859
Hammerstone fragment	1	1
Handaxe of chopper core type	-	1
Laurel leaf point, fragment	-	1
Microlith fragment, base, unpatinated	-	1
Notched flakes and blades	3	8
Other waste	294	-
Piercers	2	2
Roughout for arrowhead	1	-
Scrapers of all types	18	52
Serrated pieces	-	7
Squat flakes	10	35
Tanged blade, retouched and worn	-	1
Tanged flake	-	1
Waste blocks	6	7
Total	**1126**	**1235**

and blades (microdenticulates or saws). Usually, these artefacts are considered to be components that are hafted either serially or singly to form a sickle. There are five of these serrated pieces: Fig. 11.27 is a serrated blade and Fig. 11.26 is a heavier serrated blade flake with natural cortex backing. There are also nine flakes and blades with fine edge retouch. Two of the three scrapers are of probable Early Neolithic date: Fig.10.2 is an end scraper on a flake and Fig. 10.11 is an end-and-side scraper also on a flake. The third scraper has only a small area of retouch on the distal end. The 73 blades and blade fragments, all unpatinated, are usually indicative of an Early Neolithic date, especially the two blades with diffuse bulbs on the ventral surface. It is most likely that these contexts represent the clearings of working floors that originally contained other waste that has since rotted away. The presence of a hammerstone fragment and 13 cores is indicative of this, as well as the overall similarity of the blades, flakes and waste pieces and the absence of later prehistoric pieces.

Pit 2856 contained two fills yielding worked flint, totalling 90 pieces, together with Neolithic pottery. The 83 pieces from fill 2768 included cores, flakes (3 slightly burnt), 20 blades and parts of blades, 1 bifacially flaked piece with a finely retouched and worn edge, and 2 denticulated pieces. Of the latter, one had bold flake removals along a large flake edge, and the other denticulation along the platform edge of a flake core, showing signs of wear (Fig. 10.6). Fill 2769 yielded 4 blades and parts of blades, a blade flake and 2 flakes. Again, the flint artefacts from this pit indicate the clearings of working floors rather than the deposition of important pieces.

'Tree hole' feature, 2102, contained Neolithic pottery and a good, complete, end scraper on light grey flint (Fig.10.3). The only other flint artefact was a flake. The scraper tends to confirm an Early Neolithic date for this feature.

Bronze Age
The ring ditch yielded 14 flakes, 3 blades, 1 core, 1 flake blade, 2 waste blocks, 2 flakelets, 1 notch spall and 2 good complete scrapers. Apart from the scrapers none of the other artefacts are closely datable. The extended-end scraper (Fig. 10.14), and an end scraper (Fig. 10.10), would usually be attributed to the Neolithic rather than the Bronze Age, but such pieces do occur in diminishing numbers throughout later prehistory. However, it seems most likely that all these artefacts are residual in the ring-ditch fills.

Pit 2640 (Fig. 3) contained 2 flakes and a scraper of extended-end type. The scraper is heavily and steeply flaked all around with possible thinning flake removals across the ventral surface. Such scrapers are found in Late Neolithic industries, but not exclusively so.

In summary, the datable lithic artefacts from the 1993 site belong to the Early Neolithic to Middle Neolithic. The unusually high number of blades and parts of blades and the scraper types tend towards this conclusion. The absence of arrowheads in this collection is notable when compared to the material from the 1994 site (below).

1994 site
The majority of the flint artefacts from the 1994 site were residual in late Iron Age, Roman and unstratified contexts. However, some consideration of the broad spatial distribution of this material can be undertaken simply by plotting their general locations across the site; this has revealed some grouping of certain artefact types (Fig. 12). The composition of the flint artefacts from the 1994 site is unusual: from a total of 1235 worked flints an above average number of scrapers of all types (53) and blades (164) were recovered. There is also a disproportionate number of arrowheads. The scrapers and blades came from all areas of the site whereas the transverse arrowheads (10) were recovered from a more specific location. Many of the scrapers are carefully flaked and for one or two the visual appearance of the material seems to have been important. For example, a round/disc scraper is made from flint which is banded dark brown, ochre and light grey and is altogether a striking piece (Fig. 10.8). Three of the scrapers were patinated, and the most deeply patinated is made on a thin flake with deep bulb and fine retouch round three sides (Fig. 10.13). The patination would suggest an early date, but there is no other evidence to support this so it is also probably Neolithic; it came from the extreme east of the site. In considering the flint from the 1994 site, it should be borne in mind that there were a number of biasing factors which affected the assemblage. These included the enhanced survival of residual prehistoric material in the far greater number of Late Iron Age and Roman features on the 1994 site, and a possible tendency toward collection of only obviously worked pieces during the excavation of post-prehistoric features. In addition it is likely that, over time, artefacts were brought onto the site amongst gravels and soils imported to construct roads and occupation surfaces in the Late Pre-Roman Iron Age settlement, and to raise the height of the land surface above a rising water table (Atkinson and Preston in prep).

Lower Palaeolithic
A handaxe of Chopper Core Type (Wymer 1968) was recovered from the fill of Roman ditch 9772, in the north-west corner of the 1994 site (Fig. 10.1). It is a heavy, bifacially worked tool that occurs in many Acheulian industries. A large cobble has been flaked alternately along one side to form a straightish cutting edge. Cortex and one or two more recent
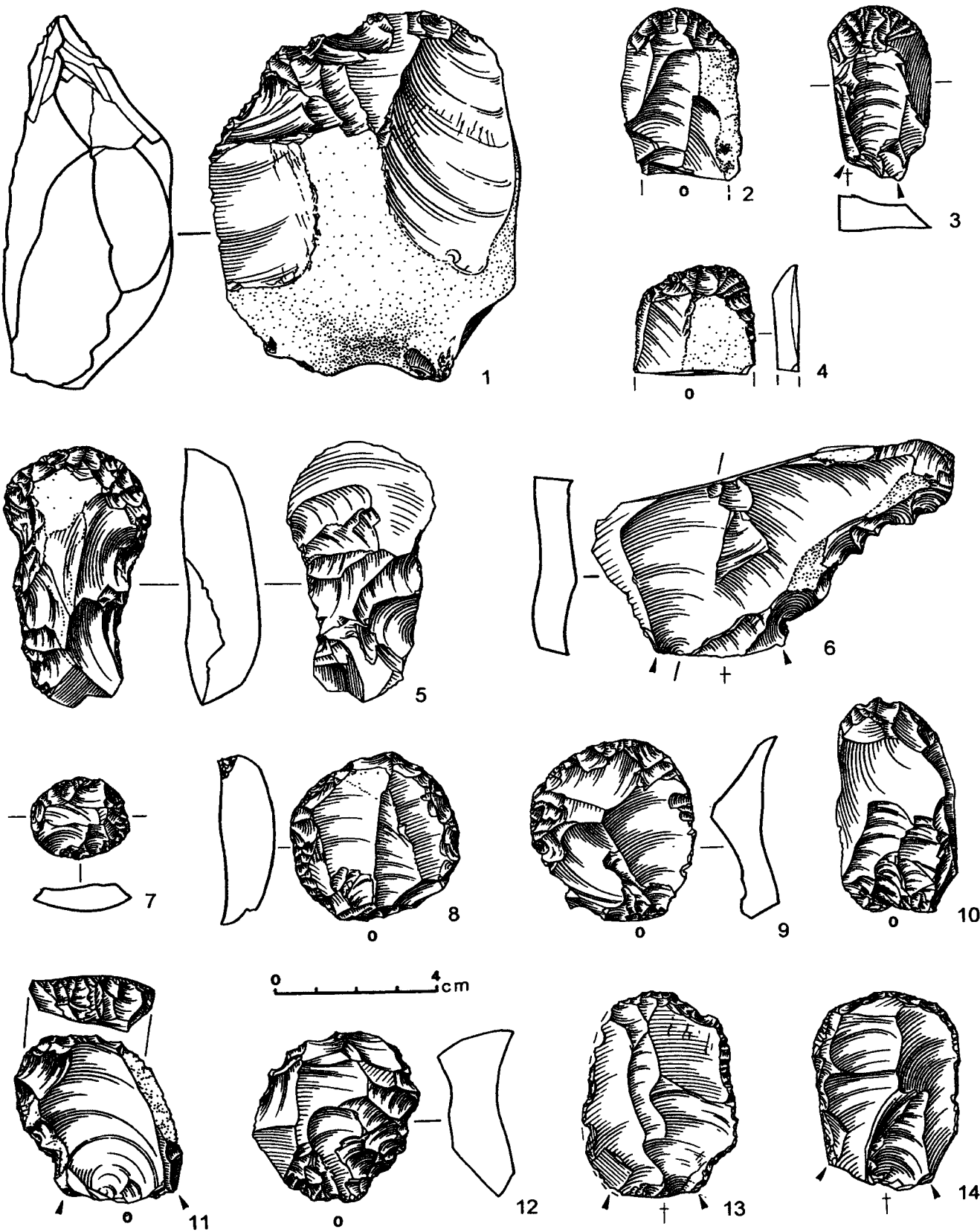
Fig. 10 Flint artefacts.
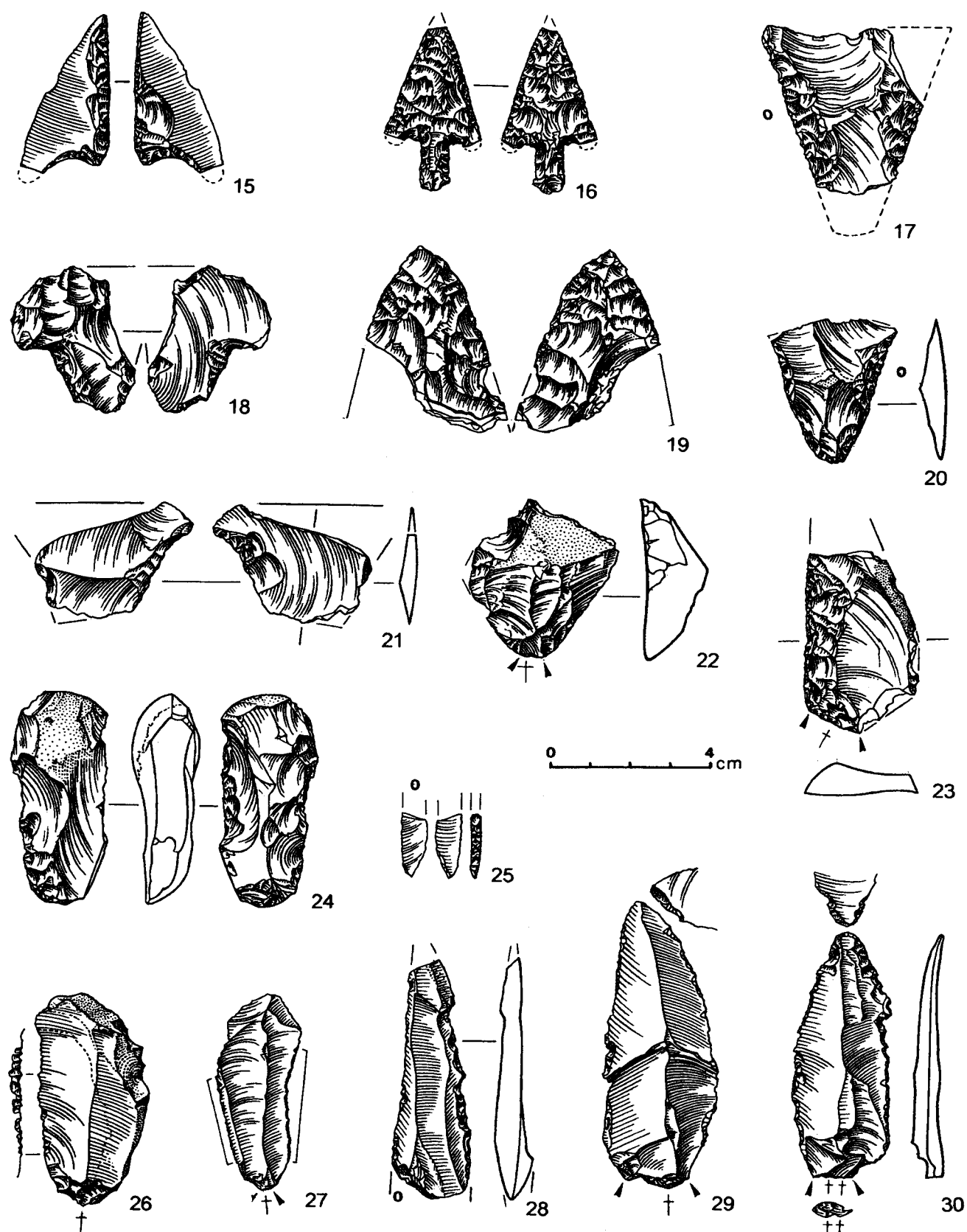
Fig. 11   Flint artefacts.

Catalogue of illustrated flints, Figures 10 and 11.

Fig No.	Object No.	Context	Feature	Description
10.1	6127	9698	9772	Handaxe, 95mm x 80mm, chopper core type, sharp arrets, some cortex, dendritic patination
10.2	176	2678	2656	End scraper, on secondary flake, semi-invasive retouch
10.3	55	2101	2102	End scraper, semi-invasive retouch around distal end, light grey flint
10.4	6810	15103	15102	End scraper, on distal end of secondary flake/blade, good semi-invasive retouch
10.5	136	2639	2640	Extended end scraper, heavily flaked all round and across ventral surface
10.6	172	2768	2856	Denticulate on large flake
10.7	199	2139	2141	Round scraper, small, on thermal piece
10.8	1543	9082	9081	Scraper, round, steep retouch all round, butt removed, on light grey flint with dark brown bands
10.9	5452	14205	Layer	Scraper, round, retouch and scalar retouch all round except for butt, on tertiary flake, good black flint
10.10	132	2569	2567	End scraper, on tertiary flake, grey flint with inclusions
10.11	202	2653	2656	End-and-side scraper, on flake, steep retouch around edge except for platform, dark flint
10.12	61	400	Unstrat	Round scraper, thick section, steep retouch
10.13	5976	17194	Layer	End-and-side scraper, steep retouch round three sides, patinated
10.14	175	2566	2567	Extended end scraper, retouch around distal end of flake
11.15	537	7000	Unstrat	Oblique arrowhead, Clark's transverse H petit tranchet derivative
11.16	6640	15438	15440	Barbed and tanged arrowhead, honey-coloured flint
11.17	4772	12000	Unstrat	Transverse arrowhead, large, Clark's petit tranchet derivative, CI
11.18	1493	8000	Unstrat	Transverse arrowhead, incomplete, Clark's type D
11.19	6348	11484	Unstrat	Laurel leaf point, tip part, bifacial
11.20	1352	6000	Unstrat	Transverse arrowhead, Petit tranchet derivative on grey flint with small patch of cortex.
11.21	527	7000	Unstrat	Transverse arrowhead, incomplete, Clark's petit tranchet derivative C or D
11.22	1	400	Unstrat	Scraper
11.23	6065	8712	8713	Retouched blade, steep shallow parallel invasive retouch to form 'knife'
11.24	1120	6000	Unstrat	Fabricator, worn pointed end. On good black flint
11.25	1366	8106	8107	Microlith, base of backed blade, unpatinated
11.26	145	2678	2656	Serrated blade flake, 55mm, fine retouch along LHS opposing cortex backed side
11.27	141	2653	2656	Serrated blade, defuse bulb on blank, fine retouch on both lateral edges, RHS worn
11.28	7427	15803	15557	Retouched blade, 60mm, rolled and patinated
11.29	1544	9083	9083	Retouched blade, 70mm, converging, two areas of minimal retouch
11.30	7382	8789	8790	Retouched blade, converging, denticulate retouch on right edge, fine retouch on left edge, tertiary, good flint.

flake removals cover the remainder of the surfaces. The primary flaked surfaces have a 'dendritic' patina. The finding of this handaxe is surprising, as it is not only the first heavy-duty Palaeolithic artefact recorded from the head of the Blackwater estuary, it is the only heavy-duty stone tool of any period recorded from this vicinity to date.

Mesolithic

Again, from the north-west part of the site, the base of a backed blade microlith was recovered (Fig. 11.25), residual in a Roman pit. The fragment is 15mm in length and is unpatinated but is the only diagnostic artefact of this period from the site. By its form it reasonably belongs to the earlier rather than
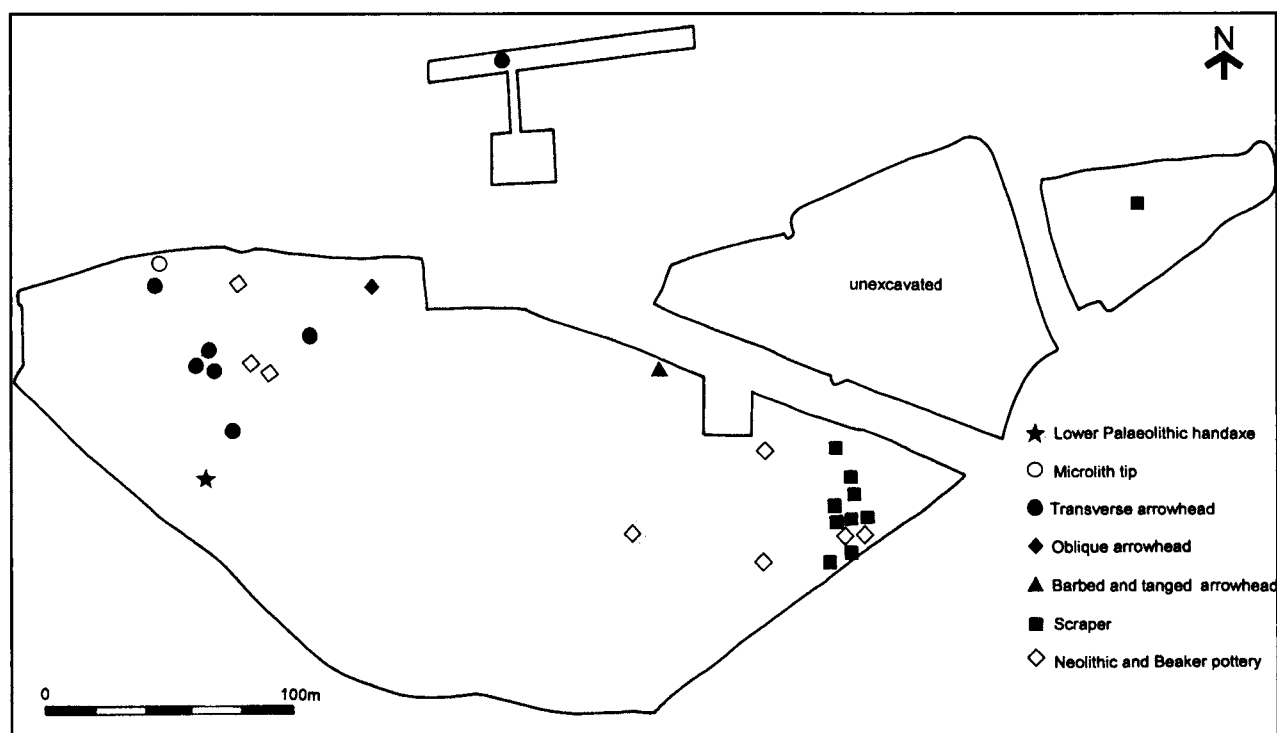
Fig. 12 Flint artefact distribution on 1994 site.

the later Mesolithic. Some of the many blades from across the site must also belong to this period.

Neolithic

Towards the eastern side of the site, 65 worked flints were recovered from a number of features. 12 of these were retouched tools. They are exceptionally well made and include nine scrapers, variations of end-and-side scrapers, made on different coloured flint flakes, and three large retouched blades, each about 63mm in length (Fig. 11.30). There is also a retouched blade of 'knife' form, with shallow invasive retouch all along one edge parallel with the axis and opposite a natural cortex backed side (Fig. 11.23). Neolithic Peterborough ware pottery also came from this area. These flint tools can support a Neolithic, and some an Early Neolithic, date for activity in this vicinity.

Consideration of the distribution of Later Neolithic artefacts, in particular the arrowheads, reveals a diagonal spread across the western half of the 1994 site (Fig. 12). All of the transverse and oblique arrowheads and fragments of them were recovered from this area, as were sherds of Grooved Ware pottery. These arrowheads are rare in Essex; they have only been found, in any number, from the Dovercourt and Walton-on-the-Naze area of the Stour estuary (Green 1980). The four illustrated (three transverse Fig. 11.17, 18, 19, and one oblique Fig. 11.15) are the most complete specimens. Also recovered from this same western area of the site were six scrapers, all basically end-and-side scrapers on flakes of varying length and roundness and all of Neolithic type; and two fabricators both stubby in

form, one roughly plano-convex (Fig. 11.24) and the other generally rougher.

Beaker/Early Bronze Age

One of the most attractive flint artefacts is the barbed and tanged arrowhead in fine honey coloured flint, again from the western part of the site. This piece is complete except for the barbed ends (Fig. 11.16). It is not uncommon for these arrowheads of Beaker/Early Bronze Age date to be flaked from this coloured flint, although this example is unusually long for an Essex barbed and tanged arrowhead, and is the only one recorded from around the head of the Blackwater estuary. A complete beaker and the sherds of another also came from a pit, 24305, at this end of the site. Another possible Beaker artefact, a scraper with scalar flaked retouch all around except at the butt (Fig. 10.9), was found just to the west. It is possible that these pieces derive from a disturbed burial as may some of the other barbed and tanged arrowheads, particularly those made from distinctively coloured flint.

Later Prehistoric

There are few Late Bronze Age and Iron Age worked flints. The usual rough artefacts associated with these periods have not been identified. A small number of squat flakes (45) and their cores (6), from both the 1993 and 1994 sites, which could be Later Prehistoric, are too few to comment upon further.

Pottery

Nigel Brown

The excavations produced 1758 sherds of prehistoric pottery weighing 23,944kg. The material has been recorded according to a system (Brown 1988) devised for prehistoric pottery in Essex (details in archive). The majority (969 sherds, 13.82kg) was derived from the 1993 site. The 1994 site was larger but only produced 784 sherds weighing 10.124kg. The differences are even more marked when average quantity recovered by context are considered: for the 1993 site this figure is 11 sherds weighing 164g, for the 1994 site 3 sherds weighing 45g.

This reflects the nature of the deposits investigated in the 1993 season, predominately features cut into the subsoil, with the potential for recovery of relatively large quantities of prehistoric material. The 1994 work concentrated on areas of more intensive Late Iron Age and Roman occupation, with most of the prehistoric artefacts recovered residual in later contexts.

The earliest pottery represented is of Early Neolithic date (Figs. 13 and 14.17-26), and would be broadly appropriate to the Mildenhall style (Longworth 1960); the general range of forms and decorative techniques can all be matched in Mildenhall style assemblages in East Anglia. However, in a number of cases precise parallels are elusive; and the Elms Farm material exemplifies the difficulty noted by Cleal (1993) of attributing individual site assemblages to one of the broad regional style zones traditionally used to characterise early Neolithic pottery. It is notable that closed forms, necked forms and forms with marked carinations are not common in the Elms Farm assemblage. These traits are similarly uncommon amongst assemblages from elsewhere in south and central Essex (e.g. Orsett, Kinnes 1978; The Stumble, Brown forthcoming a; Springfield Lyons, Brown forthcoming b), in contrast to assemblages from further north in East Anglia (e.g. Hurst Fen, Longworth 1960; Spong Hill, Healy 1988; Brightlingsea, Brown, forthcoming c).

Decorated sherds are rare in the Elms Farm assemblage (all are illustrated). Round pricked impressions, which occur on one rim (Fig. 13.1), are not known from other local assemblages but occur at Staines Causewayed Enclosure (Robertson-MacKay 1987, figs. 49, 143, 145). Stab-and-drag (Fig. 13.3) occurs widely in Mildenhall assemblages. Similarly the decoration on the interior and top of a rim sherd from 2679 (Fig. 14.17) is of a type which occurs widely. However, the lightly grooved curvilinear decoration, executed on a very wet (possibly slipped) surface, is rather more idiosyncratic (Fig. 14.17). The wiping giving a somewhat cross-hatched effect on the exterior of another sherd (Fig. 13.2) is also unusual, although comparable sherds occur at the Stumble (Brown forthcoming a) and Etton

Causewayed Enclosure (Kinnes 1998, fig. 178.M461). Ripple burnish is also a widely used decorative technique in early Neolithic assemblages. However, this normally runs across the rim (e.g. Longworth 1960, fig. 25.52; Brown 1988, fig 14.5), rather than around the circumference as on the example from Elms Farm (Fig. 13.6), although comparable examples are known from Brightlingsea (Brown forthcoming c).

The proportion of decorated to undecorated sherds is very small and this is typical of material from the numerous pit groups now known along the gravel terraces north of the Blackwater estuary (e.g. Brown 1988; 1998). This is in contrast to the pottery from the causewayed enclosures in Essex at Orsett (Kinnes 1978) and Springfield Lyons (Brown forthcoming b), particularly the latter site, and further afield, as at Etton (Kinnes 1998). Excavations within the large settlement site at The Stumble, where extensive areas of Neolithic land surface are preserved within the present intertidal zone of the Blackwater estuary, have revealed intra-site variation. Most areas excavated had low proportions of decorated sherds comparable to material from pit groups on the adjacent gravel terraces whilst one, Area C (Brown forthcoming a), had a far higher proportion of decorated sherds. Assemblages derived from sites such as Elms Farm, where only features cut into the subsoil survive, may give a very partial impression of what was once present on the site.

The forms present in the Elms Farm assemblage, mostly derived from a single pit, 2656, comprise the full range of vessel types that might be expected in a domestic assemblage: small cups, plain and decorated bowls of various sizes and rather larger jars. There is little doubt that the material represents domestic refuse. However, the presence of so much pottery in a large pit suggests something more than simple rubbish disposal. The assemblage from this pit is rather larger than those from the other pit groups of Neolithic date around the Blackwater Estuary, and the quantity of material is far greater than that recovered from other local sites with the possible exception of one of the pits from Chigborough (Brown 1998). Indeed the material from the Elms Farm pit is reminiscent of pottery from deposits within the causewayed ditches at Springfield Lyons (Brown forthcoming b). Whilst the Elms Farm pottery is probably derived from domestic activity, which would seem to concur with the nature of the worked flint from this pit (above), the manner of its disposal may well have carried symbolic significance.

A few sherds of Ebbsfleet Ware (largest illustrated Fig. 14.27) in a coarse flint tempered fabric, with large finger/thumb impressions on a deeply concave neck, are closely comparable to sherds from The Stumble (Brown forthcoming a) and further afield

Abbreviations used in the Catalogue
Rim Form:

1	Flat topped
3	Rounded
6	T shaped
9	Rounded, everted
11	Rolled
13	Externally thickened

Vessel Form.

Where possible sherds are attributed
to vessel class (after Barrett 1980):-

I	Coarse Jar
II	Coarse Bowl
IV	Fine Bowl

or a more specific vessel form:-

A	Jar, round shouldered with short upright or flared rim
E	Jar, slack shouldered with upright or slightly everted rim
H	Bowl, round bodied open
K	Bowl, tripartite angular shoulder, flared rim
Q	Bucket

Fabric. Size of inclusions

S - less than 1mm diameter
M - 1 to 2mm diameter
L - more than 2mm diameter

Density of inclusions

1 - less than 6 per cm2
2 - 6 to 10 per cm2
3 - more than 10 per cm2

B	Flint, S-M 2.
C	Flint, S-M with occasional L 2.
D	Flint, S-L 2 poorly sorted.
E	Flint and sand, S-M 2.
F	Sand, S-M 2-3 with addition of occasional L flint.
H	Sand, S2.
I	Sand, S-M 2-3.
J	Sand, S 2 with veg. voids particularly on surfaces.
L	Quartz sometimes with some sand, S-L 2.

M	Grog, often with some sand or flint and occasional small rounded or sub-angularvoids.
N	Vegetable temper.
O	Quartz and flint and some sand S-L 2 poorly sorted.
P	Sparse very fine sand may have occasional M-L flint or sparse irregular voids.

Catalogue of illustrated sherds, Figure 13

Fig. No.	Context	Feature	Rim Form/ Vessel Form	Description	Fabric
13.1	493	494	13/-	Rim and neck of closed bowl wiped surfaces, small stabbed prick' impression an exterior of rim together with a ? finger tip impression. Coil joins visible on rim.	D
13.2	491	495		Body sherd, wiped exterior with pattern of horizontal lines overlaid by sloping lines.	O
13.3	2101	2102	–	Neck sherd with smoothed surface and sloping lines of horizontal stab-and-drag.	B
13.4	2653	2656	11/-	Rolled rim of bowl with slight concave neck and high slightly angular shoulder. Single pre-firing perforation survives below shoulder.	C
13.5	2653	2656	13/-	Rim and neck of large bowl with shallow neck and very slight shoulder. ?Slipped surface with strong horizontal wiping, trace of ripple burnish on top of rim. Rim added as separate strip of clay. Patch of very heavy abrasion on top and exterior of rim.	O
13.6	2655	2656	11/-	Rolled rim with trace of ripple burnish running around the circumference, rather than across the rim. Most of exterior and interior surfaces missing.	O
13.7	2678	2656	1/-	Flat topped rim, smoothed surfaces.	O
13.8	2678	2656	11/-	Rolled rim of open bowl, with post-firing perforation below rim.	B
13.9	2678	2656	11/-	Rolled rim and neck well smoothed, originally burnished exterior.	L
13.10	2768	2656	13/-	Externally thickened rim traces of wiping on surfaces.	D
13.11	2678	2656	1/-	Irregular rim of open bowl with horizontal finger wiping on exterior.	C
13.12	2678	2656	13/-	Thickened rim, smoothed surfaces.	L
13.13	2678	2656	1/-	Roughly flattened rim of coarse open bowl or cup.	D
13.14	2678	2656	1/-	Rounded rim of cup.	P
13.15	2678	2656	11/IV	Rolled rim of open bowl smoothed, originally burnished surfaces.	C
13.16	2678	2656	13/I	Externally thickened rim of bag-shaped jar with slight concave neck.	D

0 _____ 100mm
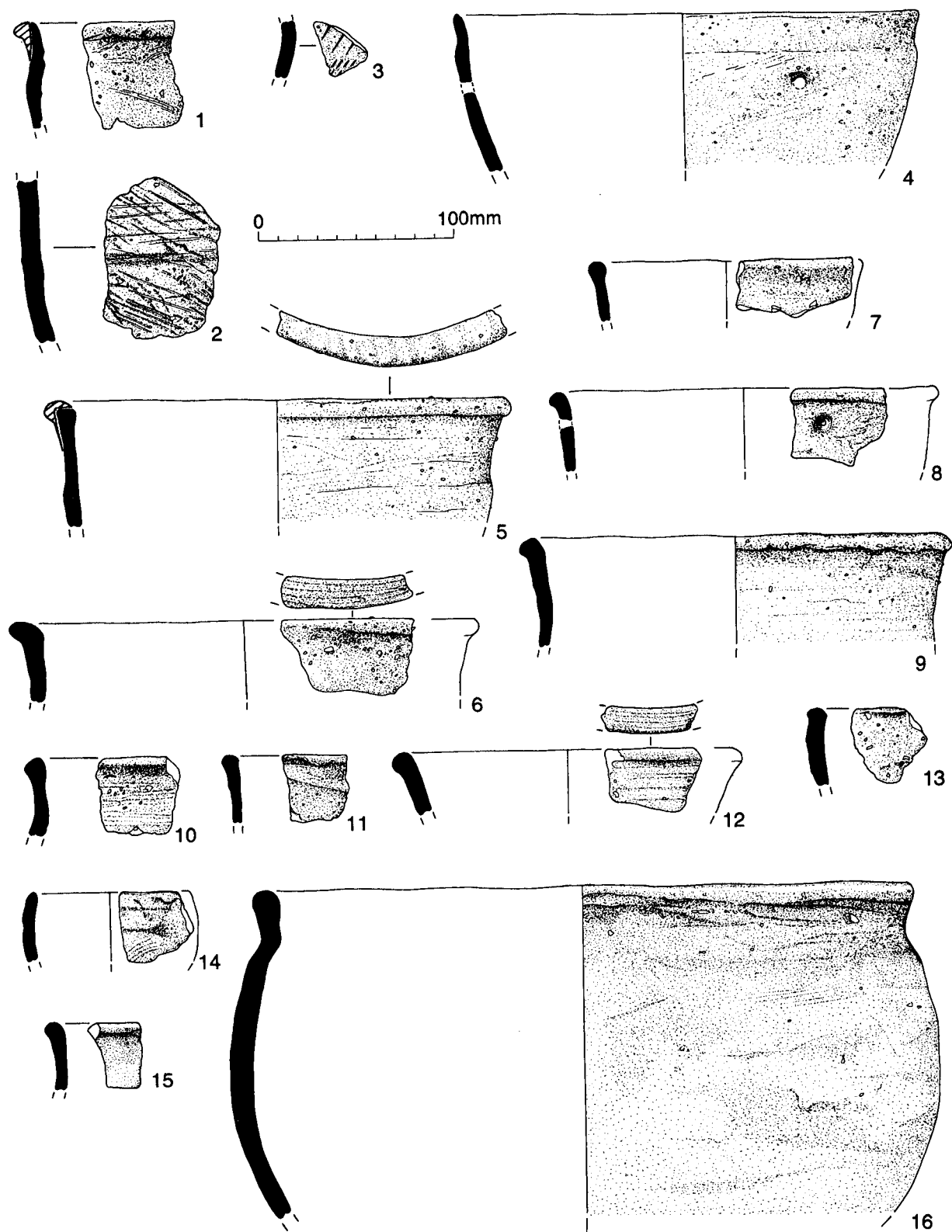
Fig. 13   Pottery: 1-16 Early Neolithic.

Catalogue of illustrated sherds, Figure 14

Fig. No.	Context	Feature	Rim Form Vessel Form	Description	Fabric
14.17	2679	2656	13/IV	Externally thickened rim, curvilinear lightly grooved decoration on exterior, vertical on interior, sloping more sharply incised lines on top of rim. Most of upper surface of rim is missing.	C
14.18	2679	2656	11/III	Irregular rolled rim of closed bowl, sloping wiping on exterior, horizontal on interior.	C
14.19	2679	2656	6/IV	Rim of open bowl, horizontal wiping on surfaces.	L
14.20	2679	2656	1/-	Upright flat topped rim of closed vessel.	O
14.21	2679	2656	13/-	Externally thickened rim, horizontal wiping on exterior.	C
14.22	2679	2656	11/-	Rolled rim of open vessel with part of a lug surviving on exterior. Heavily burnt.	C
14.23	2768	2856	3/-	Plain rounded rim of thick-walled vessel, partly abraded exterior.	O
14.24	2768	2656	11/-	Rolled rim of open vessel, horizontally wiped surface.	C
14.25	2679	2656	11/-	Rolled rim of bowl with concave neck and high angular shoulder. Single post-firing perforation survives at shoulder.	B
14.26	2679	2656	1/-	Plain flat-topped rim.	C
14.27	23104	23103	3/-	Ebbsfleet Ware, plain upright rounded rim with deep thumb impressions at neck. Exterior below shoulder scored.	D
14.28	2690	2691	5/-	Rim of ? Mortlake style bowl, deep finger impression on neck and cord impressions on neck, top and interior of rim.	D
14.29	2690	2691	5/-	Rim of ?Mortlake style bowl, finger impressions below rim, most of rim missing, finger nail impressions on top, exterior and interior of rim.	D

(e.g. Thorpe, Surrey, Grimes 1960, fig. 71.3). Mortlake style Peterborough Ware from pit 2691 (Fig.14.29; Fig.15.30-32) has some cord-impressed decoration but is predominately finger impressed; such decoration dominates Peterborough Ware from the Chelmer/Blackwater river system. The Elms Farm pottery, though abraded and with few joining sherds, may all derive from a single vessel. A small flat base with stabbed impressions on the bottom is most unusual. The form is reminiscent of the narrow base of some Fengate-style pots. However, the thinness of the vessel wall, and the fabric, tempered with small crushed flint and some quartz, appear more reminiscent of Beaker pottery. Nonetheless, the accompanying body sherd with stabbed impressions on the interior is likely to be Peterborough Ware and these sherds are best considered here. The few sherds of Grooved Ware (Fig. 15.33-36) recovered from the site are indicative of the Durrington Walls style but the sherds are too few and too small to allow confident attribution to a particular style.

The near complete Beaker from possible grave fill 24248 (Fig. 15.44) is appropriate to Clarke's (1970) shape VII, decorated with a combination of motif groups 1, 2 and 4 in style D, and attributable to his Developed or Southern Groups. The accompanying fragmentary vessel (Fig. 13.43) has very carefully finished surfaces and a very neatly executed decorative scheme of Clarke's (1970) motif group 5; unfortunately the form of this pot is not reconstructable. Together these two vessels would fit well into Case's (1993) Group B. The Beaker from 2530 is a classic example of Clarke's (1970) East Anglian Style and Case's (1993) Group E. The decorative scheme is closely similar to those used in the Netherlands (van der Leeuw 1974) and some more local examples (Brown and Going 1988).

The clear contrast in form and decoration between the Beakers from 24248 and that from 2530, together with the adjacent Langford Road Beaker (Brown 1997a), is matched elsewhere in east Essex, notably at Ardleigh (Brooks pers. comm.). The range of Beaker pottery recovered from Elms Farm and Langford Road is typical of east Essex assemblages, for example the pottery recovered from Shoebury and Southchurch brickearth quarries (Clarke 1970). Indeed, the association of decorative styles present at Langford Road is very common in assemblages from East Anglia and adjacent parts of continental Europe (Clarke 1970, table 5). Close dating of Beaker pottery is problematic (Kinnes et al. 1991). The deposition of the Elms Farm and Langford Road Beaker pottery might all be broadly contemporary. However, it is just as likely that the material was deposited over an extended period. There are some hints that the Beaker pottery was part of an extended depositional process. The complete Beaker from Langford Road, which presumably once accompanied an inhumation, was recovered from a pit dug into, and thus reopening, an earlier pit or grave (Langton and Holbrook 1997,
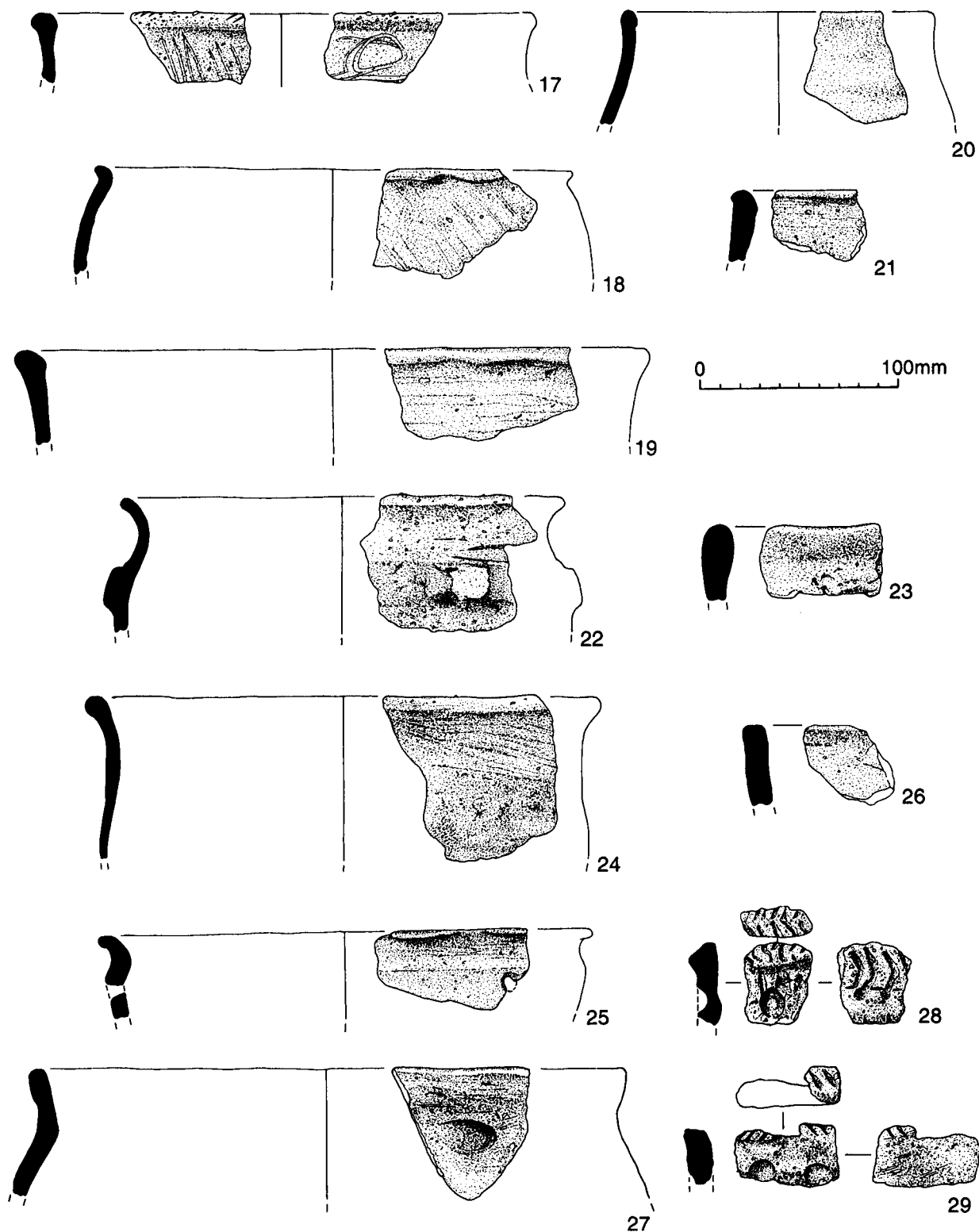
Fig. 14   Pottery: 17-26 Early Neolithic; 27-29 Peterborough Ware.

Catalogue of illustrated sherds, Figure 15

Fig. No.	Context	Feature	Rim Form Vessel Form	Description	Fabric
15.30	2690	2691	-/-	Body sherd. Exterior partly abraded, finger tip impressions on exterior. Probably Mortlake style.	D
15.31	2690	2691	-/-	Body sherd, exterior partly abraded, horizontal rows of finger tip impressions on exterior. Probably Mortlake style.	D
15.32	2690	2691	-/-	Body sherd, exterior partly abraded, horizontal rows of finger tip impressions on exterior. Probably Mortlake style.	D
15.33	10761	10772	3/-	Grooved Ware. Rounded rim, slightly abraded, grooved lines on exterior.	M
15.34	10761	10772	-/-	Grooved Ware. Grooved lines on exterior.	M
15.35	10761	10772	3/-	Grooved Ware. Incised horizontal lines below rim, sloping incised lines below. Grooved horizontal lines on interior of rim.	M
15.36	10394	10772	3/-	Rounded rim with slight internal bevel.	M
15.37	8712	8713	-/-	Stabbed impressions on exterior partly obscured by concretion.	E
15.38	8712	8713	-/-	Small flat base with rows of stabbed impressions on underneath of base, traces of similar impressions on exterior of somewhat abraded lower walls.	O
15.39	3749	3750	9/-	Everted rounded rim with horizontal rows of finger nail impressions on exterior.	P
15.40	3749	3750	1/-	Flat-topped rim with horizontal grooved lines on exterior	P
15.41	3749	3750	-/-	Body sherd with smoothed surfaces and opposed shallow grooved lines.	M
15.42	3749	3750	-/-	Somewhat abraded body sherd with opposed shallow grooved lines.	M
15.43	24248	24305	-/-	Lower part of Beaker, highly fragmentary smoothed surfaces, fragmentary smoothed surfaces, zig-zag square-toothed comb impressions above zone of short vertical lengths of square-toothed comb impressions. These are separated by horizontal rows of square-toothed comb impressions from a zone of panels of reserved and infilled triangles, the panels being separated by vertical rows of square- toothed comb impressions. Beneath the panels are further horizontal rows, above short vertical lines, of comb impressions. Complete flat base (not illustrated) also present.	P
15.44	24248	24305	-/-	Beaker, smoothed originally burnished surfaces, base slightly concave giving a slight footring effect. Interior of base and lower walls heavily pitted, presumably the result of use. Bulbous lower part of pot curves to a tall neck, rim missing. Decoration is by square-toothed comb impression and consists of elongated infilled pendant triangles separated by reserved triangles. These lie above a triple row of horizontal lines above broader zone infilled by comb mpressions with three more horizontal rows and pendant 'flattened' zig-zags bordering a broad blank zone just above the girth. This pattern repeats on the lower part of the pot with a further row of infilled pendant triangles separated by reserved triangles above the base.	B (but with very sparse flint)
15.45	2530	2933	3/-	Complete Beaker, smoothed surface with sparse vesicles, some quite large. Globular ovoid shape accentuated by cracking and distortion during burial. Slightly everted rounded rim, concave base giving footring effect. The exterior surface has been bound with a thong or cord leaving broad shallow irregular horizontal impressions. Those immediately below the rim have been left blank, the others are infilled with close-set sloping fingernail impressions.	P
15.46	2772	2773	1/Q	Upper part of large bucket urn, plain flat-topped rim, with row of finger impressions below on exterior, slight pinched-up cordon at slight shoulder. Cordon largely plain but with occasional widely spaced finger impressions. Sooting on exterior below cordon, 'dunting' cracks on surface particularly on the exterior. Rim added as a separate broad strip of clay. (Brown 1995, Gazetteer No.433).	D
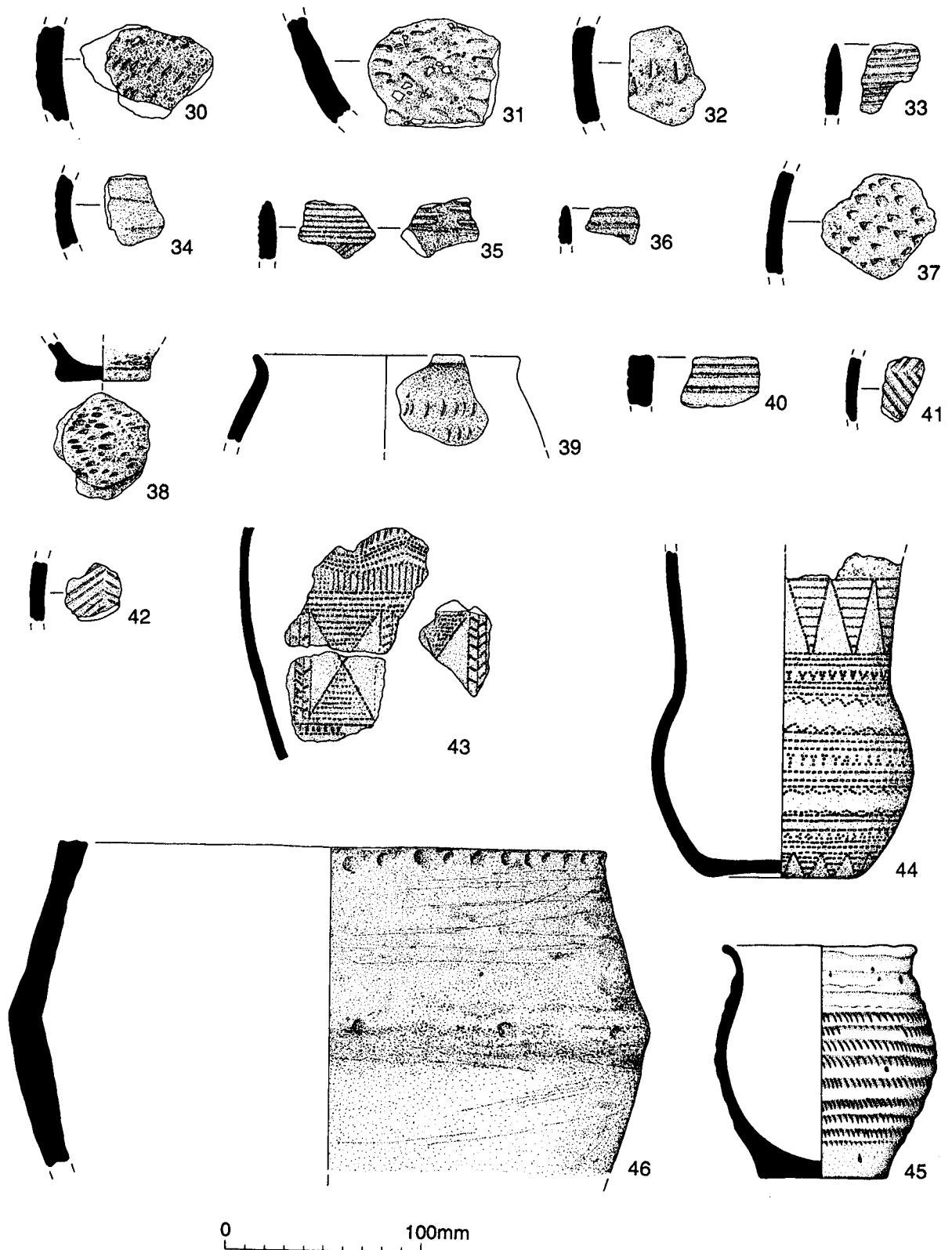
Fig. 15   Pottery: 30-32 Peterborough Ware; 33-42 Grooved Ware and Beaker; 43-45 Beaker; 46 Deverel-Rimbury.

Catalogue of illustrated sherds, Figure 16

Fig. No.	Context	Feature	Rim Form Vessel Form	Description	Fabric
16.47	2800	2812	-/-	Flat base and lower walls of globular urn, surfaces well smoothed with patchy abrasion on exterior. Row of post-firing perforations at junction of base and wall, with a further roughly parallel row just above and at least one vertical row, which shows some scars on interior where holes were started and not finished or were misaligned. (Brown 1995 Gazetteer No.434).	B
16.48	13169	13170	1/Q	Flat-topped rim of small bucket urn with finger tip impressions on top of rim.	C
16.49	13169	13170	1/Q	Plain flat-topped rim of small bucket urn, with row of pre-firing perforations below.	C
16.50	13169	13170	-/Q	Sherd of small bucket urn with applied finger impressed cordon.	C
16.51	9585	9611	1/Q	Flat-topped rim of small bucket urn.	C
16.52	12080	12371	-/-	Applied perforated lug, one end plugged into wall, the other simply luted on.	D
16.53	2759	2758	1/E	Jar with row of finger impressions above slight shoulder and cable effect decoration on top of rim. Slight sooting below rim.	O
16.54	2759	2758	1/H	Plain flat-topped rim of open bowl, exterior abraded, interior smoothed and burnished.	I
16.55	2514	2513	1/A	Plain upright rim of large jar, smoothed exterior, 'dunting' cracks in surfaces particularly the interior. Faint finger impressions as the result of rim formation, slight sooting on exterior.	D

16 and fig. 12). Similarly, the Elms Farm East Anglian style beaker came from a shaft-like feature (2993) dug into an earlier oval pit (2933), and those from 24248 from a pit cutting an earlier pit.

The Deverel-Rimbury pottery from Elms Farm (Fig. 15.46; 16.47-51), relatively plain and with little elaboration or decoration, is typical of material from southern and central Essex (Brown 1995). The fabric, surface finish and, probably, form, of the Globular Urn from Elms Farm can all be matched by an urn from the Southchurch brickearth quarries (Brown 1995, gazetteer No. 215). Repair, and other post-firing holes, are a common phenomenon on Deverel-Rimbury pots, generally occurring as pairs or rows either side of a crack or break, rows below the rim and occasionally in more unusual locations (e.g. White 1982, fig.24.7). However, the occurrence on the Elms Farm globular urn (Fig. 16.47) of a complete row of holes encircling the base at the point where the base and lower wall join, appears to be unparalleled.

Late Bronze Age and Early Iron Age pottery (Fig. 16.53-55; 17.56) is fairly sparsely represented given the density of settlement of that date around the Blackwater Estuary (e.g. Brown 1988; Wallis and Waughman 1998). The forms present at Elms Farm can all be matched in larger assemblages from sites elsewhere in the Chelmer/Blackwater river system (e.g. Brown 1988, Atkinson 1995).

Middle Iron Age pottery (Fig. 17.57-63) occurs most frequently in the south and west of Elms Farm and is relatively uncommon on the 1993 site. It occurs mostly as small sherds, with few large groups. Feature assemblages comparable to those from the house gully at Howells Farm (Brown 1998) are absent. Such diagnostic sherds as are present at Elms Farm can be matched at other sites in Essex (Drury 1978), including a number around the head of the Blackwater estuary (e.g. Brown 1997, 1998). Shallow grooved decoration of various kinds, such as that on a sherd from context 19114 (Fig. 17.61), is a common if minor component of Middle Iron Age assemblages in south and east Essex (Brown 1991). Two sherds decorated with a curvilinear pattern, probably of interlocking arcs, ordered by two rows of impressed dots, are probably from the same pot (Fig. 17.58-59). This decorative pattern may be matched on pottery from a number of sites in south and east Essex (e.g. Drury and Rodwell 1973). The decoration on another sherd (Fig.17.63) is somewhat similar in scheme but much more irregularly and crudely executed. Curvilinear and stamped/stabbed pottery has been discussed extensively elsewhere (Elsdon 1975; Drury and Rodwell 1973; Drury 1978). There is a marked concentration in south and east Essex, particularly around the Blackwater estuary (Drury 1978), including a recent find from Howells Farm (Brown 1998). Most notable is a sherd of Glastonbury Ware, ultimately derived from the west country, recovered from the excavations at Crescent Road (Drury 1978; Brown 1987).
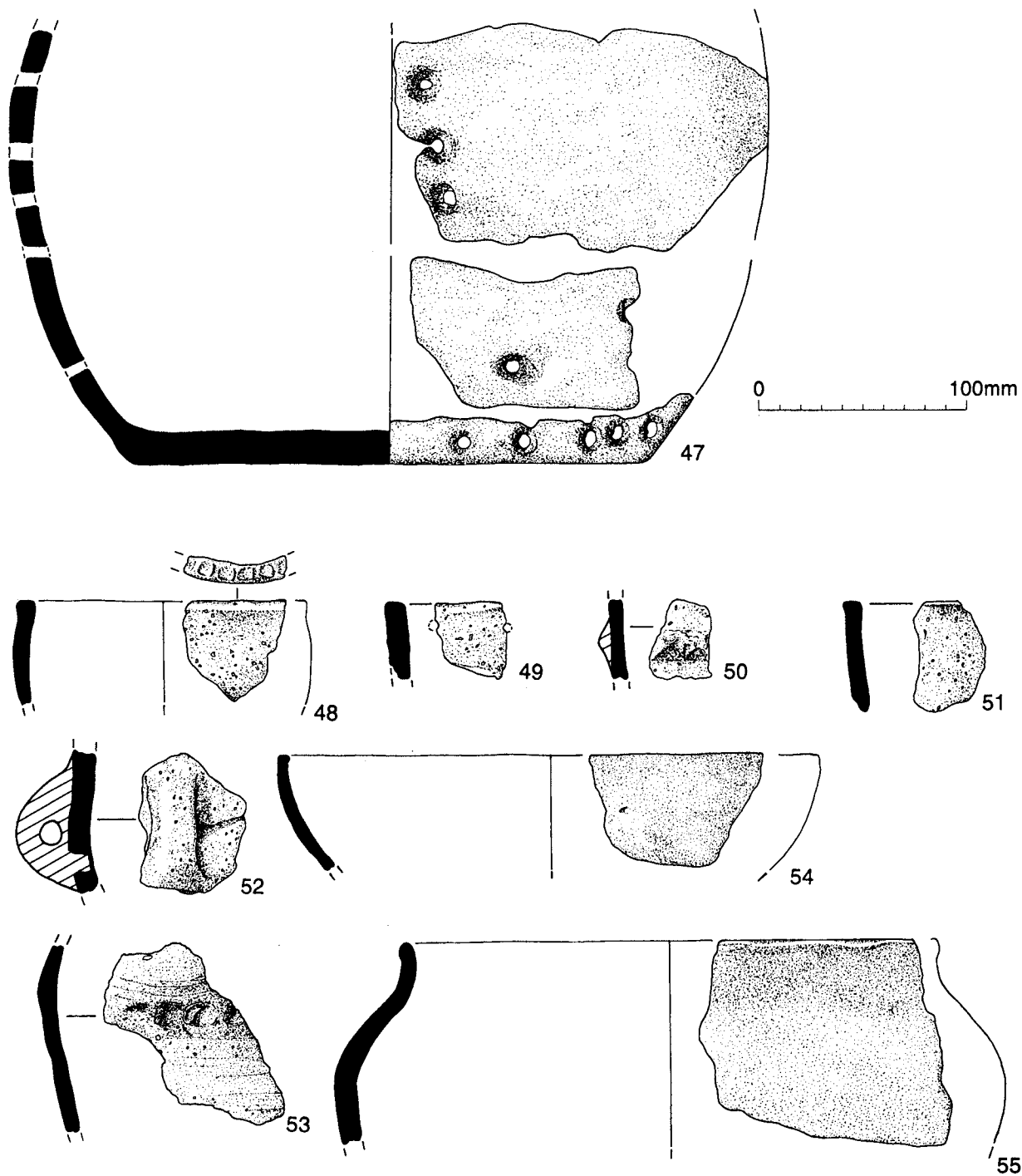
Fig. 16   Pottery: 47-51 Deverel-Rimbury; 52-55 Late Bronze Age.

Catalogue of illustrated Sherds, Figure 17

Fig. No.	Context	Feature	Rim Form Vessel Form	Description	Fabric
17.56	2747	2748	1/K	Flat-topped rim of angular bowl.	B
17.57	18974	18975	1/-	Plain rim and upper body of bowl, light vertical scoring on exterior, coil joins visible in break.	J
17.58	7228	7227	-/-	Smoothed surfaces, curvilinear grooved lines bounded by rows of cylindrical stabbed impressions.	H
17.59	7150	7149	-/-	Smoothed surfaces, curvilinear grooved lines bounded by rows of cylindrical stabbed impressions, probably same vessel as 58.	
17.60	7228	7227	3/-	Plain rounded rim, smoothed surfaces.	H
17.61	19114	19113	-/-	Shallow grooved lines on exterior, smoothed surfaces, coil join visible in break.	H
17.62	19114	19113	9/-	Everted rounded rim, smoothed exterior.	J
17.63	16203	16349	-/-	Body sherd, smoothed exterior, shallow grooved line bounded by somewhat irregular rows of stabbed impressions.	J
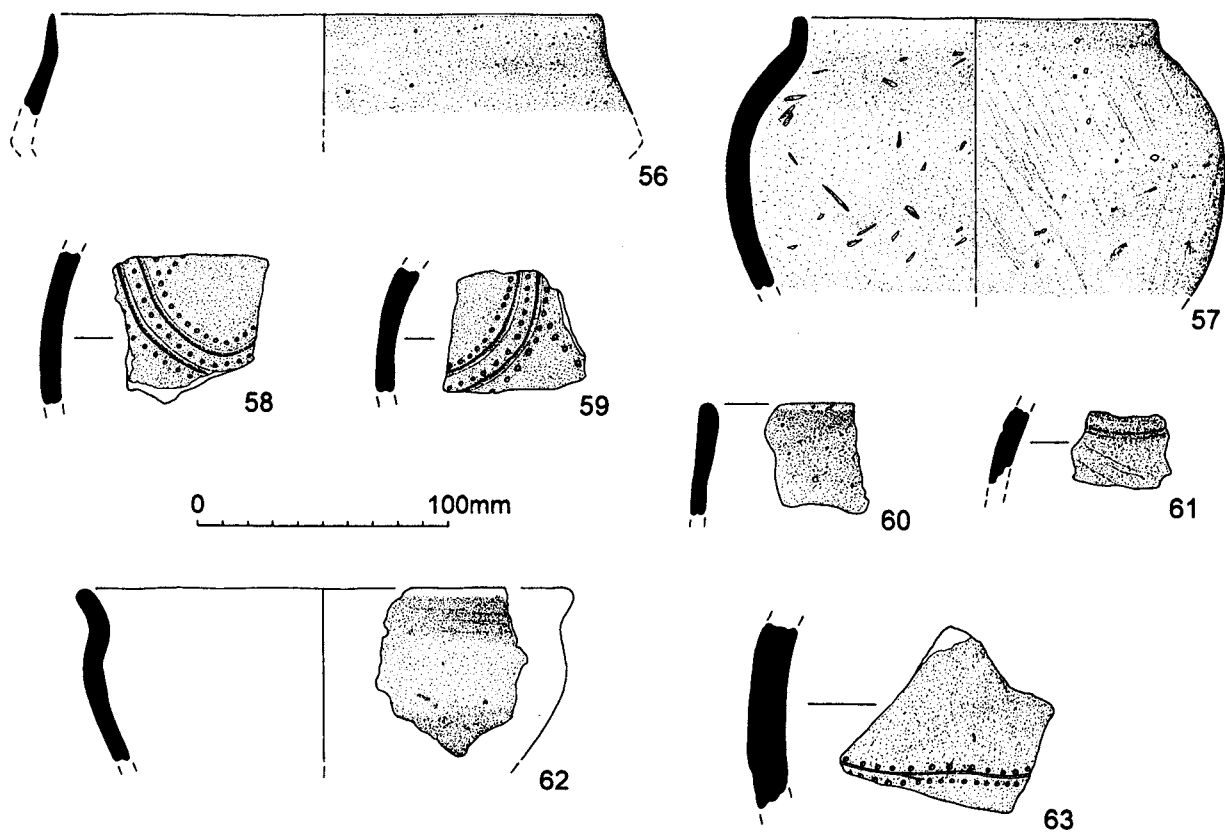
Fig. 17   Pottery: 56 ?Early Iron Age; 57-63 Middle Iron Age.

Human Bone

Corinne Duhig

Seven contexts were analysed, using the methods of Cho *et al.* (1996), McKinley (1989) and Ubelaker (1989). Unless otherwise stated, the samples were primarily white in colour, combustion having been sufficient to remove almost all of the organic component of the bone, thus showing an efficient pyre technology.

Although the site is on acid gravels, this should not significantly affect the preservation of cremated bone, so soil pH is probably not a distorting taphonomic factor. Cremations rarely reach a weight approximating the residue of one human body (200-2000g commonly found archaeologically), showing that token deposition was usually acceptable. Only one, urned, sample falls within this range, all the others being extremely under-weight, due in at least some cases to truncation. Average modern cremations have approximate proportions of : skull 18.2% by weight, axial skeleton 23.1%, limbs 58.7%. The proportions of each adequately sized sample are discussed in relation to this 'standard'.

Feature 2513 (2514): Weight: 0.6g. 10 fragments, one skull vault, remainder long-bone shaft, rib and

unidentifiable. One long-bone fragment is blue-grey within the shaft, showing that the interior of bone had some protection from burning. The weight is too low for meaningful analysis of composition to be made, but severe truncation by ploughing is recorded for this sample.

Feature 2555 (2554): Weight: <0.1g. 3 fragments only, largest 4.5mm max. dimension. 2 fragments are brown and unburnt, perhaps protected from the soil acidity by extremely local effects, or perhaps modern intrusions. If all are human (which is indeterminable), only one is likely to derive from a genuine cremation, and deposition could as well have been accidental as deliberate - dropping from a larger cremation during the transport to its depositional site, or later soil-movement effects.

Feature 2718 (2717): Weight: 5.0g. Mainly long-bone shaft fragments, almost all from the ulna, with two refits. In this sample, skull and axial skeleton are severely under-represented (at 4% and 6%) while limbs are close to 'ideal'. The extremely low weight makes it impossible to determine whether this disproportion is due to selectivity at burial stage, truncation or any other taphonomic effect, but as the cuts containing this and the above sample were doubtful, non-purposeful deposition of both is certainly a possibility.

Feature 2737 (2736): Weight 44.9g. All body areas are present, with some blue-grey patching in skull and long bones. Age is less than 21 years. The proportions of this cremation are similar to those of the modern standard (19%, 12% and 53%) suggesting careful selection and co-mingling of token fragments from all body areas, but at such low weight the proportions might be randomly-produced (plough truncation is suggested by the excavator).

Feature 2773 (2771): Weight: 789.0g. All body areas are present, with many distinctive fragments and some blue-grey areas. The individual is likely to have been an adult but of no great age. The axial skeleton has the largest fragments and limb bones are most broken; the skull is the body area most under-represented (6%, compared with 15% axial, 26% limbs). This was an urned cremation contained within approximately one-third of its urn, and could have been around 2000g if complete. Perhaps skull and more complete limb-bone fragments were placed higher in the urn and have thus been lost to ploughing.

Feature 2773 (2785): Weight: 27.0g. Most is skull, with some refits, and other body areas are represented. Nearly half of all fragments were unidentified, these being less than 5mm in size. Of the identified bone, there is a very high proportion of skull (34%), the axial skeleton is nearly half (11%), and the limbs only one-eighth (7%), the expected percentages. Skull might have been favoured in the depositional selection.

As 2771 and 2785, were from the same cut, 2773, they were examined for refits, but none were found. The edges of the 2785 fragments showed a degree of erosion similar to other un-urned material from this site, suggesting that the sample has been un-urned for a broadly similar period of time.

Feature 2901 (2900): Weight: 14.3g. Most fragments are from long-bone shafts and the remainder are skull vault apart from one rib fragment. Skull and limbs are not significantly under-represented compared to the 'ideal' cremation (15% and 41% respectively), but there is only one fragment from the axial skeleton, and, although axial bones have slightly greater fragility, their percentage here is exceptionally low.

Baked Clay
R. Tyrrell
35 fragments of baked clay, weighing 79g, were recovered from ten contexts which have been identified as prehistoric in date. The majority of the assemblage is rather undiagnostic, lacking in true surfaces and tending to comprise small pieces weighing around 2-6g. Classification of the fabric proved to be difficult due to the small size of the material but it appeared to be made from the local brickearth with some vegetable tempering. Over half the fragments came from Neolithic to Bronze Age pit and post-hole fills from the 1993 site. From the 1994 site, 5g of baked clay were associated with a middle Bronze Age loomweight in the fill of isolated post-hole 14440. A further 24g was from Early to Middle Iron Age features.

Loomweight
The cylindrical loomweight fragment from post-hole 14440 (not illustrated) is in a worn and damaged state which may indicate that it has been redeposited in the feature. It is in a reddish, evenly fired, fabric with well-mixed sand and some small pebbles. It is not possible to estimate the full size or diameter. Width from hole to outer surface: 30mm; surviving height: 40mm. Such objects are typically Middle Bronze Age in date and have been found at a number of sites in south and east Essex (Barford and Major 1992). A complete example was recovered from Howells Farm, to the north of Elms Farm (Wallis and Waughman 1998).

Other Objects
Two fragments of roughly shaped clay balls, of uncertain function, were found in late Neolithic pit 3750, on the southern edge of the 1993 site. The lack of any form of tempering suggests that they were not intended for oven or kiln use. A fired clay ball was recorded with other objects from the ditch of the Etton Causewayed Enclosure (Kinnes and Pryor 1998). Healy (1988, 71) records fired clay lumps with

rounded or flattened surfaces from a context with Beaker pottery, but these are hard fired. A large piece of fired clay from a Late Bronze Age context at North Shoebury (Barford 1995, 125-6), was identified as accidentally fired potter's waste. However, it is quite different in form and fabric from the Elms Farm lumps. It is possible that these objects were similar chance survivals.

Catalogue of illustrated pieces, Figure 18

Fig. 18.1   Part of a roughly shaped ball of baked clay, in a low fired fabric, with no visible inclusions. The marks of the makers hands are clear on the surface of the object. Context 3749 pit 3750, SF182.

Fig. 18.2   Similar to SF182 but not so well baked and roughly ovoid in shape. Context 3749 pit 3750, SF183.

0   50mm
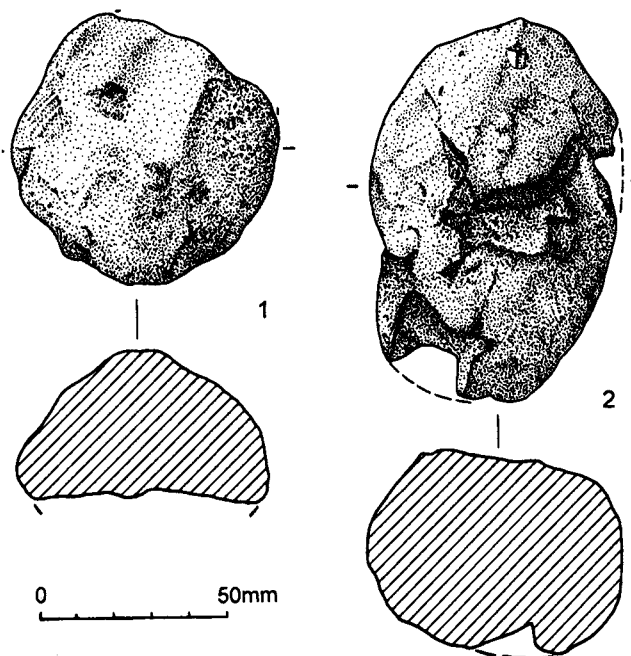
Fig. 18   Clay balls.

Discussion

Palaeolithic to Mesolithic

The presence of the palaeolithic handaxe (Fig. 10.1) is of some interest. As noted above, the handaxe is the first to be found in this area of Essex. The Mesolithic microlith (Fig. 11.25) is an additional hint of Mesolithic occupation in the area, which is better represented by other finds from the gravel terraces north of the Blackwater (Jacobi 1996), and by a series of sites within the intertidal zone of the Blackwater estuary (Wilkinson and Murphy 1995).

Early Neolithic

The early Neolithic pits, particularly 2656 and 2856 with their artefact-rich fills, and other features are clear indications of Neolithic occupation on the

upper terrace. The distribution of flint across the 1994 site indicates that occupation also extended onto the lower terrace (Fig. 12). During the early Neolithic the Elms Farm site would have overlooked a freshwater river, rather than, as today, the head of a tidal estuary. Numerous early Neolithic sites, including extensive tracts of preserved landsurface, have been recorded to the east of Elms Farm, in the intertidal zone of the Blackwater estuary. The evidence from these sites has been summarised (e.g. Brown 1997; Murphy and Brown 1999) and extensively described (Wilkinson and Murphy 1995 and forthcoming) elsewhere, and so is only briefly outlined here. Plant macrofossils and pollen analysis of buried soils indicate a predominately wooded landscape with lime, oak and hazel predominating. The most extensively excavated of the intertidal sites, The Stumble, has yielded considerable quantities of charred plant remains with abundant remains of crops, mainly emmer wheat but with a range of other crop plants. However, charred fruitstones, nuts and tubers were just as common (Murphy and Brown 1999). On the gravel terraces fringing the Blackwater estuary, early Neolithic pit groups are numerous. Almost any large-scale excavation is likely to reveal such evidence (e.g. Brown 1988; Wallis and Waughman 1998), and the Elms Farm features represent an additional example.

Evidence of early Neolithic activity at Elms Farm occurs in three areas: a small group of features in the northern part of the 1993 site, another cluster in the south-eastern part, and residual flintwork from the 1994 site. The range of features present, including pits, post-holes, tree-throws and other natural features, is typical, both of the feature groups elsewhere on the Blackwater terraces and those further afield (e.g. Healy 1988; Evans 1999 et al.). However, one feature, pit 2656, at Elms Farm is quite different from those recorded elsewhere on the Blackwater terraces: it is much deeper and with near vertical sides and a flat base. The steep sides must indicate a rapid backfill since the unstable gravel would have quickly eroded had the pit been left open for any length of time. Whilst no recuts were recorded during excavation of this feature, the section (Fig. 4) may indicate a fairly complex history. Following initial digging of the pit, a rapid backfill comprised 2693, 2713 and 2714. A recut was filled with the artefact rich layer 2678/2679 which was covered by 2655, and the whole sealed by the horizontal gravely layer 2654, which was itself recut and layer 2653 deposited. The repeated recutting of this feature is reminiscent of the sequence at a number of causewayed enclosures. Parallels have been noted between the ceramics from pit 2692 and deposits in the causewayed ditch segments at Springfield Lyons, although the Elms Farm pottery does not show the preferential selection of decorated

pottery which seems to have taken place at Springfield, and occurred at Etton (Kinnes 1998).

The recutting of pit 2692, and the nature of the other evidence from Elms Farm, would fit a pattern of shifting occupation with recurrent visits to particularly favoured locations. Such a pattern of behaviour has been postulated for the early Neolithic of the Blackwater area (Brown 1997b) and for southern England more generally (e.g. Whittle 1996; 1997). The concentration of features in the south-eastern part of the 1993 excavation (Fig. 5) included shallow pits which produced Peterborough Ware, and occupation in this area continued into the Late Neolithic with deposition of Grooved Ware in some of the features.

Late Neolithic/Early Bronze Age
The south-eastern cluster of post-holes and shallow pits suggest possible post-built buildings, associated fencelines and other features, and may be compared to similar features at Sutton Hoo, Suffolk (Copp 1989, 14-15). However, many of the Elms Farm features cannot be closely dated, and the presence of Peterborough Ware in some features and Grooved Ware in others, suggests that this complex may have been created over a long period of time. Later Neolithic occupation is indicated on the 1994 site by a scatter of flintwork and some Grooved Ware, with what appears to be a disproportionate number of arrowheads. This might indicate hunting on this lower lying, presumably marshy land, or simply reflect bias in collection.

Amongst the most significant features of this date found in the excavations are the Beaker features, 2528 from the 1993 site, and 24226 from the 1994 site, which together with the similar feature recorded at Langford Road (Langton and Holbrook 1997) are likely to be inhumation burials.

The majority of Beakers from Essex have been recovered in circumstances which precluded recording of their context (Clarke 1970). A few burials with grave goods (e.g. Mucking, Jones 1973; Southchurch, Clarke 1970) or multiple vessels (e.g. Orsett Cock, Milton 1986) are known, but the majority seem to have been single vessels. This is certainly the case for most of the Beakers recovered recently in east Essex, from Little Bentley (N. Lavender pers. comm.; E. Heppell pers. comm.), Ardleigh (Brooks 2001), Langford Road (Langton and Holbrook 1997), and the Beaker from the Elms Farm 1993 site.

The Langford Road Beaker may have accompanied an inhumation burial, bone from which had not survived in the acid gravel, and the same may be true of the two Beaker features from Elms Farm. This Langford Road grave seems to have 'reopened' an earlier feature, perhaps also a grave (Langton and Holbrook 1997, 16, figs. 3 and 12).

Similar processes took place at Elms Farm on the 1993 site. Pit 2528, of suitable size and shape for an inhumation burial, was recut with a centrally placed 'shaft' at the bottom of which a complete Beaker was placed. On the 1994 site a shallow pit 24226 was recut by 24305, which included large parts of two Beakers. It is also possible that some of the barbed and tanged arrowheads and other flint artefacts from the 1994 site may be derived from burials. This process of reopening of earlier burials is a widespread phenomenon in earlier Bronze Age burial practice (Rollo-Smith 1984; Barrett 1988; Brown 1999; Ashwin and Bates 2000). The practice recalls the sequence of recutting/reopening suggested for the earlier Neolithic pit 2656 (above), and indicates that these burial features were marked, visible and enduring features, locating significant points in the landscape. The two Elms Farm burials together with that from Langford Road were widely scattered across the area investigated. There is a recurrent link between burial and boundaries (e.g. Brown 1999) and it is possible that the Beaker burials on the Chelmer and Blackwater terraces marked out significant land divisions.

The distribution of these burials indicates that there was no single focus, and that Beaker burials were widely distributed, at both higher and lower elevation, and perhaps marked significant locations in the landscape. One of these locations, that marked by 2528 on the 1993 site, was singled out for further elaboration in subsequent periods, perhaps due to its prominent location.

Middle Bronze Age
About 7m north-west of the probable Beaker burial 2528, a ring-ditch 2206 was constructed. Why this particular location, rather than somewhere close to one of the other two putative Beaker burials, was singled out for elaboration is uncertain. Its elevated position on the river terracing may be part of the reason, and both Beaker feature 2528 and the ring-ditch lay near (although not in particularly close proximity to) early Neolithic pit 2656 (Fig. 3). It is therefore tempting to suggest that this general locality had long ancestral associations.

Although small, the ring-ditch formed part of a quite complex and long-lived monument, and seems to have been provided with an external post circle (Fig. 7). Post-circles of various kinds are a well known phenomenon associated with many ring-ditches/barrows (e.g. Ashbee 1960; Gibson 1998: Ashwin and Bates 2000) and are a particularly common feature of barrows in the Netherlands (van Giffen 1938; Glasbergen 1954). Locally post-circles occur with both, a Late Neolithic, and a Bronze Age ring-ditch, at Langford Reservoir (Cooper-Reade forthcoming) just west of Elms Farm, and further up the Chelmer valley another example has been recorded at Great Holts Farm, Boreham (Germany

forthcoming). It is possible that the post-circle was a later addition to the Elms Farm ring-ditch. However, it is at least as likely that it was an integral part of the design of the monument, and as such it may be compared with sites at Ogden Down 3 and Standlake 20 (Gibson 1998, 40-41), which appear to be broadly contemporary with the Elms Farm ring-ditch. The Standlake example (Caitling 1982) provides a fairly close parallel for Elms Farm; both these circles appear to have north-east facing entrances.

The ring-ditch appears to have been the focus for cremation burial during the Middle Bronze Age. The outlying feature, 2812, to the north-east of the ring-ditch, produced much charcoal and the remains of the lower part of a Globular Urn. It is difficult to identify this as a cremation burial due to the absence of cremated bone, though it may possibly be redeposited pyre debris (McKinley 1997, 132). It is also possible that this is the result of structured deposition with pyre material at the bottom and cremated bone on top. This was certainly the case with at least one of the cremations from Ardleigh (Brown 1999). Given the severe damage to this shallow feature, cremated bone high in the fill may have been completely removed. It was the only feature of this type to be found outside the immediate vicinity of the ring-ditch. This may hint that other such shallow 'burial' features may once have existed around the ring-ditch, but have since been ploughed away. The secondary insertions into the ring-ditch fills, and possibly into its presumed mound, which occurred as late as the late Bronze Age, indicate that, as elsewhere, it was a lasting monument respected and used over an extended period of time, and may have remained a focus of burial into the Late Bronze Age.

The Elms Farm evidence, together with the ring-ditches at Slough House Farm (Wallis and Waughman 1998) and Langford Reservoir (Cooper-Reade forthcoming), fit the perceived pattern of Middle Bronze Age burial in south Essex (Brown 1996). In this area ring-ditches and their associated cremations were distributed across the landscape in small groups rather than clustered into cemeteries. It seems probable that ring-ditches such as that at Elms Farm and those at Langford Reservoir (Cooper-Reade forthcoming) and Slough House Farm (Wallis and Waughman 1998) were used as markers to divide up the landscape (Pryor 1998). They certainly seem to have been incorporated into the line of later ditched boundaries.

Elsewhere at Elms Farm Middle Bronze Age occupation is represented by the cluster of post-holes found below the late Iron Age shrines and Roman temple. These features undoubtedly constituted part of a structure. It is tempting to speculate that this was a significant building, perhaps itself a shrine, deliberately sited upon a slight gravel rise on the edge of marshland; certainly no obviously domestic features such as rubbish pits were excavated in the vicinity. There are a number of examples of correlation between later Bronze Age ritual/religious sites and finds and those of the Late Iron Age. A number of Bronze Age cremation burials were found below the temple complex at Harlow (France and Gobel 1985, 21-22; Bartlett 1988 and pers. comm.). It is worth recalling that a Bronze Age axe was amongst the grave goods in the Lexden barrow (Foster 1986) and numerous items of Bronze Age metalwork were deposited in the Salisbury hoard (Stead 1998).

Late Bronze Age

A number of small charcoal rich features, occasionally with some burnt bone, were cut into the partially silted ring-ditch fills; this indicates that they were late deposits, suggesting continued activity into the Late Bronze Age. While the bone from 2901 is of definite human origin, 2555 contained a single burnt and two unburnt
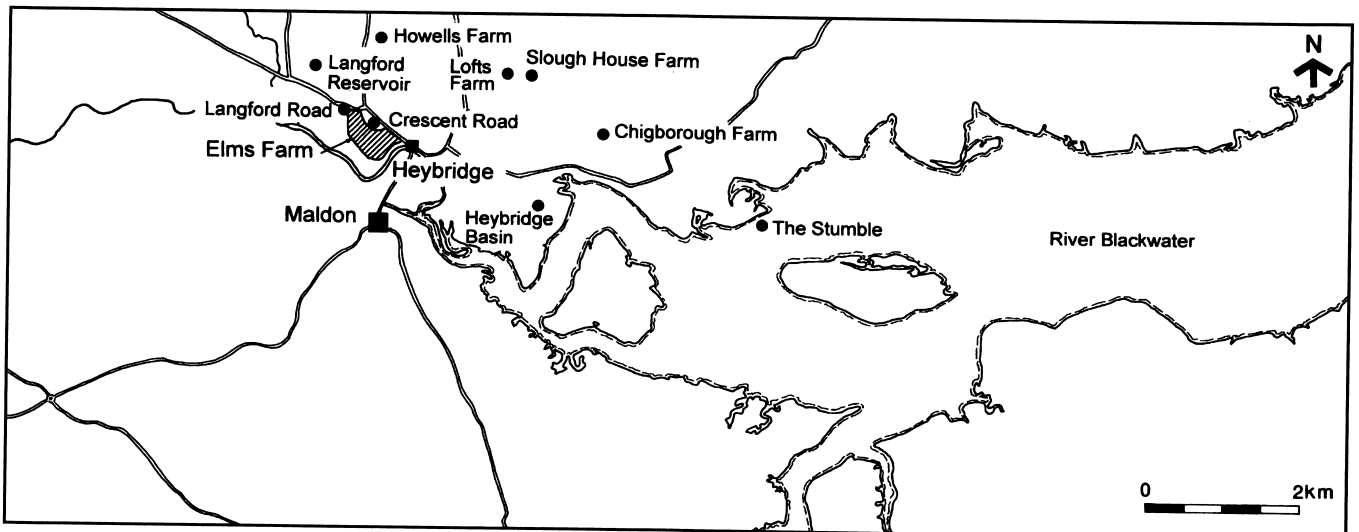
Fig. 19 Map showing sites around the Blackwater estuary mentioned in discussion.

unidentified fragments. It is likely that these features represent deliberate deposits of cremation material, or possibly in the case of 2555 a token deposit derived from burnt animal offerings. As noted above, it would appear that the ring-ditch remained an important element of this landscape for some time, even if rituals and the significance of the monument changed through time. The presence of sherds of Late Bronze Age pottery in deposits 2258 and 2513 (above) is reminiscent of the occurrence of a charcoal-rich deposit together with carefully placed fragments of Late Bronze Age pottery within one of the ring-ditches at Ardleigh (Brück 1995; Needham 1995; Brown forthcoming d).

Early to Middle Iron Age
The two phases of ditched fields identified within the 1993 site are considered to be of this date. Evidence of settlement was rather more elusive and is best represented on the 1994 site where, although there were few *in situ* features, a significant quantity of residual Middle Iron Age pottery was present in later features. Current study of the Elms Farm Late Iron Age and Roman ceramic assemblage is identifying what appear to be hand-made Late Iron Age forms in Middle Iron Age fabrics. These are presently being viewed as transitional between the Middle and Late Iron Ages and have not been considered within this report. Further research into the pottery itself, the features from which it is derived and site formation processes, should produce a greater understanding of the Middle Iron Age activity on the lower terrace. It is suspected that this will prove to be substantial and push back the origins of the settlement and religious centre of the late Iron Age and Roman periods at Heybridge. The division between settlement on the lower terrace and ditched fields on the upper terrace which is such a striking feature of the Late Iron Age and Roman periods at Elms Farm (Atkinson and Preston 1998 and in prep.), may have its origins in the Middle Iron Age.

Acknowledgements

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A Beaker burial, Late Iron Age and Roman features: observation and excavation at Elm Park, Ardleigh, 1994-1996

by Howard Brooks
with contributions by Justine Bayley, Nigel Brown, Nina Crummy, Philip Crummy, Val Fryer and Peter Murphy, and Colin Wallace

A watching brief and excavation at Elm Park revealed a Beaker burial, and a number of ditches defining a Late Iron Age and early Roman field system. There was one possible Late Iron Age/Roman post-built structure, lying mainly off-site. Residual finds included Neolithic and Bronze Age pottery. The principal find was the Beaker pot; otherwise the finds were dominated by a large group of Iron Age/Roman pottery (27 kg). The acid soil precluded the survival of any organic remains beyond a single cow tooth, and may also have been responsible for the lack of a body in the Beaker burial.

Introduction

This report presents the results of watching briefs and excavation on scheduled land (Essex SAM 199) at Elm Park Nursing Home, Station Road, Ardleigh, Essex (NGR: TM 056 287 [centre]; project codes, EPA 96 and AREP 96). Archaeological work took place before and during the construction of extensions to the house and a new access road off the Frating Road. The work was commissioned on behalf of Elm Park Nursing Home by Prior, Manton, Tuke Ltd., and carried out by Howard Brooks Archaeological Services (HBAS) between December 1995 and March 1996. There is also a brief note here on a 1994 evaluation (code EPA 94). All work was carried out according to briefs issued by English Heritage and Essex County Council Archaeology Advisory Group. This is a summary of fuller archive reports lodged with the finds at Colchester Museum (accession 1996.25).

Archaeological Background

The nationally important Bronze Age archaeological landscape at Ardleigh has recently been discussed by Brown (1999) and need not be repeated here. Recent archaeological work at Elm Park includes the 1957 recovery of Samian ware after the ploughing up of the grassland through which the road has now been built (Erith 1965). A 1st-century Roman ditch was excavated by Colchester Archaeological Group in the Elm Park kitchen garden in 1964 (Holbert and Erith 1965). Colchester Museum staff went to the house in 1981 after reports of workmen finding material

(Late Iron Age pottery and briquetage) during the excavation of a lift shaft (Thompson and Barford 1986).

The 1994 evaluation

In 1994 HBAS conducted an evaluation immediately east of a proposed new building on the north side of the main house (Fig. 1; Brooks 1994). No significant archaeological deposits were encountered apart from a post-medieval pit with residual Roman greywares.

The watching briefs

Nothing of interest was seen during the 1995 watching brief on construction work around the house. Loose pockets of soil in the sides of the footings trenches indicated undoubtedly post-medieval and modern pit digging, which is in keeping with the results of the 1994 evaluation.

There was also a watching brief on the digging of a soakaway, and pits for the fence lines on the new road. Apart from the location of the top fill of a Late Iron Age ditch in the expected position in one of the fence pits, nothing of note was seen, and no finds were recovered.

The watching brief on the road line

Following on from the watching brief on the new extension was the watching brief on the proposed new road line (January 1996) which cut a swathe across scheduled pasture south of Elm Park House.

First the removal of 300mm of turf and old ploughsoil exposed a pale brown loamy clay cover loam in which no archaeological features were visible. However, it was then necessary to grade down the south end of the road line, and this operation removed cover loam and 'natural', exposing archaeological features (a ditch, and several pits or post holes) at the Frating Road junction (Fig. 2). Limited excavation was undertaken on the exposed features to establish their general nature and date, and this completed the work specified in the original brief. The Beaker burial, although exposed, was not excavated at that time.

watching brief
on new extension

1994 evaluation

main building

new road line

village centre

A

A

Frating Road

50 metres
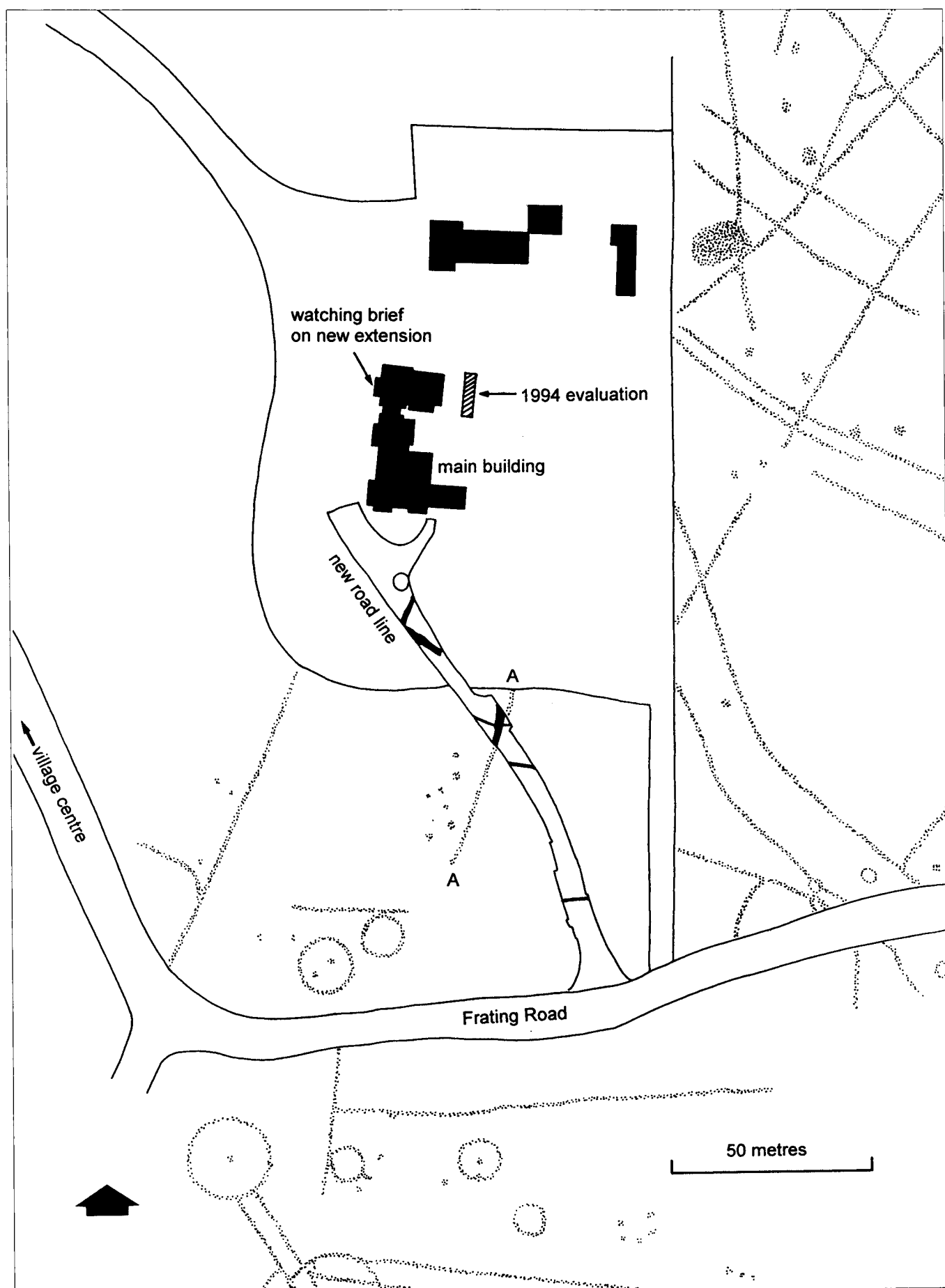
Fig. 1   Ardleigh, Elm Park, site location with local cropmarks.

Elm Park House

post-medieval
garden features 74, 76

post-medieval
pits 70, 72

Early Roman pit 36

10/110
+

50/110
+

Early Roman pit 63

Early Roman ditch 34

post-medieval pit 58

Early Roman ditch 32

Early Roman ditch 44

20 metres

LIA ditch 56

LIA ditch 64/89

LIA ditch 51

10/70
+

30/70
+

LIA ditch 48

LIA ditch 42

pit/post hole cluster
11, 13, 17, 19, 24, 26, 28

30/30
+

LIA ditch 5

Beaker burial 7

30/10
+

50/10
+

Frating Road
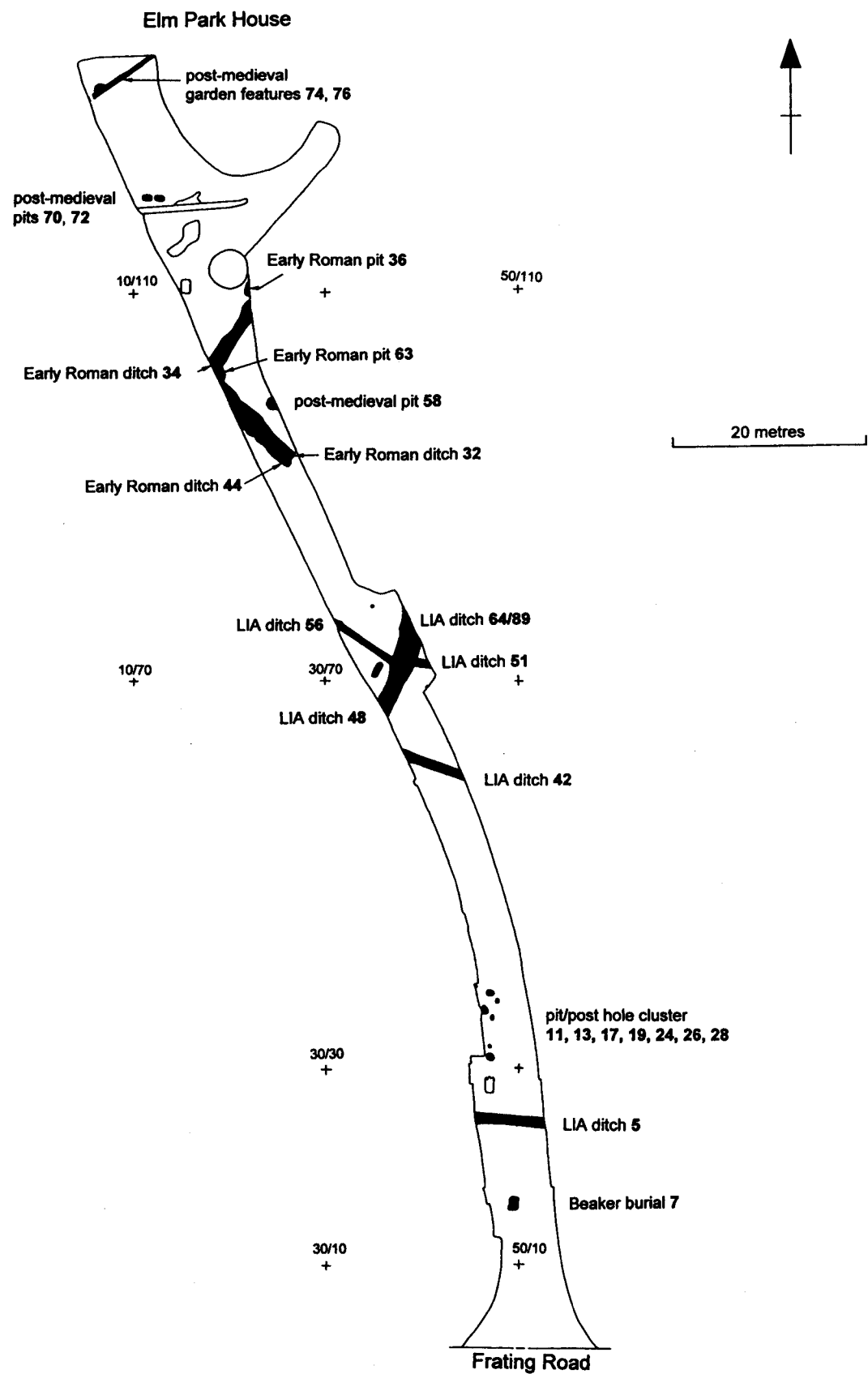
Fig. 2   Ardleigh, Elm park, site plan.

The auger survey

After the discovery of the above archaeological features, a new brief was issued specifying an auger survey to determine the depth of the buried features along the whole of the road line and to assess the damage which construction would cause to the archaeological strata. As a result of the survey it was decided that the cover loam was insufficient to protect the underlying archaeological features. Therefore preservation *in situ* was not practicable, and it was concluded that preservation by record was appropriate. A new brief for this work was issued by English Heritage and Essex County Council, and the full excavation of features on the road line was carried out.

Interpretation and discussion

Period 1 Palaeolithic
A single flint flake of possible Palaeolithic origin was recovered from the upper fill of a Late Iron Age ditch (5).

Period 2 Neolithic and Bronze Age
29 prehistoric potsherds (173 grammes) from residual contexts indicate activity on site during the Neolithic or Bronze Ages. There were no contemporary site features. The prehistoric struck flints (also residual) would fit into this general date range.

Period 3 The Beaker period: the Beaker burial
In contrast to the general impression of relatively little prehistoric activity given by the pottery and flints above, there is specific evidence of Beaker period activity in the form of a burial (Figs. 3, 4, 7).

The burial was in a rectangular pit (7), approximately 1.3m north-south and 0.95m east-west. A very thin darkish soil mark (41) was visible around all four sides of the pit, though not across its bottom. This was sampled, and examined at the University of East Anglia, but the results simply confirmed its charcoally nature. The best interpretation is that the pit had an organic lining, which had decayed or been burnt *in situ*. As the lining appears to have been put around the sides of the pit but not on its bottom, we can presumably rule out the possibility that it was a cloth. The presence of so much charcoal also seems to rule out a turf lining. On balance, it is much more likely to have been a wooden lining.

The pit contained most of a Beaker pot lying on its side, with its mouth to the north (Figs. 4, 7). The Beaker pot had been placed against the pit lining, and (on discovery) sealed the bottom edge of the lining on the southern edge of the pit. The pot was lifted whole by Anne-Marie Bojko of Colchester Museum. Its contents were examined in Colchester Museum, without result. No other finds were
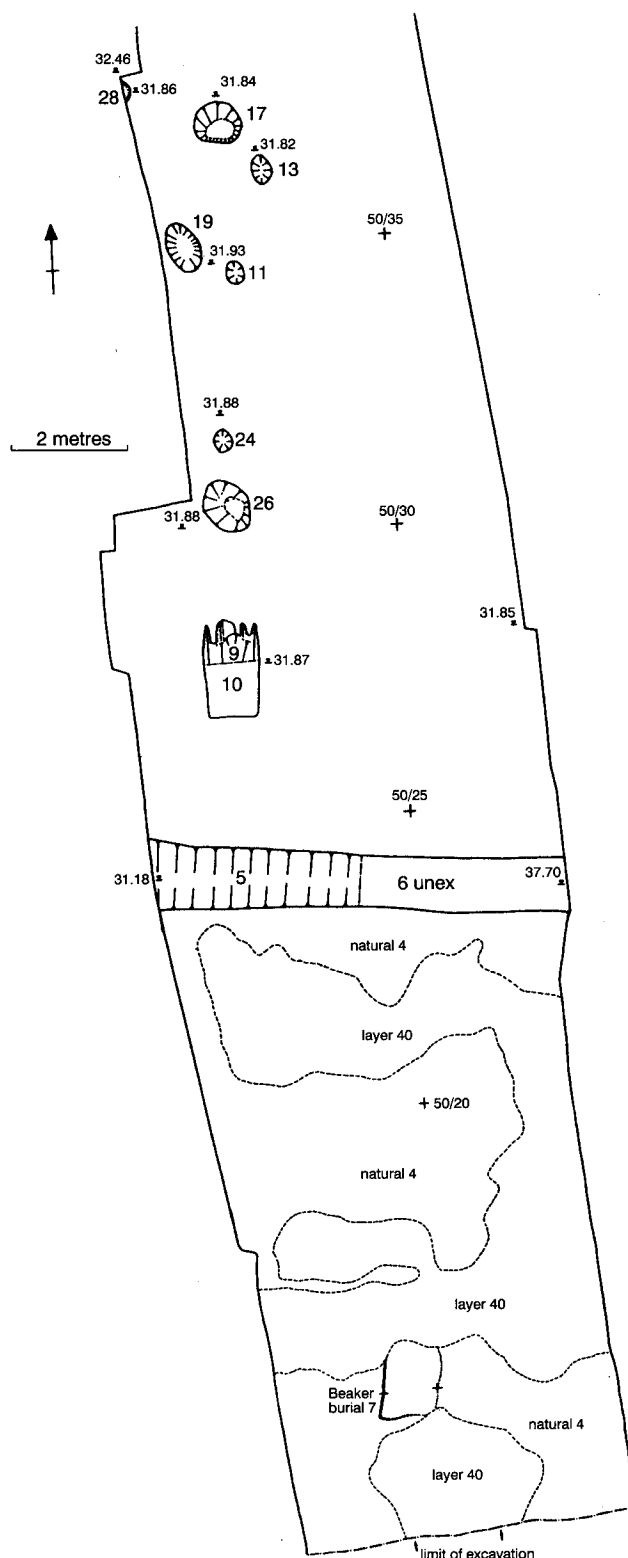
Fig. 3   Features at south end of road line.

present in the fill. However, during conservation, one waste flint flake emerged from the block of soil in which the beaker had been lifted. Its exact location is therefore not known, except that it lay within a few centimetres of the beaker. The flint is an undiagnostic Neolithic or Bronze Age waste flake, and is possibly residual in the fill of the beaker pit.
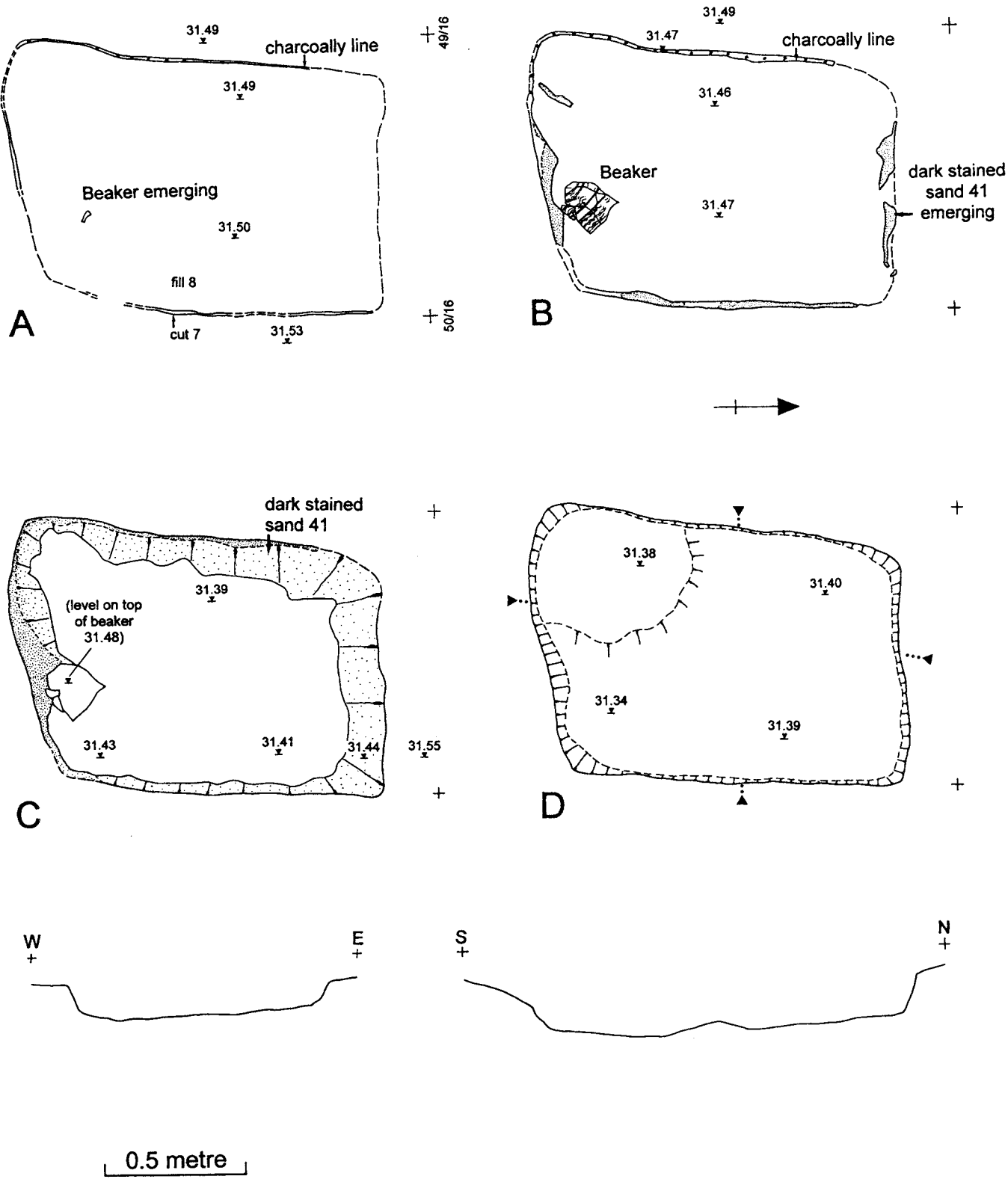
Fig. 4   Ardleigh, Elm Park, Beaker burial.

There was a patch of grey clay (40) lying around pit 7 (Fig. 3). Unfortunately, some of this had already been removed by machine before we realised there were any archaeological features on the site. However, two points are clear. First, this clay patch only existed around cut 7 - specifically, between ditch 5 and the southern limit of the excavation. Second, it sealed the edge of the backfilled burial pit 8. What was it? As it ended at a field boundary, it might be a product of Late Iron Age or Roman cultivation. Another alternative suggestion is that it was connected with the Beaker burial - and although it is too widespread to have been part of a barrow over the burial, it may have been connected with the burial ritual in some way.

The presence of burials and the large number of ring ditches in this area (Fig. 1) prompts the obvious question - was this burial inside a ring ditch? There was no sign of a ring ditch anywhere near the burial (or anywhere on site). The nearest feature was the large, straight, and undoubtedly Late Iron Age/Roman ditch (5) some 10m north of the burial.

Though the Beaker burial is isolated on this site, it is associated with a large group of Bronze Age ring ditches and burials, and lies towards the northern end of the cemetery as defined by Brown (1999).

Period 4 The Late Iron Age (later 1st century BC-early 1st century AD)
Ditches 5, 42, 48 (Figs. 3, 5) Ditch 5 crossed the excavation site almost east-west. It was 0.9 m wide and 0.5m deep and had a gentle, U-shaped profile. The two excavated fills 6 (top) and 23 (bottom) produced Late Iron Age material. The lower fill 23 was probably the primary rapid silting of the ditch, and 6 a more gradual infilling. The quantity of pottery, particularly in 23, must indicate reasonable proximity to domestic activity.

Ditch 42 ran north-west to south-east across the trench. It was 0.95m wide and fairly shallow at 0.3m, with a fairly rounded profile. Its fills (43, 88) produced large groups of Late Iron Age pottery.

Ditch 48, 10m north of ditch 42, had two much smaller ditches (56) and (51) running into it from the north and south respectively. It was impossible to tell which ditch cut which.

In an attempt to recover a good group of finds from the ditch fills away from possible contaminating cuts, the western end of ditch 48 was excavated first (fill 46), and this produced a good group of Late Iron Age pottery with a few Roman sherds. A similar strategy was adopted for ditches 51 and 56, and contaminant-free stretches of each were excavated (fills 52 and 57). Both produced small groups of Late Iron Age pottery. Box cuts at strategic points failed to shown the relationships between 51, 56 and 48. A similar procedure was repeated on the 48/51 junction, but again there was no clear
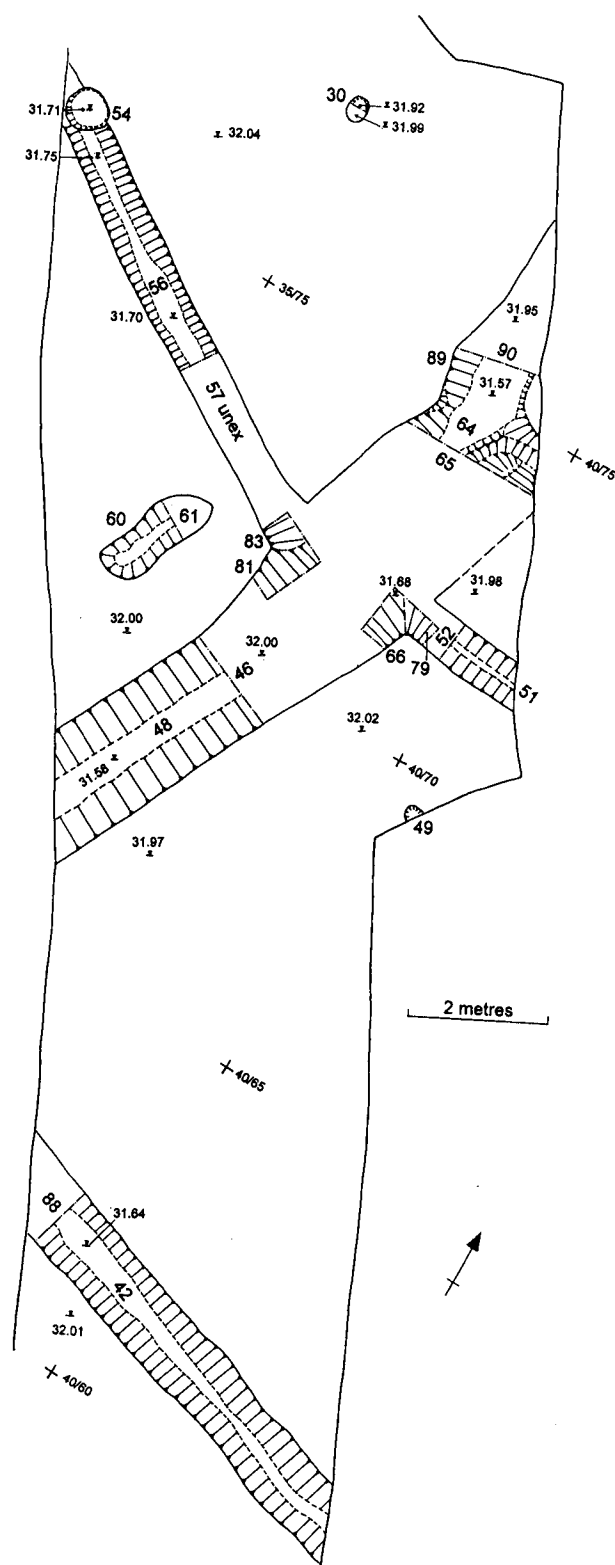
Fig. 5   Features in the centre of the road line.

indication of relationships. Fill 79 had no finds, but fill 66 had a small group of Late Iron Age material, including the larger part of a Gallo-Belgic lid (Fig. 8.14).

A box section across the bulbous north end of ditch 48 showed that it had narrowed, and was joined by another fairly narrow ditch (89). The narrow end of ditch 48 in this box section was

labelled ditch 64. There was also the impression of 64/89 turning and running east off the trench edge. Finds from 64 were a medium sized Late Iron Age group, and from 89 a small group, probably Late Iron Age. Ditch 48 shows an exact correspondence with cropmark A-A on Fig. 1 (where the cropmark plan has not been adjusted to fit the excavated ditch).

The immediate problem in interpreting these features is the significance attached to the Roman sherds in 48. If 48 is Roman then everything else in this area is Late Iron Age. The problem with this interpretation is that ditches 51 and 56 are clearly running into ditch 48. If ditch 48 now becomes a later feature, then 51 and 56 are heading into nothing, and we must invent a pre-Roman ditch on the line of 48 for 56/51 to empty into. Of course, this early ditch would need to have been completely destroyed by the later 48, because there are no indications of any earlier cuts in any of the four or five sections in which they might have been expected. This is all pushing the evidence a long way, and I am inclined to share Colin Wallace's conclusion that the Roman sherds are intrusive in ditch 48 (cf. pottery report below).

The structural or functional evidence arising from this series of interconnected ditches is interesting. No cut lines were visible between features, and all the finds are Late Iron Age. The most obvious conclusion is that all these ditches were open at the same time. As for function, the presence of 51 and 56 (smaller drains running into 48), and the presence of cut 60 to the north, show that there was probably no bank next to the ditch. This must be a series of ditches cut mainly for drainage purposes. Ditch 48 is the main drainage ditch running off downslope (it dropped by 3cm between two points on the bottom of the excavated part), and 51, 56 and 89 were smaller drains running off into it. Whether they also served as a boundary is not known. If it were also a boundary, there would need to be a hedge running alongside. There was no evidence of this.

There were three other small features in this area. First, a post hole 54 cut the northern end of ditch 56. This produced a small group of probable Late Iron Age pottery. Second, a sausage-shaped cut 60 ran parallel with and along the northern side of ditch 48. This produced the familiar small group of probable late Iron Age pottery. Third, a post hole 49 was located in section on the site edge, directly in line with a continuation of ditch 56. This post hole had no finds.

The small pits and/or post holes (Fig. 3) Lying to the north of ditch 5 there was a group of small pits or post holes: from south to north, 26, 24, 11, 19, 13, 17, and 28. The apparent linear nature of the features may be a product of the shape of the site, but also suggests that they represented the east side of a structure which otherwise lay off-site. The trench

was not quite wide enough to catch the other side of a building if it lay to the west.

There was nothing particularly noteworthy about these features. Two of them were particularly shallow - 13 was only 13cm deep, while 24 only just survived at 0.5cm deep. Only two of these contexts produced any datable material. The lower fill of 19 (16) produced three sherds of Late Iron Age or Roman pottery, not closely datable. Post hole 11 produced a single sherd of Late Iron Age pottery. A possible explanation for this group of features, then, is that they represented a Late Iron Age structure probably contemporary with the Late Iron Age field ditch (5) which lay to the south.

Late Iron Age interpretation This period marks the first intensive activity on site. Three or possibly four ditches (5, 42, 46/64/89) were cut across the landscape, separating it into blocks of something over 30 metres width north-south. These were not large defensive ditches, none being over 0.5m deep from site level, and were undoubtedly field boundaries and/or drainage ditches.

A cluster of post holes or small pits lying between ditches 5 and 42 is the only potential structure on this site. This appears to have been a rectangular, post-built structure lying mainly off the west edge of the site. Three associated sherds suggest contemporaneity with the Late Iron Age ditches.

Apart from the above structure, is there any hint of settlement location? The distribution of some of the site finds should be instructive here. There were large quantities of briquetage from the ditches 42 and 48 in the centre of the site. One could argue that these pieces are not indicative of their primary use as salt containers, but enjoying a second life as cattle licks, and that they therefore show the location of cattle as much as people. There were also fragments of baked clay from the same ditches. Some of these could be fragments of kiln superstructures or domestic house walls. There was also smithing debris from the same part of the site, and this is a clear indicator of the nearness of human activity. Perhaps the strongest indication of the location of the settlements is given by rubbish disposal. If one accepts that domestic rubbish was simply tipped into the nearest convenient hole, then the relative weights of pottery in the ditches should give a clue as to the position of any settlements or living areas. On this basis, they must have been close to the north end of the road line because there is proportionally much more pottery in the ditches than there is anywhere else, and the density of finds drops off gradually the farther one goes to the south. The balance of the finds evidence points strongly to settlement generally around the central and northern part of the site. To push the evidence even further, one could argue that the density of pottery points to living areas near the north end of the road line, and the smithing debris and baked clay (kiln

fragments?) points to light industrial activity near the centre of the site.

The environmental evidence fills the picture out a little. Samples from Late Iron Age contexts contained weeds such as Brome, and also emmer and spelt wheat, showing that wheat was grown nearby.

The pottery from this period is predominantly locally-made grog-tempered wares. Kilns are known from the Ardleigh area, and one is known 400m south of the site (Couchman & Savory 1983, fig. 2, gazetteer M). A high proportion of *Camulodunum*-type wares shows that there were trading or market links with nearby Colchester/*Camulodunum*.

Period 5 Early Roman (mid-1st century to early 2nd century)

There is a cluster of early Roman features centred on ditches 44, 32, 34 and pit 63 (Fig. 6). Initially, two broad ditches were apparent, 34 running east to west, and 32, running north to south - perhaps the corner of an enclosure. Initial cleaning showed that it was in fact a fairly complex group. Ditch 32 became two ditches, 32/44, and there were several pits to complicate it further - 63 in the angle of 34/32, and 36 on the eastern end of ditch 34. Three sections established that 44 was later, and cut an earlier feature 38, which was itself cut by a post hole 97. On the north edge of 32, a similar shallow cut (99) was cut by 32, and the end of 32 was also cut by another post hole 94.

Both pit 36 and ditch 34 had good groups of early Roman pottery. A piece of clay pipe and coal from the upper fill of 36 are regarded as intrusive.

The evidence of cut lines allows a sequence to be established. The first cuts to be made were ditch 34 and deep pit 36. Both have good early Roman groups of pottery, and define the date of the start of this sequence. Ditch 34 was 1.3m deep and 1.5m wide. What happened to the spoil dug from the ditch? The fact that a deep pit (36) was dug on its north side very soon afterwards argues against there having been a bank of soil there, and the general impression that settlement was focused at the north end of the trench would make a nonsense of a bank on the south side (defending, as it were, the wrong side). The most reasonable explanation must be that there was no bank. The very considerable quantity of potsherds found in the ditch must only have been put in the ditch after it went out of use. Several mechanisms suggest themselves. The presence of pit 36 shows that this area was a refuse dumping area, and deposition of the material in the ditch may have been part of some on-going rubbish-dumping process, of which the digging of pit 36 was a part.

The next event was the digging of the other deep pit 63 across the end of ditch 34. The fills of 63 produced good early Roman groups of pottery. This fits in with the pattern of rubbish dumping described above.
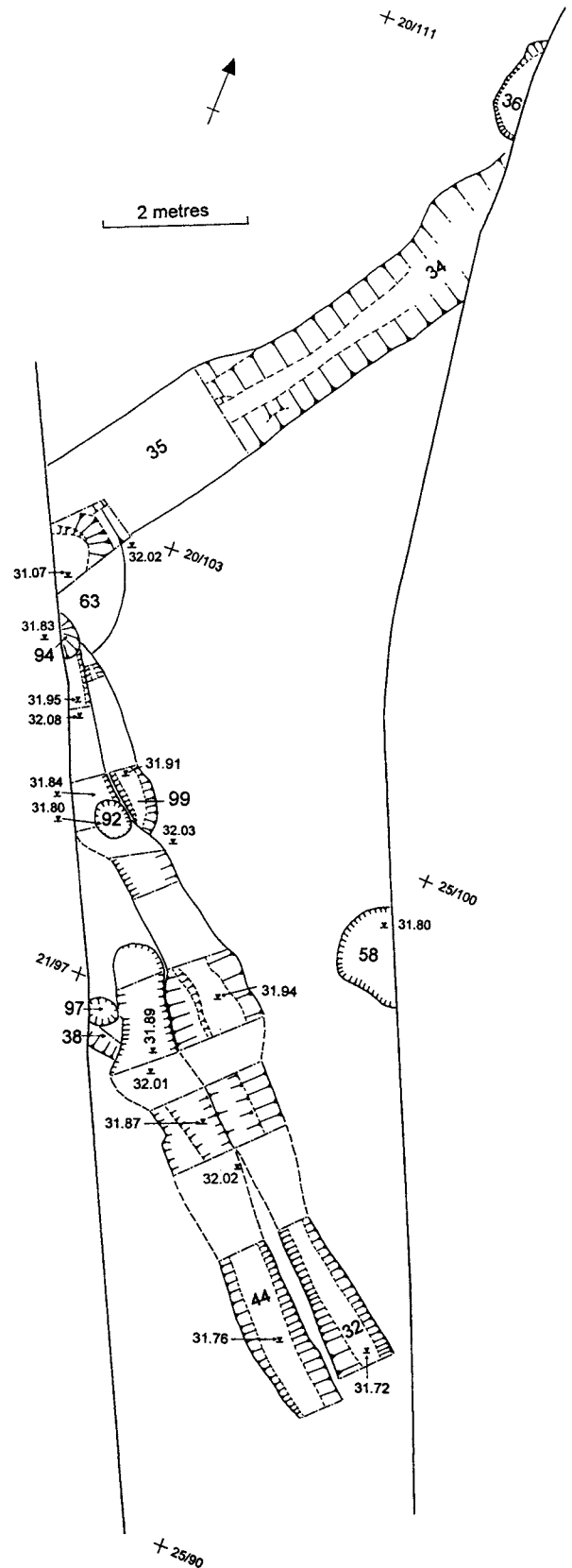
Fig. 6   Features at north end of road line.

The next phase saw the digging of two shallow cuts, 38 and 99, 25cm and 12cm deep respectively (the former largely truncated by the later cut 44). These shallow cuts look like drainage gullies to run away surface water. They were soon added to by the cutting of the slightly longer 32 (25cm deep). There were no finds in 38 or in 99, and the Late Iron Age finds in 32 must be slightly residual.

The final event in the sequence was the digging of the new drainage ditch 44, along the north edge of (the presumably defunct) 32. The fills of 44 contain an early Roman group of pottery. There are also two post holes, 94 and 97, which are probably contemporary with 44. It is easy to envisage these as part of a fence line continuing the line of 44 (and 32). There were no finds from 94 but there was one ?Late Iron Age sherd from 97 which must be residual in this context.

Also in this area was a deep pit, 58. Though it contained numerically more (twelve) Roman finds than anything else, post-medieval pottery, peg tile and coal identify this as a post-medieval feature.

Early Roman interpretation One of the unfortunate side-effects of splitting a site up into periods based on the ceramic evidence is that it gives the impression of a fixed block of time coming to an end, to be followed by something quite different. The reverse is true here, where the Late Iron Age period undoubtedly runs into the early Roman period.

There is no evidence of the Late Iron Age ditches being cleaned out or recut in the Roman period. Presumably they were left quietly to fill up. The fact that they have no Roman finds in them should indicate that they actually filled up fairly quickly, or were perhaps deliberately filled in early in the Roman period. The bronze brooch (Fig. 9) found in the fill of Late Iron Age ditch 48 dates from AD 50-70, precisely the time when the old field systems seem to have been abandoned.

The centre of settlement activity seems to have drifted north, and the only Roman cut features are the complex of drains and pits towards the north end of the site (32, 34, 38, 44, 99). The number of pits cut at this end of the site (63, 36), and the weight of pottery in the ditches, must point to the proximity of settlement. No buildings were evident, unless the three post holes (92, 94, 97) are parts of something other than a fence.

In the Roman period, the sherd size of discarded domestic pottery is very much smaller than it was in the Iron Age. A different process seems to be at work. In the Iron Age phases of this site, one could make a reasonable case that the potsherds in the ditches simply found their way in by accident. By contrast, the Roman sherds are smaller and more broken up, and might well have been dumped somewhere else first (in a midden?) before being

shifted into a heap near the ditch in which they eventually came to rest.

It is true that there are finds of baked clay and briquetage from around the site, but on a slightly lesser scale than in the Iron Age. The light industrial activities which produced these finds seem to have become slightly less intensive, but did not disappear completely.

The emphasis of the (admittedly slender) environmental evidence is slightly different to that in the Iron Age. The emmer and spelt wheat present in the Iron Age are joined in the Roman period by barley, and the range of weeds expands considerably to include eyebright, goose grass and dock. It is therefore reasonable to see an increase in the diversity of crops grown locally.

The end of the Iron Age and Roman site
There is no evidence, ceramic or otherwise, to suggest that the site lasted beyond the mid-second century. In that respect, it is similar in date to the material excavated from the Elm Park kitchen garden (Holbert and Erith 1965). There was to be no more activity here until post-medieval times. Between the mid-second century and then, this is another site which swirled out of the mainstream and into one of history's backwaters.

Period 6 Post-medieval and modern (Fig. 2)
There were a number of post-medieval and modern features. Apart from the very recent test pit (9), all these features are close to and certainly connected with Elm Park House. They included a garden bed, a drain, a concrete footing/drain, and a pair of small pits.

The Finds

Prehistoric pottery
Nigel Brown
In addition to a near complete Beaker, the excavations produced a very small quantity of prehistoric pottery - 29 sherds, weighing 173 grammes. This material has been recorded using a system devised for prehistoric pottery in Essex (details in archive). All of this pottery occurred residually in later contexts with the exception of a single sherd from 02/03 (the interface between topsoil and cover loam). This piece (Fig. 7) is a thickened everted rim with light stroke pattern on the interior and horizontal ripple burnish on the exterior. The rim and decoration are appropriate to the early Neolithic Mildenhall style (Longworth 1960), and may be paralleled locally by material from Brightlingsea (Brown, in prep), and is an addition to the small body of Neolithic evidence already known from Ardleigh (Brown 1999). The remaining sherds are not closely datable but are

likely to be Neolithic or Bronze Age, although it should be noted that none necessarily derive from Ardleigh urns, which have been recovered in great numbers immediately to the south (Erith and Longworth 1960, Brown 1999).

The Beaker (Fig. 7.2), probably complete when deposited, has a small part of the rim missing (despite a scrupulous search of the soil block in which the Beaker was lifted). The fabric is tempered with small crushed fragments of burnt flint; and occasional quartz, and one or two pieces of grog are also visible. There are some small angular voids particularly on the interior. The rim is flat-topped, the base slightly concave giving a broad flat footring effect. Decoration is by square toothed comb impressions, and there are three blank zones, one below the rim, one at the waist, and one towards the bottom of the pot. Double rows of horizontal impressions border two broad zones, on neck and girth, of zigzag impressions, alternately reserved and infilled with vertical impressions. At the bottom of the pot a further double row of horizontal impressions is linked to the base by infilled pendant

triangles. This strongly zonal decorative scheme is characteristic of Clarke's (1970) style 2, and strongly zonal decoration is typical of Case's (1993) Group E Beakers characteristic of East Anglia and south-east England. The vessel form would be appropriate to Clarke's (1970) shape VIII. The Beakers used by Lanting and van der Waals (1972, fig. 2) to illustrate steps 4 and 5 of their East Anglian area provide most of the local parallels for the form of the Elm Park pot. This pot is a marked contrast in form to the Beaker recovered at Ardleigh in 1944, a few hundred metres south of Elm Park. Such contrasts are also apparent in Beakers recovered in fairly close proximity at Langford Road and Elms Farm, Heybridge. It is hoped that publication of the finds from the latter site will enable discussion of this emerging pattern.

The Late Iron Age and Roman pottery
Colin Wallace

Introduction
There were 2,866 sherds (27,068 grammes) of pottery from 34 contexts (including five unstratified or modern). There were four broad date-ranges for the pottery: residual prehistoric; Late Iron Age (later 1st century BC-mid 1st century AD), which accounted for more than half of the better-dated contexts; early Roman (later 1st century-early 2nd century AD); and some post-medieval sherds.

The pottery in context
An archive report considers all the pottery as dating evidence, classified using the system current for all Essex County Council sites (see Going 1987, 3-54), supplemented by references to Camulodunum (Hawkes and Hull 1947) for the grog-tempered wares. For the purposes of this report, only the better-dated or problematic features are listed here. The fabrics are listed in Table 1 with Going number codes. The alpha-numeric form codes used below are also derived from Going 1987.

The illustrated pottery
The intention here is to provide an overview of the material, drawing on the good Late Iron Age (nos. 1-14) and early Roman (nos. 15 -23) contexts.

0   100mm
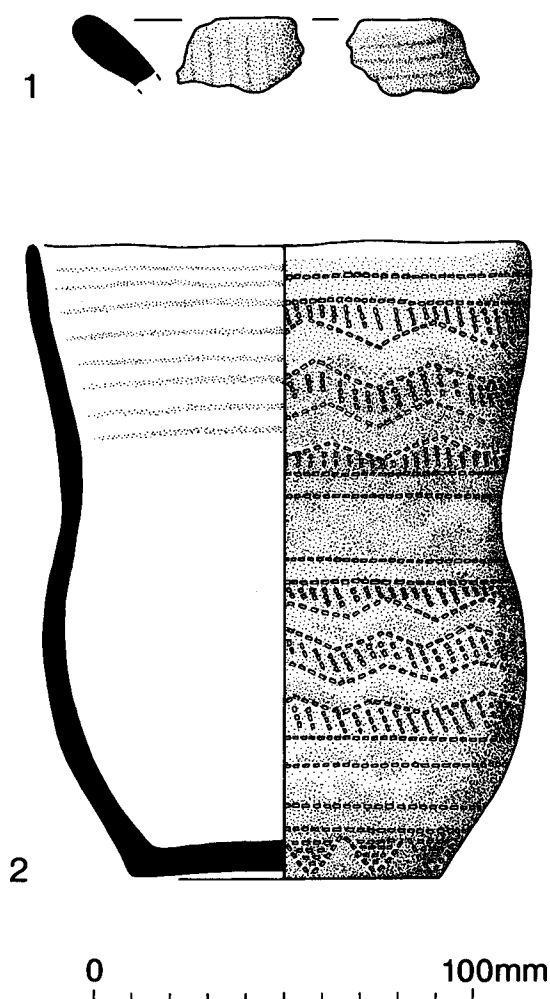
Fig. 7   Prehistoric pottery.

Table 1. Pottery fabrics (common names and codes as in Going 1987, with additions)

Common Name	Code
Terra Nigra	63
Misc. white-slipped wares	15
'Silty Wares'	68
Misc. oxidised wares	21
White Fine Sand	69
White Fine	70
Unspecified buff wares	31
Fine grey wares	39
Storage jar fabrics	44
Romanising grey wares	45
Sandy grey wares	47
Early shell-tempered ware	50
Grog-tempered fabrics	53
Salazon amphoras	86
Early amphora fabric	57
Post-Medieval	—

Ditch 5

23 Misc. pottery: beaker (**68**); fabrics **69** and **70**.

6 Misc. pottery: Cam 119 (**53**), storage jar (**53**), Cam 113 base (**69**); burnt fabric **70**; residual prehistoric.

Both upper fill 6 and lower fill 23 produced Late Iron Age sherds; curiously there were none of the common grog-tempered wares in the lower fill.

Reliability: 23 a medium-sized context, 6 small-sized.

Post hole 11

12 Late Iron Age body sherd.

Ditch 32

33 Misc. pottery: Cam 204 (**53**), Cam 211/212 (**53**), Cam 263 (**53**), storage jar (**53**), red-surfaced (**53**).

A good Late Iron Age group, residual in what must be (on stratigraphic grounds) a Roman feature.

Reliability: medium-sized context.

Ditch 34

35 Misc. pottery: bowls C12 (**39**), C16(**47**); jars G20 (**45**), G23, G24 (**47**), large and small G40 (**45**), G- (**39**); fabrics **15** and **44**.

By contrast, an early Roman group of the later 1st/early 2nd century, with residual Late Iron Age body sherds (fabrics **53**, **68** and **69**).

Reliability: large-sized context.

Pit 36

37 Misc. pottery: bowls C12 (**21**), C16 (**47**); jar G23/24 (**47**); fabric **31**.

36 Misc. pottery: jars G20 (**47**), G23/24 (**47**), G- (**45**); lid K6 (**47**); fabric **39**.

Early Roman group. There were only three sherds of grog-tempered wares in lower fill 62. Context 36 also contained some intrusive clay pipe.

Reliability: 36 and 37 large-sized contexts.

Ditch 42

88 Misc. pottery: Cam 218, Cam 229, Cam 255 and Cam 259 (all **53**).

43 Misc. pottery: Cam 117, Cam 211-type, Cam 218 and storage jar (all **53**).

Late Iron Age group.

Reliability: both medium-sized contexts.

Ditch 44

45 Misc. pottery: main vessels, Thompson B3-8 (Cam 231/232) and a large Cam 119 (both **53**); also, Cam 234, pedestal vessel, lid (same vessel as in context 67), necked jars, flask, rouletted jar and storage jar (all **53**) ; bodysherd, *salazon* amphora (**86**; kindly identified by Dr Paul Sealey).

The Late Iron Age pottery from upper fill 45 comprised two main vessels, plus sherds from half-a-dozen others. There was no pottery from lower fill 47.

Ditch 48

46 Misc. pottery: bowl C16 (**47**, burnt); jars G9-type with footring (**45**), G18-type (**45**), necked jar, coarse jars and storage jar (all **53**).

It is not clear why there should be such a difference between the pottery from ditch 48 and that from 64 and 66, when they would appear on plan to be the same feature: if some of the pottery in 46 is regarded as intrusive, it would fit better as another Late Iron Age context. Certainly most of the sherds are grog-tempered.

Reliability: large-sized context.

Ditch 56

57 Misc. pottery: Cam 229-type, storage jar (both **53**)

Probably Late Iron Age.

Reliability: small-sized context.

Pit 63

68 Misc. pottery: jars G16.2/Cam 218 (**45**), Cam 218 (**53**), storage jar (**53**); red-surfaced fabric **53**.

69 Misc. pottery: jars G- (**45, 47**); Cam 218, Cam 255 and storage jar (all **53**).

102 Misc. pottery: jar G20-type (**45**); beaker H1 (**45**); fabric **53**.

There was no pottery in lower fill 91. The pottery from finds group 102 (= all three fills) is the same as that of the individual fills. The interpretation adopted here is that the Late Iron Age sherds are residual in early Roman contexts. That is to say, the fills of pit 63 were probably derived from the backfilled ditches 32 and 34. Thus it can be interpreted as an early Roman feature.

Reliability: medium-sized (69,102) and small-sized (68) contexts.
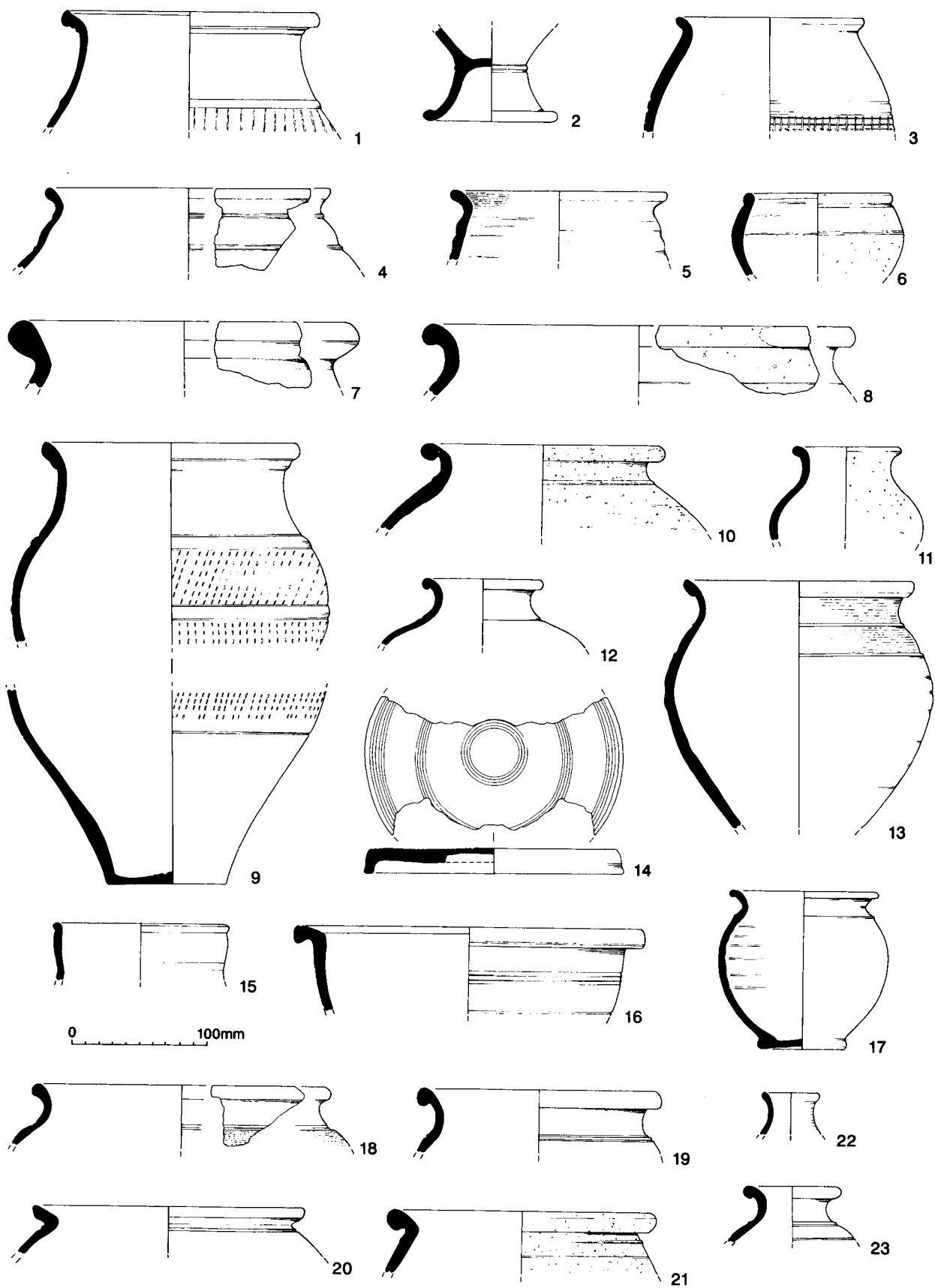
Fig. 8   Late Iron Age and Roman pottery.

Discussion

The early Roman contexts (35, 36, 37), though large in terms of sherds, contain much more fragmentary material than the good Late Iron Age ones, which ought to point to different disposal practices in these different periods.

The ?local grog-tempered pottery was accompanied by a very small number of imported sherds, including a body sherd in a fine powdery buff fabric probably from an Iberian salazon amphora (Sealey 1985, 77-85). The other imported vessels were represented by sherds from single examples of Terra Nigra (fabric 63) and North Gaulish/Lower Rhineland White Fine (fabric 70) vessels and one or two North Gaulish Cam 113 butt-beakers (fabric 69).

Aside from some red-surfaced grog-tempered pottery, there were a few sherds of oxidised wares that were not imports: the so-called 'Silty Wares' (fabric 68). These are representative of a class of regional Romanised pottery made using introduced techniques of clay preparation, pottery making and firing rather than Late Iron Age ones. These were first recognised in Herts., Beds. and Northants. (e.g.

Stead and Rigby 1989, 192-97) and are now being recorded in Essex (Stansted site DFS; Woodside, Horsley, in Medlycott 1994, 40-41; and several sites on the Lower Blackwater, including Elms Farm). There was pottery-making in the 'romanising' (*sensu* Hawkes and Hull 1947, 206) black-surfaced tradition at Ardleigh from the mid 1st to the early 2nd century AD (unpublished in detail, see Swan 1984, gazetteer pp. 268-69). Necked jars, bowl-jars and platters were made there, and also large narrow-mouthed jars (Cam 232) and carinated reed-rimmed bowls (Cam 246, pers. comm. C. J. Going). Ardleigh kiln products probably account for all the fabric 45 vessels found here in early Roman contexts, given that this is an Ardleigh site; elsewhere in Essex, similar wares are given a 'Colchester/Ardleigh region' origin (e.g. Going 1987, 106).

The Ardleigh area is well-known for its Late Iron Age and early Roman material; in her Gazetteer, Thompson surveyed the cremation burials and other groups now in Colchester Museum (1982, 582-85). The material from the present site can be readily compared with the useful group of Late Iron Age pottery salvaged from Elm Park House itself

Table 2. Catalogue of illustrated pottery (Fig. 8)

Fig No.	Context + Feature	Fabric	Form
1.	6; F5	53	Cam 119.
2.	33; F32	53	Cam 204.
3.	43; F42	53	Cam 117.
4.	88; F42	53	Cam 218 (small).
5.	88; F42	53	Cam 229.
6.	88; F42	53	Cam 259.
7.	88; F42	53	storage jar.
8.	88; F42	53	storage jar, necked form.
9.	45; F44	53	Cam 119 (very large).
10.	45; F44	53	Cam 231/232. Despite the large number of sherds present, extreme difficulty was experienced in reconstructing more than the upper profile of pot 10; there may even have been two pots present sharing the same coarse grog-tempered fabric.
11.	45; F44	53	narrow-necked flask/bottle.
12.	45; F44	53	Cam 234.
13.	69; F63	53	Cam 218.
14.	67; F66 45; F44	53	new lid form, cf. example from Ardleigh site C4 (Thompson 1982, fig 3.1227: in a different fabric). Sherds from the lid found also in F44. Patterns of concentric circles on top surface.
15.	35; F34	39	C12.
16.	46; F48	47	C16 (burnt).
17.	46; F48	45	Neckless everted-rim jar, c.f. Going G9 but with footring base.
18.	35; F34	45	G20.
19.	36; F36	47	G20.
20.	35; F34	47	G23.
21.	36; F36	47	G24.
22.	35; F34	45	G40 (small).
23.	35; F34	45	G40 (large).

(Thompson and Barford 1986) and the other pottery in the 'cauldron pit' group nearby (Erith and Holbert 1974; Sealey 1999). There was no pottery evidence for ritual deposits on the present site; it would be hard to make the two smashed pots from the upper fill of ditch 44 into a convincing closure deposit, when ditch fills at Ardleigh are notoriously pottery-rich (e.g. Holbert and Erith 1965, 17). The pottery from the early Roman contexts on the present site is similar in its range of forms and fabrics to that from the ditch excavated by the Colchester Archaeological Group in the kitchen garden at Elm Park (Holbert and Erith 1965), though samian ware was found there but not in the 1996 excavation.

The metal small finds

Nina Crummy

Fig. 9. SF 3 (46). Complete copper-alloy Colchester B Derivative brooch, length 42.5 mm. On this two-piece (Fawn *et al.* 1990, 11) brooch the spring is secured by passing the external chord and the axial bar through a lug with two perforations behind the head. The side-wings are plain and semi-cylindrical. The forward hook of the Colchester brooch can be seen in the crest which runs on a flat ridge down the head to the bow. The ridge continues down the bow, flanked by cavetto mouldings, and is decorated with a scribed zigzag line. The catchplate is pierced by one round and one triangular hole, and is grooved to take the pin. The main body of the brooch has a distinctive glossy grey-green patina noted by Hull on several Nauheim derivative brooches (Crummy 1983, 8) and which also occurs on two Colchester Derivatives at East Malling, Kent (Canterbury Archaeological Trust, BHEM96, Finds 56 & 84). The wire used for the spring/pin and axial bar is of a

1 cm
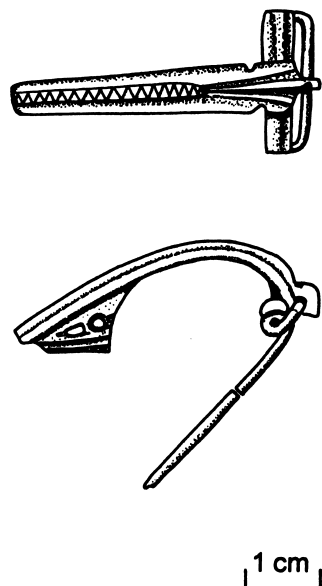
Fig. 9   Roman brooch.

different alloy, presumably bronze, which has the required 'springiness' necessary. A Colchester B Derivative brooch from Winchester had a pin of bronze and a bow of leaded bronze (Crummy *et al.* forthcoming, sf VR 3232). The native Colchester B Derivatives date from AD 50-70.

SF 5 (35).   Iron double-spiked loop with both ends broken off. Surviving length 40 mm.

SF 2 (43).   Iron shaft fragment, length 25 mm, probably from a nail.

SF 4 (45).   Iron nail, bent double and in fragments. Approximate length 55 mm.

SF 6 (33).   Large piece of crumpled sheet iron. Maximum dimensions 126 by 115 mm. X-radiography shows what may be a corner cut at an acute angle, typical of an offcut. The recovery of iron slag and furnace lining from the site suggests that this sheet metal is part of the same industry.

Briquetage

Nina Crummy

Twelve contexts produced 33 fragments of salt briquetage, weighing 672g in total. The split between periods was as follows: Late Iron Age contexts 19 frags (537g); Roman 9 fragments (71g); post-medieval 3 fragments (54g); undated 1 fragment (10g). Many of the fragments were small and abraded, but large sherds were produced from Late Iron Age contexts 46, 88, and 90, which between them accounted for 66% of the assemblage by weight. In thickness they conform to the average of 19mm established for north-east Essex Type A briquetage (Fawn *et al.* 1990, 11).

All the pieces of any size are flat, and come from either rectangular vessels, or tile-like slabs. One piece retained a short length of a straight edge with a irregular, very slight, central flange. The height either side of the flange varied, being lower on the inner side than the outer. This is probably just the result of knife-trimming the rim, rather than a deliberate flange for seating a lid (Fawn *et al.* 1990, 11).

Earlier excavations at Elm Park produced six sherds of briquetage (Barford 1990, 79). The presence of this material on an inland site has been discussed by Barford, who concluded that broken vessel sherds may have been acquired by farmers as salt licks for their stock.

Baked clay fragments

Nina Crummy

A total of 57 fragments of baked clay, weighing 582g, were recovered from 12 contexts. The period split was as follows: Late Iron Age, 32 fragments (457g); Roman, 14 fragments (57g); undated, 11 fragments (68g). Two contexts, 46 and 55, contained nearly two-thirds of the total assemblage. All the pieces were in a sandy fabric with small flint grit

inclusions, typical of structural daub in this part of Essex. All are small and abraded, and eight have been at least partially burnt. Only one had a definite surface. Ten have hollow impressions consistent with the size of wooden wattles and/or stakes, but the degree of abrasion in some cases is very great, suggesting that some impressions may be post-depositional. It is possible that at least some of this material derives from furnace superstructure rather than from the walls of buildings.

Macrobotanical and other remains

V. Fryer and P. Murphy

Eight samples were submitted for assessment: four samples (samples 3-6) from a charcoal-rich soil surrounding a Beaker burial (context 7) and four from the Late Iron Age or Early Roman fills of pits and ditches (sample 7, context 59: sample 10, context 68: sample 11, context 46: and sample 13, context 88). Sample 7, context 59, was later dated to the post-medieval period, and has been removed from Table 4.

The samples were processed by manual flotation/washover, collecting the flots in a 500 micron mesh sieve. The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. The dried flots were scanned under a binocular microscope at low power and the macrobotanical and other remains noted are listed on Tables 3 and 4. Plant macrofossils were preserved by charring. Modern contaminants including fibrous and woody roots, seeds/fruits of weed taxa, seeds of *Vitis vinifera* (grape), stem and leaf fragments, arthropods and land molluscs were present in all samples.

Table 3. Macrobotanical and other remains from the Beaker burial.

Sample No.	3	4	5	6
Context No	41	41	41	41
Charcoal	+++	++	+++	+++
Mineralised concretions	+			
Sample volume (litres)	0.5	0.1	0.1	0.2
% flot sorted	100	100	100	100

With the exception of common or abundant charcoal fragments, the samples from the Beaker burial contained no plant macrofossils. The charcoal from sample 3 was largely over 5mm in size and fragments of diffuse porous charcoal were present. Sample 3 also contained a few fragments of indeterminate mineral concretion. No other material was noted.

The assemblage from sample 7 from post-medieval pit 58 consisted largely of probable

industrial residues including slag, vitrified material and small coal fragments. A single indeterminate cereal grain was also noted.

Table 4. Macrobotanical and other remains from Late Iron Age and early Roman features

Sample No.	10	11	13
Context No.	68	46	88
HERBS			
Bromus sp.			+
Chenopodiaceae indet.	+		
Euphrasia/Odontites sp.	+cf		
Galium sp.	+		
Poaceae indet.	+		
Rumex sp.	+		
Stellaria sp.	+		
TREES/SHRUBS			
Corylus avellana L.	+cf		+
CEREALS			
Avena sp. (awn)	+		
Cereal indet. (caryopses)	++		
Hordeum sp. (caryopses)	+		
Triticum sp. (glume bases)		+	+
(spikelet bases)	+		
T. dicoccum Schubl. (glume bases)	+		+cf
T. spelta L. (glume bases)		+	
OTHER PLANT MACROFOSSILS			
Charcoal	+++	+++	+++
Charred root/rhizome/stem	++	+	
Indet. buds	+		
Indet. culm nodes	+		
Indet. inflorescence frags.	+		
OTHER			
Bone	++b	+b	+b
Black porous 'cokey' material	+	+	+
Black tarry material	+		+
Fish bone	+b		+b
Metallic globules			+
Slag		+	+
Small coal frags	+	+	+
Vitrified material	+	+	
Sample volume (litres)	8.5	6ss	7
% flot sorted	100	100	100

Key to table   **Density of materials**

b = burnt   +   = 1 - 10 frags/specimens

ss = sub sample   ++   = 10 - 100

                      +++ = 100+

Samples 10 (early Roman pit 63), 11 (Late Iron Age ditch 48), and 13 (Late Iron Age ditch 42) contained a higher density of charred plant macrofossils. Cereal grains and/or chaff were present in all three samples and included an awn fragment of *Avena* sp. (oat), grains of *Hordeum* sp. (barley) and *Triticum* sp. (wheat), and chaff of *T. Dicoccum* (emmer wheat) and *T. spelta* (spelt wheat). Preservation was poor, with severe puffing and

distortion of the grains and fragmentation of the chaff. Seeds/fruits of common segetal weeds were also present at a low density and included *Bromus* sp. (brome), *Euphrasia/Odontites* sp. (eyebright/red bartsia), *Gallium sp.* (goose-grass), indeterminate grasses, *Rumex sp.* (dock) and *Stellaria* sp. (?chickweed). Other plant macrofossils included nutshell fragments of *Corylus avellana* (hazel), indeterminate buds, *Poaceae* (grass/cereal) culm nodes and charred root, rhizome or stem fragments.

Other materials included burnt bone and fish bone, further possible industrial residues and black porous 'cokey' material which is possibly the residue of the combustion of organic material at high temperature.

The assemblages from samples 10, 11, and 13 appear to represent a mixture of refuse including cereal remains and possible industrial residues, but the density of material is very low, and there was no realistic potential for further analysis.

Smithing debris

Justine Bayley
A sample of smithing debris (2.3 kg), was recovered from Late Iron Age ditch fills at Elm Park. It consisted of fragments of hearth bottoms and parts of the baked clay sides of smithing hearths which had broken away when the hearth bottoms were removed from the smithing hearth. Some of the wall fragments seem to have broken off just below the position of the tuyère hole. This smithing debris is in keeping with the levels of iron-working one would expect on a rural site of this period, though it is not suggestive of any large-scale output.

Prehistoric flints

Philip Crummy
This small assemblage of 18 utilised flints included flake blades, a probable burnt core, two shattered burnt nodules, and waste flakes, one of which shows very delicate knapping. In addition, there is a slight possibility that one fragment of rolled flint may be Palaeolithic. Details in archive.

Other finds

There are details in the archive report of small quantities of stone, tile, clay tobacco pipe, metalwork, fuel, shell, miscellaneous modern or natural finds (by Nina Crummy), and animal bone (by Alec Wade).

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The Late Bronze Age enclosure at Springfield Lyons in its landscape context

by N. Brown

Each states the law and fact and face o' the thing
Just as he'd have them, finds what he thinks fit,
Is blind to what missuits him, just records
What makes his case out, quite ignores the rest.
. . . . Such a scribe
You pay and praise for putting life in stones,
Fire into fog, making the past your world.

(From *Mr Sludge the Medium*,
by Robert Browning)

This paper considers the major Late Bronze Age circular enclosure at Springfield Lyons, north-east of Chelmsford, in its landscape setting, and how this location was used and reused over many millennia. Five aspects are briefly addressed: the location with regard to a large part of central Essex, the topography of the enclosure's immediate setting, the site in relation to earlier human uses of the landscape, its position in the contemporary, Late Bronze Age, landscape, and finally the way in which the surviving remains of the Bronze Age enclosure affected later occupation.

Topography

Springfield Lyons lies within the central Essex river system of the Chelmer Valley/Blackwater Estuary. The complex geography of Essex has had a profound impact on human land use and has helped to produce a landscape of great variety; this has been described and discussed in some detail recently (Green 1999; Hunter 1999a) and only the main points pertinent to the present article will be outlined here.

It is possible to reduce this landscape complexity to three broad zones, each capable of numerous sub-divisions (Hunter 1999b). Moving from the north and west to the south and east these comprise the Essex Till, an extensive deposit of chalky Boulder Clay forming a relatively high dissected plateau of heavy but very fertile clay soils. This gives way to a central belt of sands and gravels, a complex combination of terrace deposits and glacial outwash. Beyond this lies the broad coastal zone of extensive tracts of London Clay and gravel terraces with salt marsh fringing the creeks and estuaries.

The Chelmer valley/Blackwater estuary provides a potential routeway linking these diverse zones together (Brown 1997). The Chelmer and its major tributary the Can drain the Boulder Clay plateau. From their confluence at the centre of modern Chelmsford, the Chelmer flows east through a valley cut through sands and gravels with a relatively narrow alluvium-covered floodplain. Just west of Maldon, the river is joined by the Blackwater; a short distance to the east they widen into the broad expanse of the Blackwater Estuary, which is fringed with salt marsh. This part of the river system has been much affected by a rise in sea level since the end of the last glacial stage around 10,000 years ago. This has been briefly outlined (Murphy and Brown 1999) and fully described elsewhere (Wilkinson and Murphy 1995). For much of the Mesolithic, what is now the Blackwater Estuary must have been dry land, some distance from the sea. By the Neolithic, whilst the present day intertidal mudflats of the Blackwater estuary remained dry land, estuarine conditions were close at hand. As a rough guide it has been suggested that the limit of the high tide was approximately the same as the present low tide (Wilkinson and Murphy 1995). By the Late Bronze Age the estuary had taken on much of its present form. However, the salt marshes were probably much more extensive, and without the present sea-walls, salt marsh conditions will have flourished inland of the present limits.

This broad landscape pattern within the Chelmer/Blackwater river system is important in understanding the significance of the location of the Springfield Lyons enclosure, but the rather more detailed topography of the immediate location of the site must also be considered. The Springfield Lyons enclosure lies on a slight spur or promontory between two small streams, tributaries of the Chelmer. This is one of a series of such small spurs which run north and east from Springfield Lyons toward Boreham. The Springfield site lies about 3km north-east of the confluence of the Can and Chelmer, overlooking a broad sweeping meander of the Chelmer. On the Springfield side of the Chelmer, the valley slopes are fairly even; to the south at Great Baddow the initial drop from the crest of the
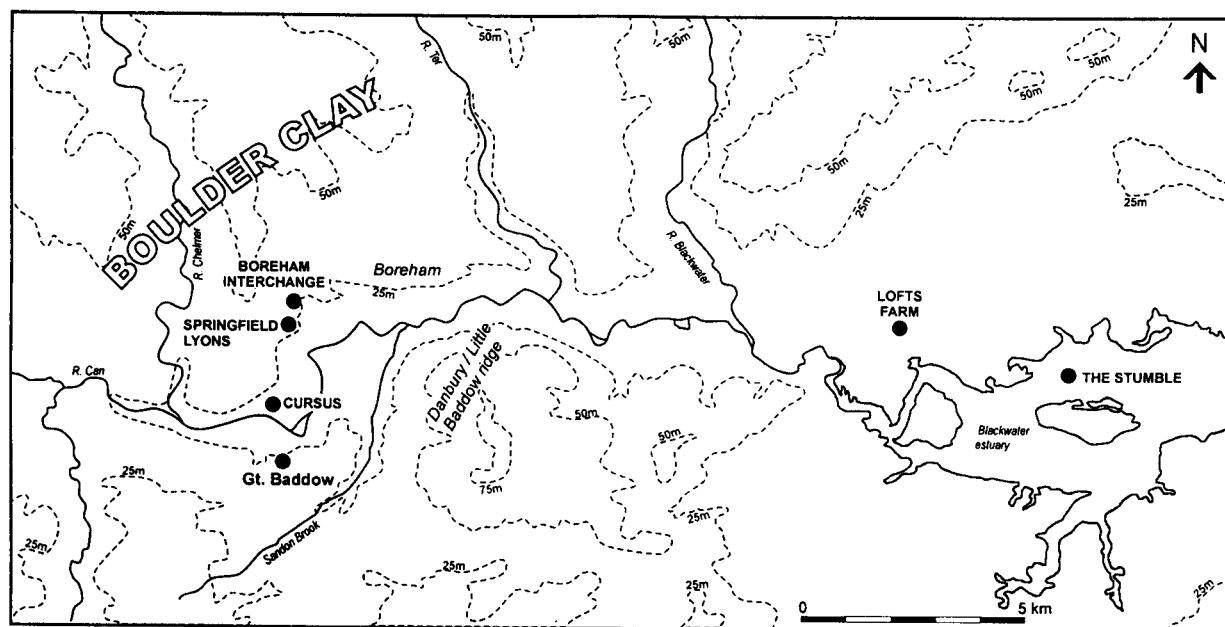
Fig. 1   Map of the Chelmer/Valley/Blackwater Estuary showing places mentioned in the text.

valley ridge is relatively steep, the slope becoming more gentle as it approaches the valley floor. One of the tributaries of the Chelmer, the Sandon Brook, dissects the valley side and flows along the foot of the Danbury-Little Baddow ridge (Fig. 1). This ridge is a very significant feature of the local topography and Danbury is the highest point in southern Essex. In winter, when a bitter east wind is blowing, it is locally maintained that 'There is nothing higher between here and the Urals'. Something similar is said about any largish hill anywhere in the east of England from the Thames Estuary to the Vale of York. Whilst almost certainly not literally true, like most myths it does encapsulate a general truth, that unlike the hilly fringes of Britain, this whole area of eastern England is an extension of the north European plain and needs to be understood as such.

Viewed from Springfield Lyons (Fig. 2), this part of the Chelmer Valley forms a large, bowl-like arena bounded to the south by the valley side at Great Baddow: looking east the view is across one of the widest parts of the Chelmer floodplain about 2km of fairly flat ground towards the steep rise of the Little Baddow/Danbury ridge. To the north-east the valley slopes run in a series of small spurs towards the present village of Boreham. To the north and west the view is quickly cut off by the rising ground of the edge of the boulder clay plateau. The Boulder Clay outcrops just 500m north of the Springfield Lyons Bronze Age enclosure.

The topographical significance of the Springfield site is twofold. Firstly it lies in a nodal area within a large scale axis of movement east-west or west-east along the river to the estuary, sea, and wider world beyond, and north and west up on to the very different topography of the Boulder Clay. This is clear to us looking at a two dimensional map (Fig. 1),

and would have been understood and experienced in the movements of daily life in the distant past. Secondly, experienced on the ground, the location of the enclosure itself does not appear as a point on a linear route, but a place which commands a great semi-circular panorama from north-east to due south bounded by rising ground and with the river Chelmer winding through its centre (Fig 2).

Today the river itself still follows a meandering course but has been restricted and channelled by recent drainage and most importantly the addition of a number of locks and short 'cuts' across meanders to create the Chelmer and Blackwater navigation. In prehistory the river would have been wider, with a more braided course than today. Silted former channels of the Chelmer have been revealed to the south of Springfield Lyons and to the north-west of Chelmsford (Murphy 1996; Drury 1978).

Springfield and the Chelmer valley before the Late Bronze Age

Mesolithic occupation within the Chelmer/Blackwater estuary river system is not well understood although finds of flintwork are quite widespread in the valley (Jacobi 1996). A major site has been recorded within the present intertidal zone of the Blackwater estuary at Maylandsea (Wilkinson and Murphy 1995). There is also a remarkable concentration of finds at Great Baddow (Jacobi 1980; 1996, fig.1), which may be the first indication of the long-term importance of this general area of central Essex just east of the confluence of the Chelmer and Can. The nature of the Neolithic settlement pattern is rather better understood (Brown 1997; Buckley, Hedges and Brown forthcoming), and a few of the salient points are briefly set out below.

Some of the best evidence is derived from the intertidal zone of the Blackwater estuary where large expanses of preserved Neolithic land surface have been recorded. One Early Neolithic site at The Stumble, north of Osea Island (Wilkinson and Murphy 1995 and forthcoming), has been extensively sampled: substantial quantities of flintwork and pottery were recovered from surface deposits, together with structural remains and shallow pits. Pollen analysis of the preserved soils at The Stumble and other sites in the estuary indicated a predominantly wooded environment. To the north, where extensive excavation has taken place on the low-lying gravel terraces fringing the estuary, numerous scatters of pits and at least one substantial post-built structure (Brown 1988a; Wallis and Waugham 1998) have been revealed. Somewhat similar evidence has been recorded for the later Neolithic (Brown 1997). Whilst Neolithic occupation appears to be widespread and fairly uniform within the river system, there is a marked variation in the distribution of monuments. Oval or sub-rectangular long mortuary enclosures/barrows, together with some ring-ditches, are widely distributed along the river system (e.g. Buckley et al. 1988; Wallis and Waughman 1998; Cooper-Reade forthcoming) Despite extensive fieldwork within the valley and very good cropmark coverage (Lawson et al. 1981; Priddy and Buckley 1987), major monuments are known only from the Springfield area. It has been suggested that this area was selected for their construction, as it was a major point of transition for people moving through the river system and up onto the Boulder Clay plateau, or from the Boulder Clay to the valley (Brown 1997). There may thus have been an opportunity for considerable gatherings of normally scattered
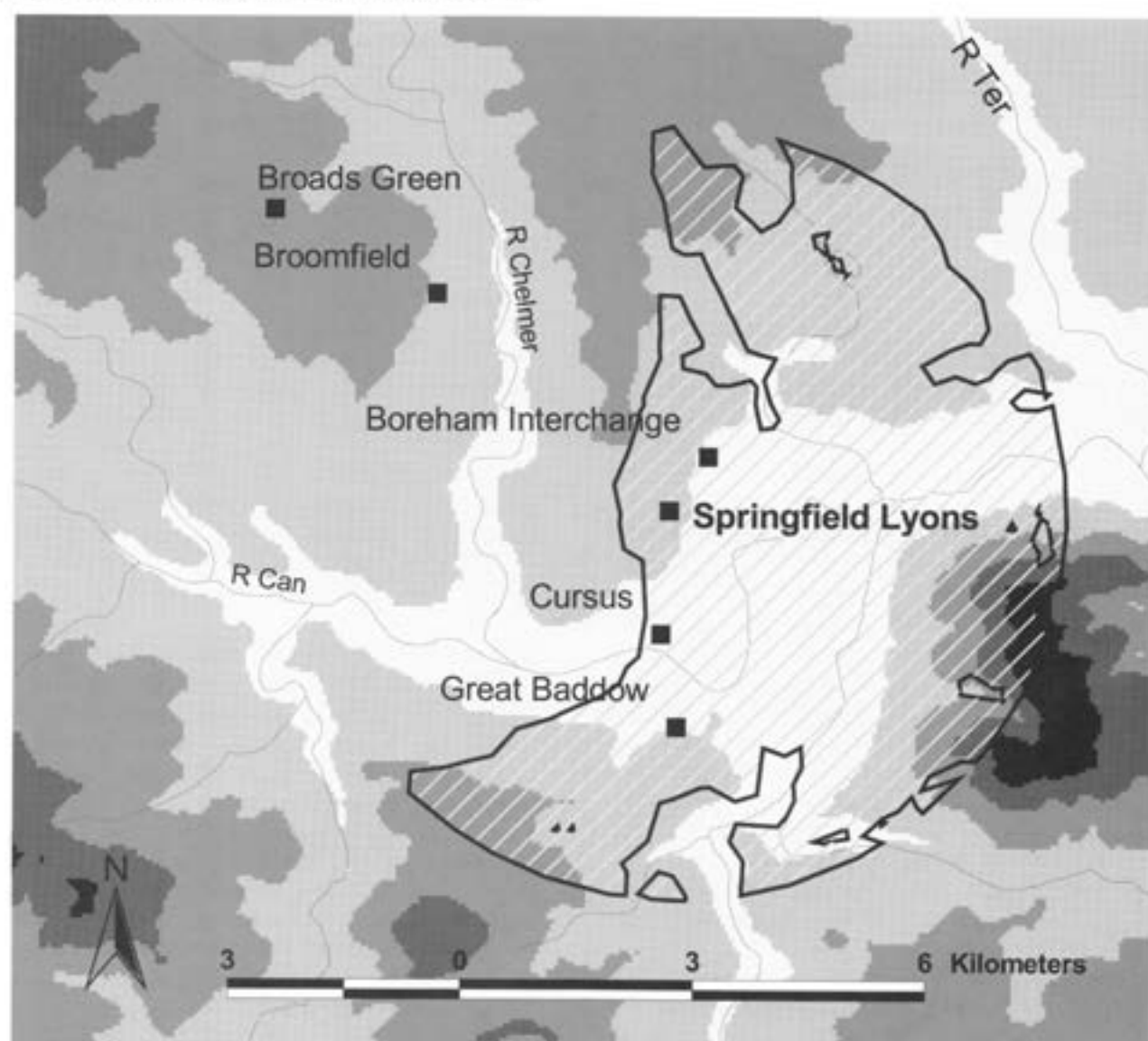
Fig. 2   Viewshed map indicating area visible from a point 2m above the site of the Springfield Lyons enclosure. The shaded area indicates what could be seen from the Bronze Age ramparts. An arbitrary 5km cut-off has been used, and of course no account is taken of restricted views due to trees or woodland. Contours are at 15m intervals. (© Crown copyright Ordnance Survey. All rights reserved MC100014800).)

groups of people in the Springfield area at particular seasons.

At Springfield Lyons itself, an arc of deep pit-like ditch segments was dug, cutting off the small promontory described above (Buckley 1991, 1992). These features were associated with a large amount of early Neolithic Mildenhall style pottery. In effect they formed a single-circuit causewayed enclosure, with a range of artefacts and deposits comparable to those recovered from the Orsett Causewayed Enclosure (Hedges and Buckley 1978) and other similar sites. The Springfield Lyons site lies about 1km north of a cropmark oval barrow/long mortuary enclosure, situated on the valley floor, which was unfortunately destroyed by housing development at the end of the 1970s before it could be excavated. Another major monument, the Springfield Cursus (Buckley, Hedges and Brown forthcoming) was constructed in the valley below Springfield Lyons. The cursus as revealed by air photographs and extensive excavations prior to development, was a rectilinear enclosure 670m long and 40m wide with squared terminals and apparently aligned on the cropmark large mortuary enclosure. Together these two monuments cut off the neck of a spur of ground just above the Chelmer floodplain and marked by the 20m contour line within a broad loop of the river. The break in slope is not great but may have been significant. Despite the canalisation of the Chelmer in the 18th century and more recent drainage works, the river still floods each winter to the east of Chelmsford in the vicinity of the Cursus. The Springfield Lyons causewayed enclosure would have provided a panoramic view of the monument in the valley below. Today (or rather 20 years ago since the view is now obscured by housing) the view from Springfield Lyons can often be dramatic in mid winter when the rising sun is reflected from the often frozen floodwater in the valley below. Such a view may have been even more spectacular when the Cursus and oval barrow/mortuary enclosure were standing monuments. It seems likely that winter flooding in the Neolithic would have been even more extensive than it is today in which case, in mid winter, the cursus and mortuary enclosure/barrow would have formed a line of monumental earthworks cutting off an area of land surrounded on three sides by water.

Both the Springfield Lyons Causewayed Enclosure and Springfield Cursus continued in use in some form throughout the later Neolithic, with deposits of Grooved Ware and Beaker Pottery being made at both sites. However, in the Early and Middle Bronze Age there is a marked contrast. Earlier Bronze Age urn material was deposited at the Cursus, which also became a focus for round barrow construction, represented today by cropmark ring-ditches at least one of which appears to be of Middle Bronze Age date (Buckley, Hedges and Brown

forthcoming). On top of the ridge at Great Baddow south of the Chelmer, a Middle Bronze Age cremation burial in a bucket urn has been recovered (Brown and Lavender 1994). By contrast, despite very extensive excavations at Springfield Lyons, Early and Middle Bronze Age material, apart from a couple of apparently stray sherds, is remarkable by its absence (Brown 1996). In the latter part of the Middle Bronze Age, an enclosure was constructed, not at Springfield Lyons but on a very similar spur to the north, adjacent to the present A12 Boreham Interchange (Lavender 1999). This site comprised an arc of ditch which may once have formed a roughly C-shaped enclosure, any ditch which might have existed on the eastern side having been destroyed by construction of the A12 Chelmsford by-pass. One part of the ditch had a distinct deposit of bone, antler and pottery in a charcoal rich matrix. Adjacent to this deposit in the interior of the enclosure was a small rectangular structure measuring 4.5 x 2.2m. Elsewhere in the interior were fence lines but no house structures or storage pits characteristic of contemporary domestic sites in Essex and elsewhere (e.g. Brown 1996; Ellison 1981).

Springfield and the Chelmer valley in the Late Bronze Age

The Late Bronze Age was a period of considerable social and economic change rooted in, and developed from, the practices of the Middle Bronze Age (e.g. Barrett 1994; Bradley 1984, 1996) and manifested in new forms of settlement, ceramics, metalwork, burial and agricultural exploitation. These developments are well attested in Essex and particularly within the Chelmer/Blackwater estuary river systems (Brown 1996). Settlements are widespread, and there is some of the best evidence in the east of England for the striking developments in ceramics which characterise the Late Bronze Age (e.g. Needham 1996). Charred plant remains indicate that all of the principal crops of the later first millennium BC were in cultivation by the Late Bronze Age (Brown 1996; Murphy 1996). The central Essex river system has other indications of agricultural intensification. Around the Blackwater estuary, wells are a particular feature of the settlements, and may reflect a primarily pastoral economy, ensuring adequate supplies for livestock. Most notable of the Blackwater settlements is an enclosed site at Lofts Farm (Brown 1988a). Here there is good evidence for a pastoral economy with charred plant remains indicating that crop processing did not take place at the site, fully processed crops being brought in from elsewhere. Plant macrofossils from a well at this site and pollen from other wells nearby indicate a locally open landscape of damp grassland with some evidence for nutrient enrichment by dung from grazing animals

(Murphy 1988; Wiltshire and Murphy 1998). The Lofts Farm site was well placed, both to exploit the low-lying gravel terrace and the marsh pasture provided by the saltmarshes fringing the estuary. The importance of wetland pasture during the Bronze Age elsewhere in eastern England has recently been emphasised by Pryor (1996, 1998). The coastal zone also provided the opportunity for salt production for which the earliest evidence in Essex is of later Bronze Age date (Brown 1996). The Chelmer/Blackwater estuary river system provided part of a routeway connecting Essex with other parts of Britain and to continental Europe. The raw material for bronze working had to be brought from far afield. External contacts, either direct or indirect, are represented by similarities in material culture on both sides of the North Sea (e.g. O'Connor 1980; Champion 1994), by numerous items of imported metalwork and occasional pots (e.g. O'Connor 1980; Brown 1996, 1999a and b).

One of the most striking developments of the Late Bronze Age is the appearance of substantial, circular, ditched enclosures. These sites are widely distributed across eastern England (Champion 1980; Needham 1993). Essex seems to be particularly rich in such enclosures: six have been extensively excavated or trial trenched (Brown 1996; Guttman and Last 2000) and a number of others have been provisionally identified from aerial photographs. These sites share much in common, notably circular form, substantial enclosure ditches, and a similar range of artefacts and internal structures. However, these clear similarities mask a considerable variation in detail most striking for instance, when the plans of two of the most extensively excavated examples, Mucking North Ring (Bond 1988) and Springfield Lyons itself (Fig. 3) are compared: each site appears to have its own particular history and pattern of use (Brown 1996).

In common with the evidence from other circular enclosures it is apparent that the occupants of the Springfield Lyons site were deeply involved in agriculture and other aspects of production (Brown 1996). Artefacts recovered from the site include a large pottery assemblage, loomweights, spindle whorls, and perforated clay slabs. In contrast to Lofts Farm at Springfield the charred plant remains indicate that crop processing took place within the enclosure. Weeds present in the plant remains indicate that not only the light soils of the gravel terrace were exploited, but that agricultural cultivation also extended on to the heavier clay soils and the damp conditions of the valley floor.

Whilst Springfield Lyons can be seen as an integral part of the densely settled highly productive Late Bronze Age landscape of the Chelmer Valley/Blackwater estuary river system, it was more than just an element in this productive landscape:

there are very clear ceremonial or symbolic aspects to the site.

The symbolism embodied in the Springfield enclosure may be approached by considering the particular location chosen for its construction. The prominent spur of ground at Springfield Lyons gave commanding views over the Chelmer Valley, but it is one of a number of such spurs which could have offered similar views. Indeed it might appear more logical to choose the similar location at Boreham Interchange, for here the site constructed in the Middle Bronze Age continued in use into the early part of the Late Bronze Age. The dominant structure at Boreham Interchange, the small rectangular building, in common with a similar building at Broads Green, has been interpreted as a shrine (Brown 1996), partly by analogy with the better preserved, waterlogged, remains of a shrine at Bargeroosterveld, Netherlands (Waterbolk and Van Zeist 1961; Brown 1988b). This interpretation of the Boreham Interchange building has been accepted and elaborated by the excavator (Lavender 1999). It appears that the shrine was demolished, posts removed and the postholes filled with a range of deposits. These incorporated a pottery assemblage which comprised an unusual range of ceramics and included fragments of a highly decorated imported
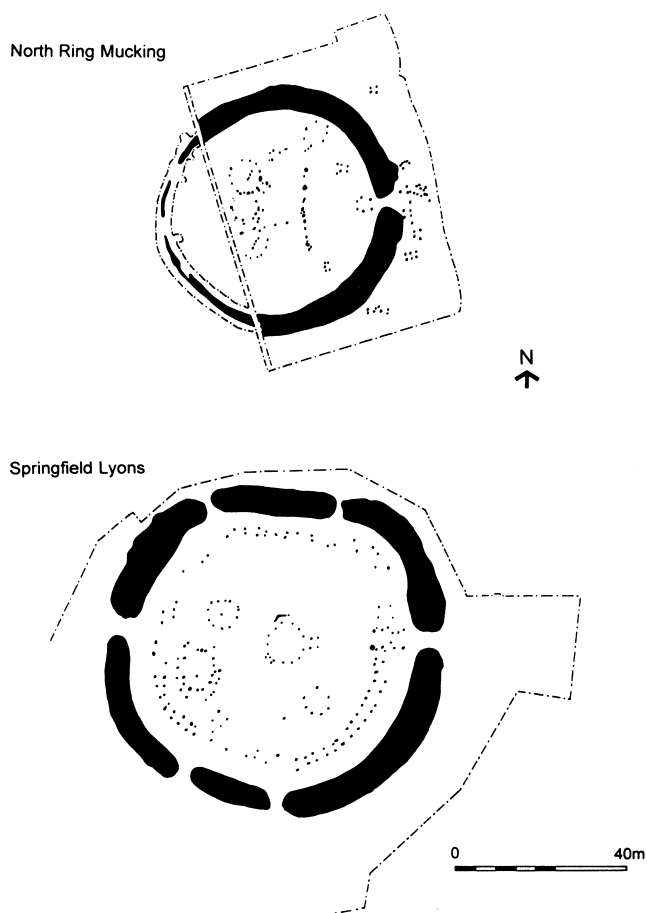
Fig. 3   Comparative plan of the Late Bronze Age enclosures at Springfield Lyons and Mucking North Ring.

bowl (Brown 1999b). This pottery can be quite closely dated to an early stage of the Late Bronze Age contemporary with the earliest ceramics from Springfield Lyons. It thus seems that the Boreham Interchange shrine was demolished, and sealed, at the time that the Springfield enclosure was constructed. Needham (1993) has suggested that the Late Bronze Age saw the transfer of shrines and religious structures into what otherwise appear to be domestic compounds.

This could, of course, have been achieved by converting the existing Boreham Interchange site into one of the new Late Bronze Age circular enclosures. Instead the Springfield Lyons spur 800m to the south was selected. A plausible explanation for this choice may be connected to the existence there of the remains of the Neolithic causewayed enclosure, already by the Late Bronze Age at least 2,000 years old. It is very striking how hard it is to distinguish Late Bronze Age circular enclosures from Neolithic henge monuments on the basis of aerial photographs. In Essex, Mucking South Rings, Ferriers Farm and Springfield Lyons itself were all considered to be henges prior to excavation. This is probably more than a coincidence: it seems that the builders of these Late Bronze Age monuments deliberately chose an archaic form for their new enclosures (Clare 1987). In this context it may be helpful to consider the notions of 'genealogical history' and 'mythical history' which Gosden and Lock (1998) use to address prehistoric people's understanding and use of the past. Genealogical history describes what for non-literate societies is '... the main device employed through which to recount history ...in which relations of blood and kin are specified and become the basis for recounting stories about these known individuals' (Gosden and Lock 1998, 5). This history, dealing with known and named figures from the past linked to living individuals and groups, was essentially recent (although recent in this case might extend back several centuries). Mythical history, by contrast, dealt with a deeper past of original ancestor figures, spirits and gods, often associated with ancient landscape features, whether man made or natural, the uncertainty and obscurity of whose origins offered considerable opportunities to manipulate the past for social and political advantage in the present.

If builders of the Late Bronze Age circular enclosures generally exploited this mythic history in utilising the ancient henge form, those who constructed Springfield Lyons went further. They had inherited or adopted the genealogical history embodied in the Boreham Interchange site and the rituals carried out there, and transferred these associations to the new enclosure at Springfield Lyons. The conscious link with mythic history embodied in the circular form typical of the Late Bronze Age enclosures was made more explicit at

Springfield. Here the new site was constructed immediately west of the Neolithic Causewayed Enclosure, the remains of which may well have been still visible. The numerous causeways of the Springfield Bronze Age enclosure, a highly unusual feature of such sites, appear to consciously echo the adjacent Neolithic site. The Springfield ditch is certainly unlike any of the other known Late Bronze Age circular enclosures (e.g. Champion 1994 fig. 12.2).

The presence of the Neolithic causewayed ditch as an ancient landscape feature at Springfield not only affected the form of the Bronze Age monument, but was used to structure the relationship of the enclosure to, and its impact on, its wider setting. Other Late Bronze Age enclosures investigated in Essex, such as Mucking North Ring (Bond 1988) and South Hornchurch (Guttman and Last 2000), are embedded in a contemporary landscape of extra-mural settlement which runs right up to the enclosure ditch. By contrast quite extensive excavation outside the Springfield enclosure to the south and west, and trial trenching to the north and east, has revealed almost no features of Late Bronze Age date. The Bronze Age site is overlain by an Early Saxon cemetery and later Saxon settlement (see below), both of which extend far beyond the limit of the Bronze Age enclosure. Examination of the quantities of Late Bronze Age pottery residual in these later features has revealed large quantities in features inside the limit of the Bronze Age enclosure, but very little in those outside. The immediate vicinity of the Springfield enclosure thus appears to have been kept largely clear of contemporary occupation. The occupants of, and activities taking place within, the enclosure appear to have been deliberately isolated in a manner anticipating the practice of the Iron Age (Bowden and McOmish 1987).

Recent evaluation work in advance of development on the valley slopes indicate the presence of contemporary occupation and fields. Indeed excavations just 400m east of the Springfield enclosure have revealed extensive evidence of Late Bronze Age occupation. Importantly this occupation lies beyond the line of the Neolithic causewayed ditch. It seems that the area between this ditch and the Bronze Age enclosure was kept clear of contemporary occupation.

The Chelmer Valley/Blackwater estuary was clearly a routeway important in facilitating the intricate network of exchange relations which were a vital part of Late Bronze Age Society. A traveller approaching the Springfield enclosure from the river would have moved up slope through a landscape of fields and farms until they reached the line of the low banks and shallow ditches which marked the remains of the Neolithic Causewayed enclosure. Passing through this line, a traveller would enter a

kind of sacred precinct, kept clear of the clutter of contemporary life. This space was dominated by the circular enclosure whose archaic form was designed to impress upon the visitor that the occupants of this place wielded not only the authority of generations of ancestors whose names were known and stories told, but also brought all the power of an unimaginably old spirit past into their contemporary world. Something of the way the Springfield dominated its contemporary landscape is shown by the reconstruction painting (Plate 1).

However effective the Springfield site and its occupants may have been in expressing their local dominance, nothing lasts forever, and the site was abandoned by the Early Iron Age.

The Springfield enclosure after the Bronze Age

Long after it ceased to be occupied, the Springfield enclosure remained as a significant earthwork. During the Late Iron Age, a sword was ritually deposited, the blade coiled up in a pit dug at the centre of the Bronze Age enclosure. This is a particularly clear example of the way in which Bronze Age sites and objects were used in the Late Iron Age. Examples include the construction of a major roundhouse adjacent to an early Bronze Age

cemetery at Harlow Temple. The temple at Elms Farm, Heybridge, may also have been constructed on the site of a Middle Bronze Age structure. Similarly a Bronze Age axe was incorporated in the grave goods of the Lexden burial (Foster 1986) and Bronze Age objects form a major element in the Late Iron Age Salisbury hoard (Stead 1998). It is possible that similar ritual activity continued into the Roman period when a pit with much burnt material was inserted into the Bronze Age ditch. The Bronze Age enclosure certainly figured as a factor in land division at this time since an east-west field boundary was established bisecting the enclosure.

By far the most significant reuse of the Bronze Age enclosure occurred during the early Saxon period when it formed the focus of a major cemetery. The northern arc of the Bronze Age ditch seems to be respected by the Saxon graves (Hedges and Buckley 1987). The southern, downslope, ditch is not and may already have been obliterated perhaps by ploughing during the Roman period. This reuse of earlier monuments for cemetery sites during the Early Saxon period appears to be a widespread phenomenon (e.g. Williams 1998), and is represented elsewhere in Essex by the burials at the Orsett Causewayed Enclosure (Hedges and Buckley 1978) and possibly at Ardleigh (Brown 1999a). The
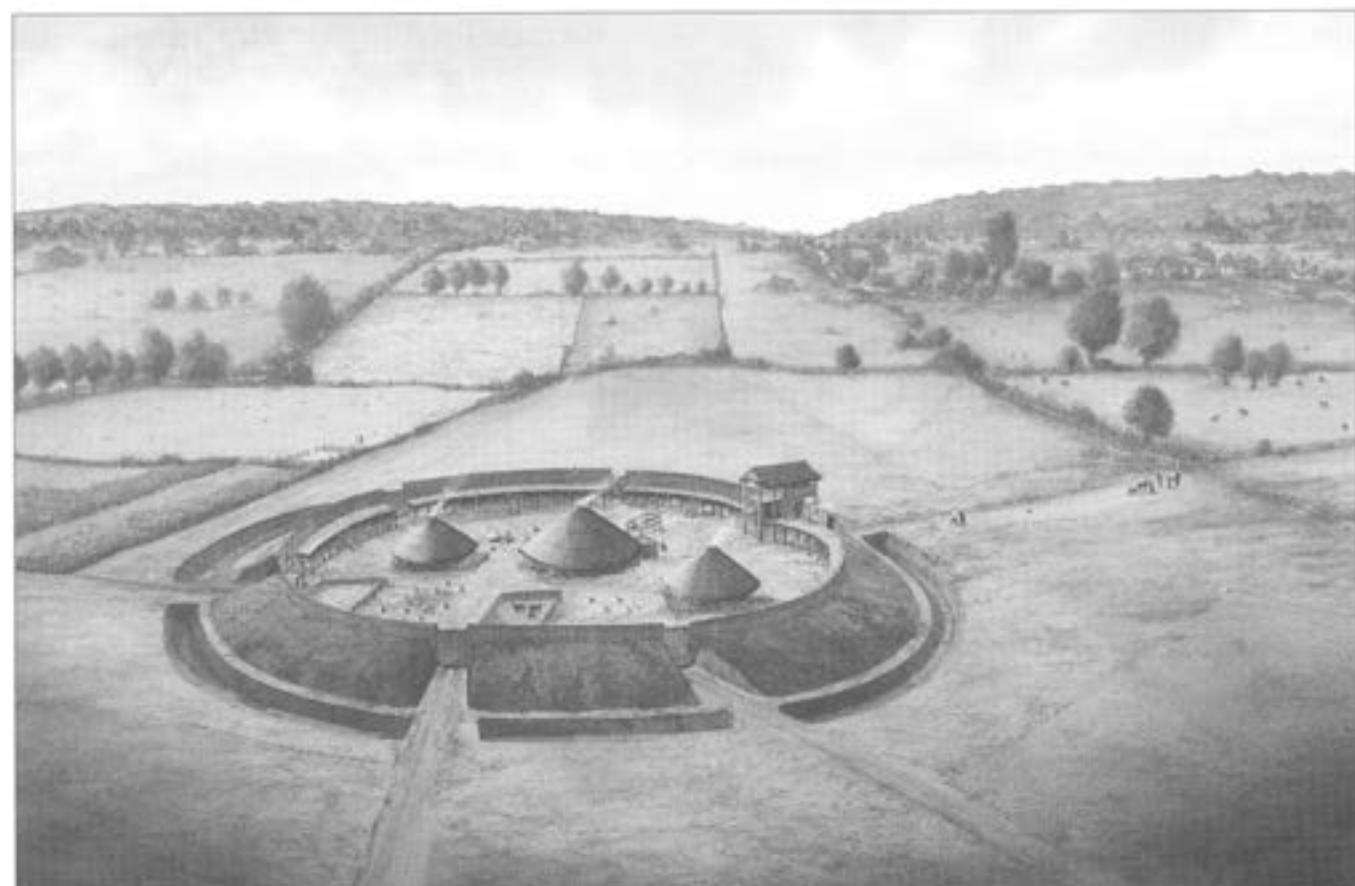
Plate 1   Reconstruction painting of the Bronze Age enclosure at Springfield Lyons as it may have appeared about 800BC, showing its dominant position in the local landscape. (Watercolour by Frank Gardiner).

local examples appear quite deliberately to eschew association with Roman remains. The Bronze Age enclosure at Springfield was chosen as a cemetery location in preference to any association with the remains of the Roman town of Chelmsford to the south (e.g. Drury 1988) or of the villa and other major Roman structures at Boreham to the north (Lavender 1993, Germany forthcoming). Perhaps this represents a new social order deliberately avoiding association with the relatively recent past to make an association with a far older ancestral past or mythic history (Gosden and Lock 1998; Williams 1998).

In the later Saxon period a settlement was established to the south and west of the cemetery. This settlement may have lasted into the 11th century (Tyler and Major forthcoming) and it is tempting to suggest this is the immediate precursor of the Domesday manor of Cuton Hall. The manorial centre may, at some time, have shifted slightly further to the south across a small stream to the vicinity of the existing late medieval/early post-medieval Cuton Hall. If this is the case, a manorial centre recorded by the Domesday commissioners in the late 11th century AD may ultimately have owed its location to the establishment of a, by then forgotten, Bronze Age enclosure 2000 years before, an enclosure which in turn had been located with respect to a Neolithic monument 2000 years older still. Once forgotten the Springfield Bronze Age enclosure remained unknown until the late 20th century, when archaeologists revealed its ancient and long lasting significance in the landscape and began to imbue it with a symbolism of their own.

Acknowledgements

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The excavation of an Iron Age and Roman site at the former Star and Fleece Hotel, Kelvedon

by David Fell and Ron Humphrey
with contributions by
Donna Cameron, Hilary Cool, Jane Cowgill, Nina Crummy, Andrew Fawcett, Val Fryer, Peter Guest, A. V. Roberts and Tony Waldron

Excavation undertaken at the site of the Star and Fleece Inn, Kelvedon, revealed a ditch, a quarry pit, and a cobble surface dating to the late Iron Age and Roman periods. A variety of miscellaneous post-medieval and modern pits and post holes were located across the site, reflecting the development of the later settlement at Kelvedon.

Introduction

Construction of a new housing development took place on the site of The Star and Fleece Inn, High Street, Kelvedon, Essex (NGR TL 8646 1912) (Fig. 1). Kelvedon is a town of considerable archaeological and historical interest and the development area is situated in the Kelvedon conservation area, within an area of Iron Age occupation and the Roman town (Medlycott 1998). Accordingly, an archaeological evaluation and programme of documentary research were undertaken (Ennis 1998, Trevarthen 1998). This revealed a number of features of archaeological interest, including Iron Age and Roman ditches and a Roman road and quarry pit. The Roman road was identified as a feature of particular importance to our understanding of the development and layout of the Roman town and an area excavation was then undertaken, in order to identify the full extent of the Roman road within the development area and to record other deposits to be disturbed during the development. This report presents the results of the archaeological projects.

There is evidence for activity in the Kelvedon area from the Palaeolithic period onwards. A settlement developed during the Iron Age and the site is located on the northern periphery of the Iron Age occupation. Kelvedon is located along the route of the Roman road from *Londinium* (London) to *Camulodunum* (Colchester) and the Kelvedon High Street follows the course of the Roman road. A fort may have been constructed during the early Roman period, south-east of the present High Street with a civilian centre to the north (Fig. 1). A north to south aligned road led north from the fort/settlement and may have joined the London to Colchester route immediately south of the river Blackwater. The civilian settlement was enclosed by a defensive ditch during the late 2nd century and developed into the small Roman town of *Canonium*. An area of extra-mural settlement was located north of the defended area and the site lies on the northern periphery of the extra-mural area. The town declined towards the end of the Roman period, although occupation may have continued into the Saxon period, and a 5th/6th century cemetery is located on the eastern side of the river.

Site description

The site lies in the north-eastern part of Kelvedon, on the south-eastern side of the High Street, near the crossing of the river Blackwater, which follows a meandering course and forms a natural defensive barrier along the eastern and northern sides of the town (Fig. 1). The geology of the area comprises the gravel terrace of the river Blackwater (Haggard 1972). The gravel outcrops directly beneath the topsoil, but is capped by deposits of brickearth in localized areas. The soils of the area comprise the Efford 1 Association, typically well drained loamy soils, derived from the river gravel. The site is essentially flat and lies at an elevation of *c.*25m OD.

The origin of the Star and Fleece Inn is unknown, but an inn called the Star (formerly The Crown) was present on the site in 1684. A malthouse was located behind the Star and Fleece. This was in the ownership of Fisher Unwin in 1789 and later passed into the ownership of the Fuller family. The brewery buildings were located to the rear of the Star and Fleece and were laid out around a large yard (Ennis 1998, 3). Their greatest extent was reached during the early 20th century. The inn was demolished in 1968 and the brewery in 1971 (Peaty 1992, 82).

The archaeological excavation was undertaken in three phases (Figs. 2-4):

1 An archaeological evaluation, comprising documentary research and four archaeological trial trenches (Trenches 1-4), located across the development area (Ennis 1998).

2 A second phase of archaeological trial trenches (Trenches 5-6), situated to the south-east of the previous evaluation, off Heron Road (Trevarthen 1998).
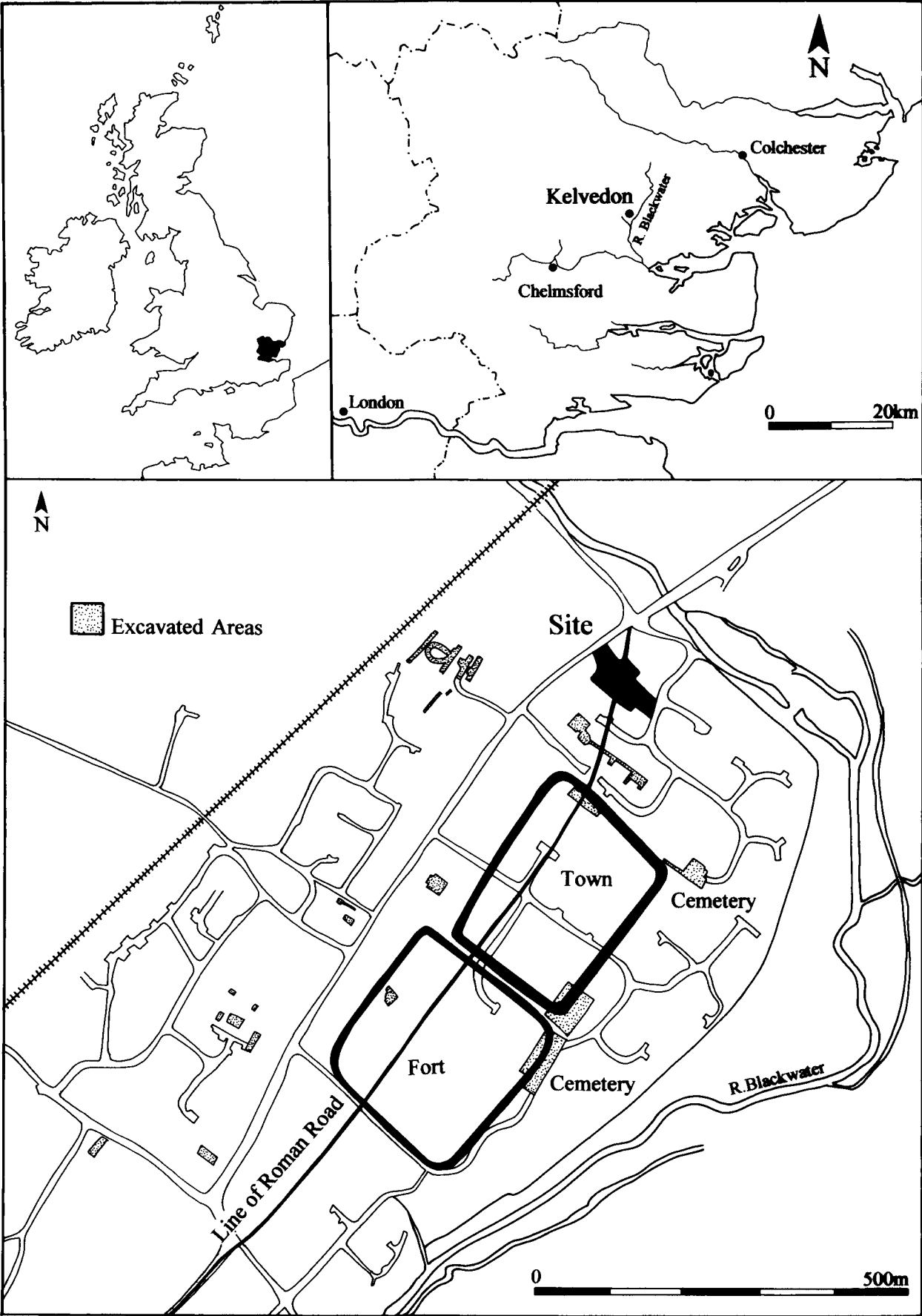
Fig. 1   Kelvedon, Star & Fleece, site location.

3. An open area excavation (Trench 7), in the central part of the development area (Humphrey 1999).

Archaeological excavation

The archaeological remains were concentrated in the central area of the site (Figs, 2 & 3). The northern area, fronting the High Street, had been disturbed by the construction of the Star and Fleece Inn (Ennis 1998, 4). Post-medieval and modern disturbance was also extensive towards the south of the site (in Trial Trench 4 and the southern part of Trench 7). Archaeological features were concentrated in the central area, predominantly in Trench 7, but were absent in trial trenches 5 & 6.

A sequence of four phases has been identified:
1. Early Prehistoric (Mesolithic-Bronze Age).
2. Late Iron Age.
3. Roman.
4. Post-medieval.

Phasing of the post-medieval features should be treated with some caution as, in common with other sites in Kelvedon (Clarke 1988, 17), residuality problems were encountered. Analysis was further hindered by low sherd counts in many of the features.

In the following discussion, features recorded during the evaluation phase are identified by one to three digit numbers. Features recorded by the Essex County Council Field Archaeology Group
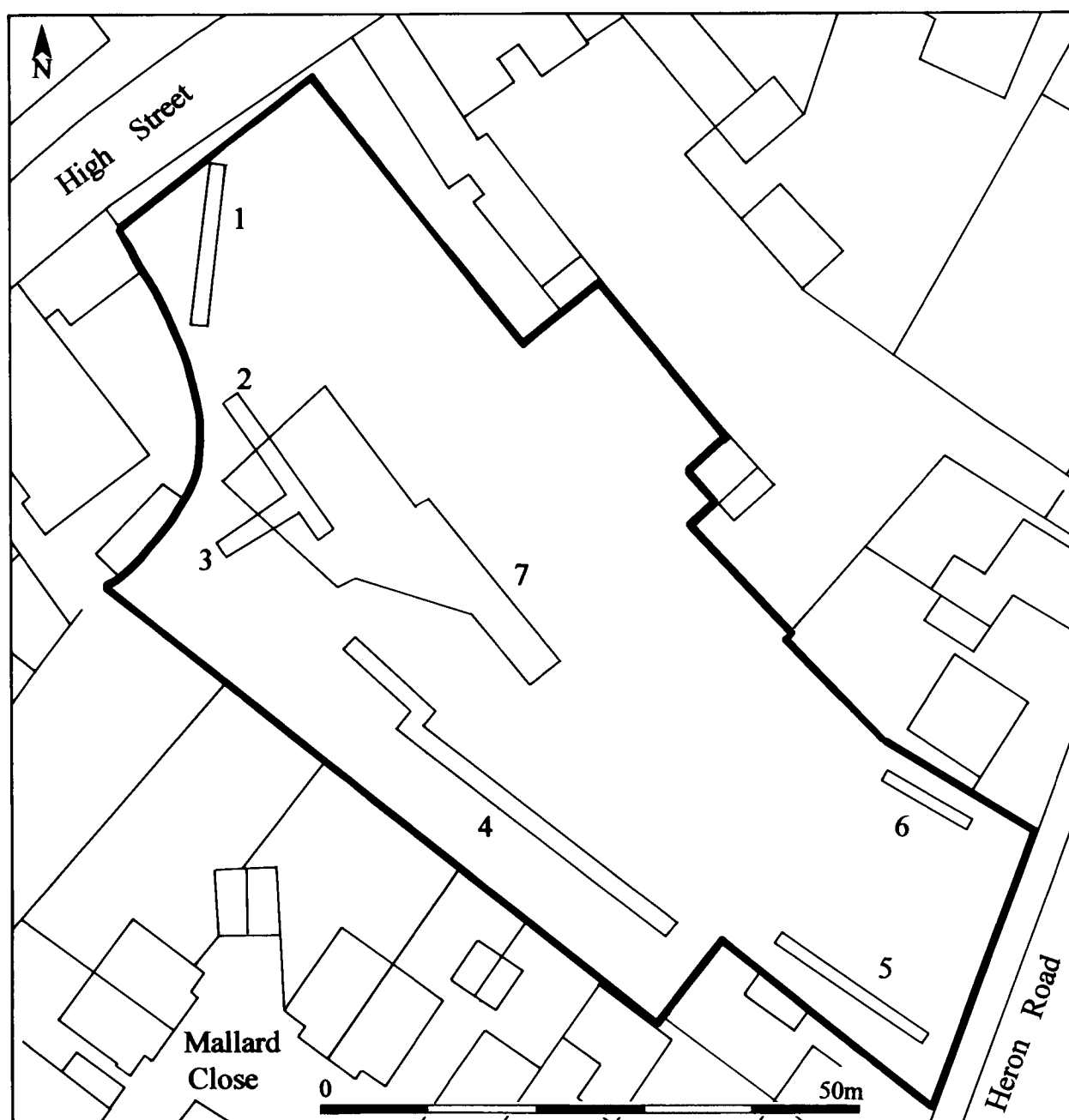
Fig. 2   Kelvedon, Star & Fleece, location of trial trenches and excavated areas.

commenced with L1 (Trenches 1-4). Features recorded by the Hertfordshire Archaeological Trust (Trenches 5 and 6) commenced with L500. A four-figure numbering sequence was used in the main excavation (Trench 7) commencing with L1000.

Phase 1. Early Prehistoric

Although archaeological features were not present, the site was significant during the early prehistoric period and an assemblage of 10 residual flint tools and struck flakes was recovered. These include a fragment of a Mesolithic adze, a Neolithic blade core and struck flakes of Neolithic or Bronze Age date. Prehistoric material has been recorded throughout the Kelvedon area (Eddy 1982, 5) and the early prehistoric material from the excavations confirms the existing distribution.

Phase 2. Late Iron Age (Figs. 3 & 4)

A ditch, F1047, aligned north/south, was present at the northern edge of Trench 7 and was also seen in Trial Trench 2 (Ditch F46). The ditch had uneven sides and a concave base (Fig. 4) and contained seven fills, comprising yellow/orange/grey sandy loams, the products of natural weathering and silting. The lower fill L1063 contained the residual Mesolithic adze fragment (SF63), and the upper fill L1057 contained two sherds of probable 1st-century pottery and four fragments of animal bone. The upper fills became more loamy to the south (L1058, L1059) and contained late Iron Age, Roman and post-medieval pottery sherds, six fragments of daub, animal bone and four fragments of a Mayen lava quernstone (SF36). The majority of the artefacts are from the upper fills and the ditch cannot be accurately dated, but it is likely to be of the late Iron Age or early Roman periods.

Phase 3: Roman (Figs. 3 & 4)

A large quarry pit was excavated during the Roman period. A metalled track or road and three ditches were also present.

A large pit, F1042, was located immediately south of late Iron Age/Roman Ditch F1047. This was also seen in the evaluation (F145). It had an irregular linear form and was aligned north to south, across the entire width of the site. It had irregular sides and a concave base (Fig. 4) and was a Roman gravel quarry, perhaps for the extraction of gravel used during the construction of the adjacent road. It was 10m wide, in excess of 16m long, and up to 1.6m deep.

The quarry contained a complex sequence of fills (Fig. 4), which can be divided into two main datable phases of deposition, separated by a third period when sand and gravel was dumped in the quarry to seal the earlier waste. The extreme basal fills L1140, L1139, L1144 etc., generally comprised yellow or greyish brown sandy loam, containing gravel and small quantities of slag, animal bone, daub, tile and charcoal. A small dump of hearth debris was located within L1138. These fills were largely formed as the result of the erosion of the quarry sides and with some minor dumping of waste domestic or industrial material. The pottery assemblage comprised largely undiagnostic Roman types, but the fills probably date to the 1st century AD.

The remaining lower quarry fills, L1103, L1149, L1092, L1091 etc. comprised spreads of gravel, sand and grey brown or olive green silty loams frequently containing, slag, shell, domestic and industrial waste and animal bone. The lumps of slag were distributed throughout the layers but a concentration of slag was noted in L1106, much of which was coated in cess. A variety of glass and copper alloy objects were present within these layers. A glass melon bead (SF58, Fig. 7 No. 9) was found in L1136 and a limestone mortar (SF37, Fig. 6 No. 7) in L1092. Part of a glass jug (SF54, Fig. 7 No. 7) and a copper alloy armlet (SF57, Fig. 6 No. 1) were present in L1103 and part of a glass jar (SF52, Fig. 7 No. 8) was located in L1106. A number of pits, gullies and post holes, including F1095, had been cut into the top of these fills. Pit F1095 was filled with a mid grey-brown silt loam, L1096, containing a single sherd of Roman pottery, brick and tile fragment, a bone pin and an unidentified copper alloy object. The intermediate quarry fills contained 30kg of pottery, dating predominantly to the late 1st to mid 2nd centuries and were formed by the dumping of cess, domestic and possibly industrial waste, and possibly minor gravel surfaces.

Fills L1114 and L1077, and L105 and L112 identified during the evaluation, comprised mixed gravel and sandy loam respectively. Two iron fittings SF45 (Fig. 7 No. 2) and SF46 were present in L1077, and L1114 contained a copper alloy sheet and Roman coins of 2nd-century date. The pottery from fills L105, L112 and L1077 could not be closely dated, and that from L1114 is very abraded but dates from the mid 1st to 2nd centuries. These layers are interpreted as deliberately placed dumps of sand and gravel, to seal the underlying waste material, creating a flat surface.

This second major phase of infilling involved further waste material being deposited into the quarry, after the gravel deposition. A layer of yellow brown, silty loam L1076, containing pottery of the 2nd to 4th centuries, was located centrally within the quarry. A number of dumps of fired and/or burnt clay L1089, L1122 and L1116 were recorded above the gravel fill L1114 (not shown on Fig. 4). A concentration of fragments of Roman brick and tegula, L1090, was also present. The clay from L1089 originated from a hearth and the deposits are interpreted as domestic or industrial waste,
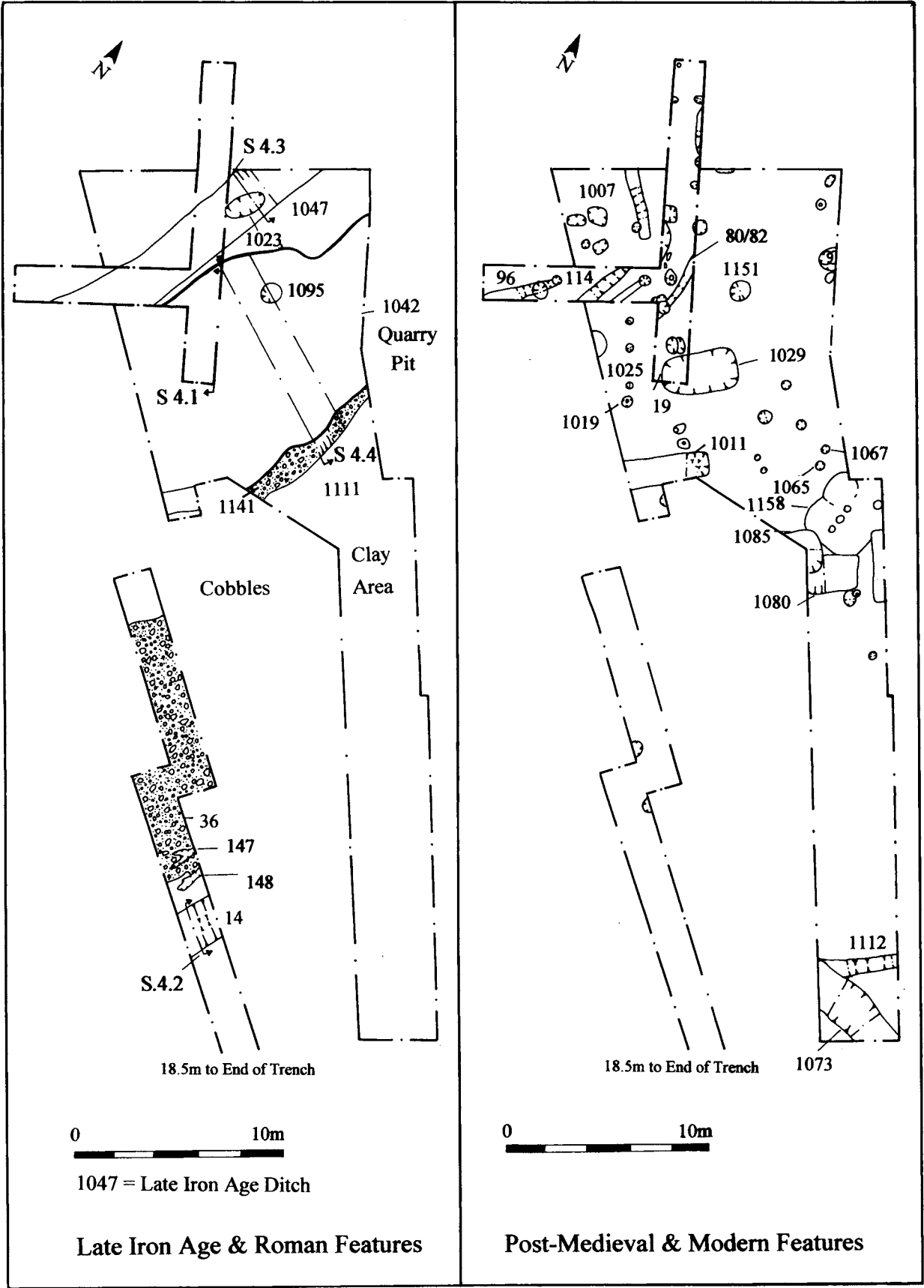
Fig. 3   Kelvedon, Star & Fleece, archaeological features.

deposited in the partially-filled quarry pit during the 2nd to 4th centuries.

The remaining fills L16, L100, L124, L1040, L1041 and L1032, which were identified in both the area excavation and during the evaluation, comprised grey brown silty loams with a lower density of gravel than the underlying deposits. They represent the third and final phase of infilling. An iron hipposandal, an iron pin and a bone needle were located within L1041 and also an assemblage of abraded 2nd- to 3rd-century pottery. The uppermost fill, L1032, contained a substantial assemblage of finds and pottery, including Roman bronze coins and a variety of miscellaneous glass, metal and stone artefacts. The pottery assemblage comprises mostly very abraded sherds, predominantly of the 3rd to 4th centuries. Fill L16, identified during the evaluation, is interpreted as a buried topsoil layer, and L1032 as the upper silting of the pit, mixed with domestic and industrial waste, and is similar to 'dark earth' layers characteristic of disuse and decay at the abandonment of many Roman towns.

An extensive spread of gravel was located in the southern area of the site, in Trial Trench 4. It comprised an orange gravel, make-up layer L36, onto which patches of orange grey pebbles L29, L30, L33 had been set (Fig. 3). These spreads are interpreted as the badly worn surface of the Roman road leading from the centre of the Roman settlement towards the river Blackwater crossing. Evidence for the passage of traffic over the surface is provided by two parallel linear bands of dark grey gravelly silt L147, L148 cut into road make-up L36. These are interpreted as wheelruts. A second area of

cobbling L1141 was located to the north-west of this surface, on the east side of quarry pit F1042, partially spreading into the edge of the quarry (Fig. 3). A layer of greyish yellow brickearth L1111, immediately south of gravel L1141 may be the remnant underlying soil layer. The overlying fills within the quarry contained pottery dating from the 1st to mid 2nd century and, while the surface may have undergone several phases of resurfacing, it may have been constructed at a similar date.

An oval pit, F1023, was located at the northern end of the site, cutting ditch F1047. It had two fills of orange/grey, sandy loam. The lower fill, L1064, contained pottery dating to the 2nd and 3rd centuries. Disarticulated human bone fragments were present within L1064 (Human Bone Report below). The upper fill, L1024, contained 1st to 2nd century pottery sherds. The pit was a disturbed grave, which cut the former late Iron Age ditch F1047. However the date of this feature is insecure and the pottery from the fills may be residual.

A linear ditch, F14, was located immediately to the east of road F36, in Trench 4 (Figs. 3 & 4). This had a north-east to south-west orientation and contained an assemblage of pottery, securely dating the ditch to the second half of the 2nd century. It is interpreted as a boundary ditch, or a ditch flanking the eastern side of road L36.

Phase 4. Post-medieval/modern

The remaining features on the site are all modern and comprise ditches, scattered pits and post holes (Fig. 3). Many features are undated and are considered post-medieval or modern on the basis of
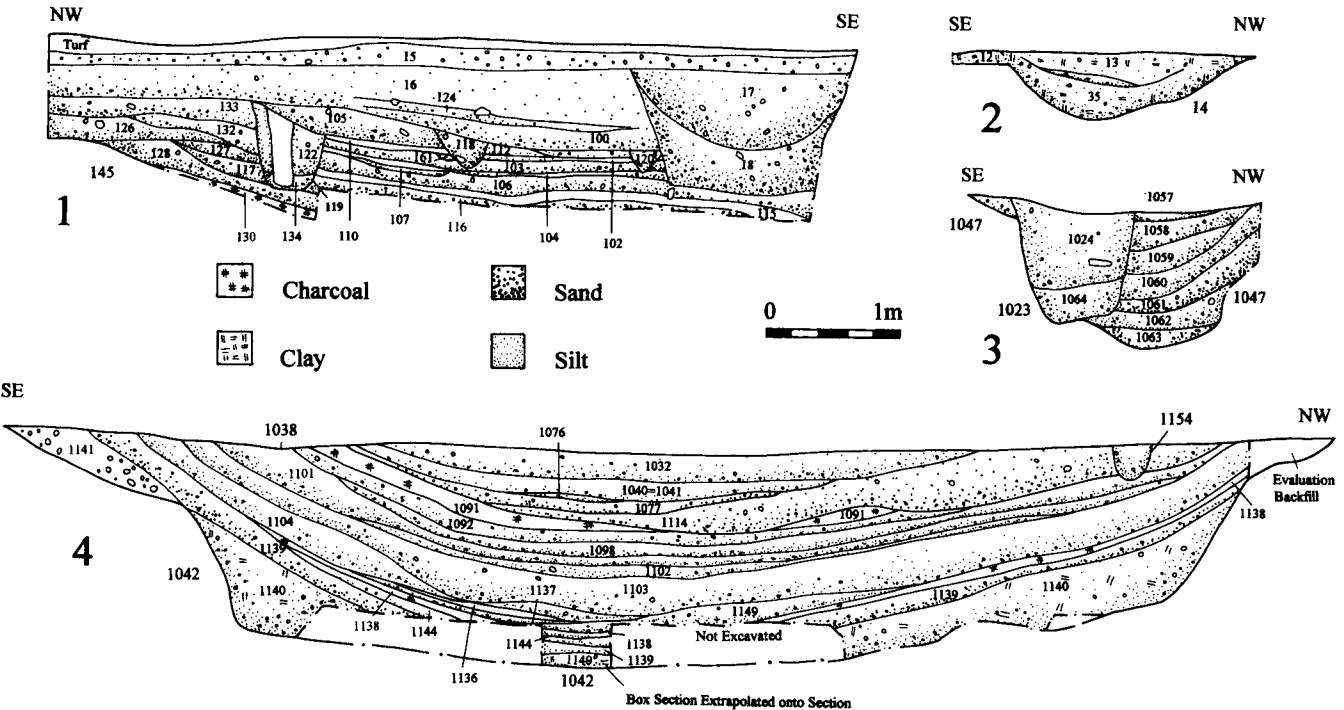
Fig. 4   Kelvedon, Star & Fleece, sections through quarry 1042 (after Ennis 1998, Fig. 9a).

their stratigraphic position. Where no stratigraphic evidence was available, the excavator considered that undated features were post-medieval or modern. Sherds of Roman pottery were present in a number of post holes, but in insufficient quantity to enable satisfactory dating (Martin n.d., 27). Post holes containing Roman sherds are confined solely to the area of the former Roman gravel quarry, and it is likely that Roman pottery within the post hole fills are residual and are derived from the underlying Roman quarry pit fills.

A variety of ditches ran across the area (Fig. 3). Ditch F1007 was aligned north-west to south-east and was perpendicular to the High Street. Ditches F80, F82 were located during the evaluation and had a similar orientation. A variety of ditches followed north-east to south-west alignments. Ditches F1011, F1085 and F1080 were located in the centre of the site and terminated with butt ends. Two further ditches, F1112 and F1073, were located at the south-eastern end of Trench 7. Ditch F1073 was curved in plan and cut into ditch F1112, which was parallel to ditches F1080, F1085, etc. The ditches are interpreted as boundary ditches, defining properties or plots fronting onto the High Street.

A variety of pits and post holes were located across the area. Pit F1029 contained a copper alloy spoon (SF6, Fig. 6 No. 4). Ten of the post holes were grouped together as pairs, e.g. F1019, F1025 and F1065, F1067. These are interpreted as light industrial or agricultural structures, perhaps constructed as part of the brewery. A similar alignment of paired post holes was present in previous excavations c.100m to the west of the present site (Rodwell 1988, 8) and is interpreted as a structure. Similar pairing of post holes are present at other sites in south-east England, e.g. Village Farm, Elstow, Bedfordshire (Shepherd forthcoming).

ROMAN POTTERY
Andrew Fawcett

Introduction
The site of the former Star & Fleece at Kelvedon yielded 2957 sherds of Roman pottery weighing 49.591kg from 24 features with a total of 52 contexts. The site was dominated by one main deep feature, a large elongated quarry, F1042, which produced 80% of the pottery from the entire site. The remainder of the archaeological features comprised ditches, pits, post holes and gullies. This report focuses on the pottery from the quarry, describing it chronologically by means of the accumulation of deposits within it. Through the interpretation of fabric, form and the use of quantitative techniques, a 'socio-economic' statement can be made allowing comparison with other sites. This will reveal information about the

ceramic products arriving at Kelvedon, their origin, function and date.

Methodology
Generally the pottery recovered from the site is in poor condition, consisting mainly of small undiagnostic coarsewares. The pottery was recorded by context and feature; pro-forma sheets were used to record the fabric, sherd count, weight (in grams), general class of vessel (jar, bowl, dish etc.), the presence of rim, base, handle or body sherds, condition, decoration and estimated vessel equivalents (EVEs).

The results of recording the pottery from the quarry are set out below, quantified by sherd count, weight and EVEs. The alphabetical codes refer to those used (below) in Fabric Description. The numbers in bold, which occur alongside, refer to the codes employed at Chelmsford (Going 1987). The codes used for vessel forms (e.g. G, G24, F7.4) are also those employed at Chelmsford (Going 1987, 13-54). The latter is an important study of Roman ceramic data in the county and the site is only a few miles south-west of Kelvedon. It should be noted that amphorae and storage jar fabrics are excluded from the percentage of weight calculation due to their heavier weights which would distort the final results. Due to the nature of the deposits, and the condition and type of pottery, it was not found useful to express every fabric in each context on a point scale of abrasion; nevertheless; those fabrics which are clearly in better, or worse, condition are commented on.

Fabric Description
Fine wares

SGSW **60** (South Gaulish samian ware)
All the samian ware in this fabric originates from La Graufesenque and all examples, except one, occur in the quarry. The dominant form is the Drg27 cup; only one sherd is decorated, a fragment belonging to a Drg36 rim

CGSW **60** (Central Gaulish samian ware)
The production centres of Les Martres de Veyre and Lezoux make up the products of Central Gaul. They have a slightly different distribution pattern compared to those from South Gaul. The largest number are found in the later contexts of the quarry, although they do occur sporadically in the lower half of the feature. Nearly all examples, compared to the rest of the assemblage, are in poor condition. Single examples comprise Drg18/31, 31, 36 & 38 the remainder are Drg30 and 33.

COLC **1** (Colchester colour-coat)
Two beaker sherds were found in the quarry.

NVCC **2** (Nene Valley colour-coat)

The largest quantities of this fabric occur in the later phases of the quarry. At Chelmsford the quantity of NVCC increases around the middle of the 3rd century, becoming the most commonest fineware by the 4th century (Going 1987, 3). This fabric is represented by flagons and beakers. Decoration is restricted to rouletting.

OXRS **3** (Oxfordshire red colour-coat)
Decoration occurs as indentation and occasional white painted fragments. Forms are restricted to bowls and jars. The remaining examples are even smaller and abraded. The forms at Kelvedon are *c*.mid 4th century (Young 1977) and as with NVCC occur in later contexts, suggesting both are residual. This trend is well documented in Essex e.g. Braintree (Drury 1976, 46) and Chelmsford (Going 1987, 115).

HAX **4** (Hadham oxidised red wares)
This industry is not fully understood in terms of dating, fabric and form; however, it is known that the main expansion of this industry at Hadham, Hertfordshire, is *c*. AD 270. Only small undiagnostic sherds are found in the later contexts at Kelvedon.

?TN (Terra Nigra)
Only one small uncertain and undiagnostic sherd was noted in 1102 within the lower half of the quarry.

Glazed wares

SEGL **10** (South-East English glazed ware)
This fabric is rare at Kelvedon and occurs in contexts in the quarry that are dated to the late 1st and early 2nd centuries. The fabric, which originates from Staines, Middlesex, is a rare example of Romano-British glazed ware. The only form present is a hemispherical bowl (copy of Drg37) decorated with yellow/white vertical hairpins.

Mica dusted wares

MIC **12** (Romano-British mica gilt ware)
Only one small sherd occurs in a hard, light grey fabric with darker grey burnished surfaces which are abundantly covered with silver mica flakes. The fabric is probably local in origin.

White slipped red ware

HAWO **14** (Hadham white slipped ware)
Another product of the kilns at Hadham, Hertfordshire. This industry again had its largest expansion in the later Roman period and is found in 3rd and 4th-century contexts. The sherds are mostly undiagnostic. One small mortaria fragment was also recovered in this fabric.

Red ware

?FSR **18** (Hadham fine slipped red ware)

Only one ?body sherd was present in a 4th-century context within the quarry pit. It resembles HAWO, but it is much harder.

LEST **19** (London-Essex stamped ware)
This fabric, which originates in the Hadhams on the Hertfordshire/Essex border, is represented at Kelvedon by one body sherd. It is decorated with stamped circles and is derived from a cylindrical bowl, a copy of a Drg37.

RED **21** (Miscellaneous oxidised red ware)
Most of the sherds are small and undiagnostic. It is thought that the majority of these wares may be products of the Colchester industries (Going 1987, 6). These sandy fabrics are difficult to distinguish because they contain varying amounts of quartz often with sparse calcitic inclusions.

White ware

VRW **26** (Verulamium region ware)
This regional import originates from the kilns at Brockley Hill, Bricket Wood and Verulamium, Hertfordshire. The peak of this fabric at Chelmsford (Going 1987, 106-8) was ceramic phase 2 (*c*. AD 80-120/5) and similarly the largest number of sherds at Kelvedon is found in contexts dated Flavian period to the early 2nd century. Unfortunately most sherds are small and abraded; only one is diagnostic and belongs to a flagon neck. Four undiagnostic mortaria sherds were also recovered, all from later Roman contexts.

Buff ware

COLB **27** (Colchester buff ware)
The majority of sherds in this hard fabric are in good condition although undiagnostic. Only two forms are present, a flagon and a deep-sided bowl. The majority of examples occur in late 1st- and early 2nd-century contexts. Mortaria sherds are present.

NGMO **28** (North-eastern Gaulish mortaria)
The source for this fabric is not clear: it may be northern France or possibly south-east England. The fabric is hard, but fine, with an off white/cream surface. Only one small undiagnostic sherd is present in a Flavian to early/mid 2nd-century context.

BUF **31** (Unspecified buff wares)
These unattributed wares are mostly very small and of little diagnostic value. One sherd could be assigned to the shoulder of a flagon. At Chelmsford these fabrics were found to be most common in the 1st and 2nd centuries and thought to be largely of local origin (Going 1987, 7), a pattern which is repeated at Kelvedon. In general they are hard and sandy fabrics which contain variable amounts of quartz. A small number of undiagnostic mortaria sherds are also present in this fabric.

Grey ware

NKG **32** (North Kent grey ware)
Although only a small number of sherds are present they all belong to drinking vessels and are found in Flavian to early 2nd-century contexts. It is thought this fabric may have been produced locally or in London (Going 1987, 7).

LOND **33** ('London' wares)
Only a small number of sherds are recorded. They have a date range at Kelvedon of Flavian to the early 2nd century. No diagnostic sherds are present. One example is decorated with a compass-drawn half circle.

HAB **35** (Hadham black surfaced ware)
Again only a small number of sherds in this fabric are present. The industry extended from the 2nd century to the end of the Roman period. The majority of examples occur in the later contexts at Kelvedon. Dishes and jars are the only forms present.

HAR **36** (Hadham grey wares)
As with many of the products of the Hadham industry the date range of this product is not fully understood; however, it probably extended throughout the Roman period. Only one form, a bowl, has been identified in a slightly later Roman context.

HGG **37** (Highgate grey ware)
All the sherds in this fabric are from beakers, a number of which have a white slip over barbotine decoration. All the sherds of this regional import occur in mid/late 1st to early 2nd-century contexts.

GRF **39** (Fine grey wares)
This fabric occurs in almost every context. At Chelmsford it appears in every ceramic phase; however an abnormally high percentage was noted in phase 6/7 (later 3rd to early 4th centuries). The latter is thought to represent an attempt to revive the industry (Going 1987, 8). This trend appears to occur at Kelvedon in context 1032 and to a lesser extent in context 1040. The assemblage is dominated by dishes, jars and beakers. The majority are undecorated, but there are occasional burnished examples.

BB1 **40** (Black burnished ware 1)
The origin of this fabric is the Poole/Farnham area, Dorset. Only a scatter of small sherds are present in this fabric, mostly one sherd in each context. Two bowls have been identified and these were both found in 1031, a pit with post-medieval pottery. The sherds are undecorated, although burnished.

BB2 **41** (Black burnished ware 2)
At Chelmsford this fabric occurs sporadically in c.2nd century contexts and is most prolific from the 3rd to mid 4th (Going 1987, 8). However, at Kelvedon this fabric is found only in Flavian to early/mid 2nd-century contexts. Only three forms have been noted, a jar, bowl and dish. Decorated examples have the well known lattice pattern.

AHFA **43** (Alice Holt grey ware)
Only one small and abraded sherd has been identified of this national import. It was found in the final deposit infilling the quarry.

STOR **44** (Storage jar fabrics)
The storage jar fabrics seem to reflect many of the local coarseware combinations with variable amounts of coarse sand and grog. Decoration is basic, restricted to stabbing and combing. The best examples occur in the quarry where sherds are large with clean sharp breaks.

BSW **45** (Black surfaced or Romanising grey wares)
This is the most dominant fabric at Kelvedon occurring in nearly every context (reflected in sherd count, weight and EVES). At Chelmsford this fabric declines markedly from the 2nd century onwards (Going 1987, 9). As at Chelmsford, the fabric at Kelvedon is dominant in the early period; however, in the later phase of the quarry the sandy grey wares are the most dominant fabric. This trend can also be seen in Hertfordshire. In contexts 1077 and 1091 the fabric appears to be on a par with GRS, the fabric which gradually replaces it. The assemblage is dominated by jars but plates, dishes, bowls and the occasional beaker are also present. Most examples are undecorated, though a small number display cordons and lattice patterns.

GRS **47** (Sandy grey wares)
This fabric replaces BSW (above) around the mid 2nd century at Chelmsford (Going 1987, 9). Its rise can be charted in the quarry where it becomes the most dominant fabric in the later contexts. Most sherds are probably of local origin and undecorated, and as with BSW, jars are the most frequent; nevertheless, dishes, bowls, plates and the occasional beaker are present.

RET **48** (Rettendon type ware)
This is another fabric that is exclusive to later contexts in the quarry. It originates in Essex. Indeed at Chelmsford it first appears in contexts dated to the final decades of the 3rd century with its floruit in the early to mid 4th (Going 1987, 10). Although there are few diagnostic sherds, dishes seem to be dominant; the remainder are jars and an occasional internal white slip appears on some open forms.

WEST (West Stow grey ware)
Only one undiagnostic but decorated sherd of this regional import from Suffolk has been noted (No. 22, Fig. 5).

?NVG (Nene Valley grey ware)
One small uncertain and undiagnostic sherd has been recorded at Kelvedon. It has a very light grey/white fabric with light grey surfaces. The main

inclusions are white clay pellets, fine quartz and red iron ore.

Shell tempered wares

ESH **50** (Early shell tempered ware)
This is probably from southern Essex or North Kent. The sherd is small and undiagnostic. Unlike LRSH the sherd has no shell erupting on to the surface, but in the break it is abundant.

LRSH **51** (Late shell tempered ware)
The source of this product is either Lakenheath (Suffolk) or Harrold (Bedfordshire). The major expansion of this industry was during the 4th century. The fabric is found exclusively in the quarry, where the sherds are in good condition with no sign of vesiculation. The assemblage is dominated by jars on which horizontal rilling is common. At Chelmsford the fabric is at its most frequent from c.AD 360 to 400 (Going 1987, 107; Nos. 5 and 6, Fig. 5).

FABRIC 1
This occurs only once (No. 13, Fig. 6, below) and is part of a tripod leg. The source is unknown, but is possibly an import from Gaul. The date is also unknown. Hard sandy fabric with red/brown smooth to irregular surface. The fracture is irregular with a blue-grey core and abundant multi-sized shell, moderate clear quartz, sparse red iron ore and mica.

Miscellaneous tempered wares

?LIME **52** (Lime tempered fabric)
Four sherds occur in this fabric and represent a bowl. The fabric has been found at Chelmsford in ceramic phases 1 and 2 (Going 1987, 10), and the sherds at Kelvedon are with material of a similar date range. The fabric is hard, sandy and light grey, the surfaces being slightly lighter. It is coarse and contains abundant ill-sorted quartz, common rounded lime, sparse black iron ore and calcite.

GROG **53** (Grog tempered fabrics)
This fabric is represented sporadically at Kelvedon. In the quarry it becomes increasingly rare in contexts above the intermediate phases of infilling. The assemblage is dominated by jars and plates. These fabrics decline soon after the conquest and are replaced by BSW. However, many of the examples occur with material of Flavian to early 2nd century date. The end date for these fabrics is broadly c.AD 70 in Hertfordshire. However, a small number of localised products do continue for a short while after.

Amphorae fabrics

AMPH **55** (South Spanish amphora; Dr20)
A small number of undiagnostic sherds were found at Kelvedon and part of a handle. The Dressel 20 is a globular olive oil carrier which originates from the Guadalquivir valley in southern Spain.

AMPH **57** (Amphora of uncertain origin ?London 555/Haltern 70)
A hard, granular fabric with a pink/red core, irregular fracture, powdery surface with a cream slip. Inclusions consist of abundant quartz, rounded limestone, feldspar and mica. The surviving sherd is part of a very abraded solid spike. It may have been a carrier of defrutum or olives. The fabric has clear similarities to the southern Spanish fabrics.

Discussion

The ceramic assemblage from the quarry is characterised by coarsewares in which the fabrics BSW, GRS and GRF dominate. Across the site fine wares, both continental and Romano-British, account for only 6% of the assemblage and, as might be expected, the most common form is the jar. This is apparent when the quarry is divided by its ceramic phases by form based upon EVEs (Table 1).

The significant changes are a decline of jar numbers in the later phase and an increase in bowls, dishes and flagons. Plates disappear altogether. It is noticeable that there is a distinct lack of decoration within the assemblage. On coarseware vessels decoration is restricted to occasional stabbing, rilling, lattice designs and burnishing. The few fine wares in the assemblage exhibit colour-coats, and some exhibit slips with occasional rouletting and barbotine decoration.

The majority of the pottery, especially the coarsewares, from the Star & Fleece is probably of local origin, from Colchester and Chelmsford, because Kelvedon is located on the main road between these two centres. Table 2 presents a breakdown of fabrics from contexts 1140 up to and including 1091 (the basal and lower phase of infilling of the quarry). These contexts are consistent with the Flavian period through to the early/mid 2nd century. Continental imports comprise samian ware from South Gaul, which is the most common; however, it does occur in association with samian from Central Gaul, which is less numerous and in some cases in considerably poorer condition. The only other imports present are three sherds of Dressel 20 amphorae.

The coarseware assemblage is dominated by the three fabrics of BSW, GRS and GRF which account for c.75% of the assemblage. The majority of regional imports originate from Hertfordshire and London (VRW, SEGL, HGG, HAR and possibly LOND, LEST and NKG). Others originate from Suffolk (WEST) and possibly south-east England (NGMO, NKG & BB2). One of the significant absentees from these phases is Colchester colour-coats, an industry which commenced c.AD 120. Similarly, the majority of forms and fabrics relate to the Flavian period and the early 2nd century, a typical example being SEGL (AD 70-120). This date range would also account for

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Quarry Group (Fig. 5)

1. 1032 GRS B6.1
This bowl is in a hard sandy fabric with a dark blue-grey core and lighter surfaces. The main inclusions are abundant ill-sorted quartz and quartzite with sparse irregular calcite/lime. Burnished bands can clearly be seen on both internal and external surfaces. The internal surface also has a zig-zag pattern level with the flange.

2. 1032 GRS G
Jar with an everted rim in a hard fine sandy fabric. The external surface is burnished to a high degree; internal burnishing is confined to the rim area. The internal surface is light grey. The external surface is of the same colour but where the burnishing occurs it has a brown tinge. The core is dark grey with orange margins. The main characteristic of the fabric is abundant mica which can also be seen on the surfaces.

3. 1032 RET B6.1
Bowl with a short undeveloped flange, poorly executed. The fabric is hard and sandy with a harsh feel due to the abundant, ill-sorted quartz which erupts on to the surface. The core is dark grey with a lighter blue-grey surface.

4. 1032 RET G25
A hard sandy fabric, blue-grey throughout, with an irregular feel. The fabric is dominated by abundant quartz, but rounded black iron ore and flint are more prominent. This jar is also similar to the G24 class; however, the angle of the rim, which is slightly undercut, and the remains of the neck are closer to G25.

5. 1032 LRSH F305
Jar with classic undercut rim of the South Midlands shell tempered industry. Close to form 305. The fabric is fairly hard with a soapy feel, an irregular fracture, but smooth surfaces. The surface colours vary from black to grey with a black core. The main characteristic is abundant fine to medium shell flakes which erupt on to the surface.

6. 1032 LRSH F211
Small fragment of a dish, close to form 211. The fabric and feel is the same as F305 (above), the only difference being this example has a light brown internal surface.

7. 1040 HAR C
Bowl with frilled rim in a very hard blue-grey fabric which has a slightly irregular fracture. The outer surface and rim are burnished excluding the internal surface. The fabric is slightly micaceous, dominated by quartz and sparse black iron ore.

8. 1092 SEGL F7.4
Copy of a Drg37, close to form 7.4. Hard sandy orange fabric, distinguished by the lime green glaze and yellow/cream vertical hairpins which decorate the bowl's external surface. The internal surface is also glazed.

9. 1092 STOR G44.5
Very hard fabric with a blue-grey core with a thin orange margin on the internal side. The surface is dark grey. The surface is fairly smooth but it has many elongated cracks and irregular voids. Light grey clay pellets and sparse large flint dominate the fabric.

10. 1092 BSW C22
Fine fabric with a medium grey core and blue-grey burnished surfaces. The fabric is slightly micaceous with rare medium quartz.

11. 1092 GRS C16
Bowl with a prominent hooked rim. Hard sandy fabric with a medium grey core and light grey surfaces. Sparse calcite inclusions and abundant quartz.

12. 1092 GRS G
Jar, not easily categorised. Short, squared off rim. The fabric is hard and sandy. The core is light grey with a slight brown tinge. The surfaces are dark grey. The main inclusions are ill-sorted quartz and rounded black iron ore.

13. 1092 FAB1
Remains of a tripod leg. No other sherds from this vessel were found and no sherds of a similar fabric were found. The angle of the leg is determined by a smoothed wear surface on the base of the leg.

14. 1098 GRF H
Beaker, thin-walled vessel in a fine sandy fabric. It has a very slight lip on the underside of the rim. The fabric is light grey with a burnished dark grey outer surface. Ill-sorted, mostly fine quartz, although occasional larger grains occur, and abundant mica.

15. 1098 STOR G44
Vessel with a narrower neck compared to the previous example. Row of stabbing below the neck. The very slightly undercut rim may be the result of poor manufacture because it is not consistent around the whole vessel. The fabric is harsh and sandy with a hackly fracture. The core is light grey with a medium grey surface. The main inclusions are grey grog with sparse quartz and calcite.

16. 1101 GRF G8
Fine, light grey fabric with medium grey surfaces. A small globular jar with a burnished external surface. The rim is slightly damaged so the angle is difficult to ascertain. The fabric has common occurrences of ill-sorted quartz
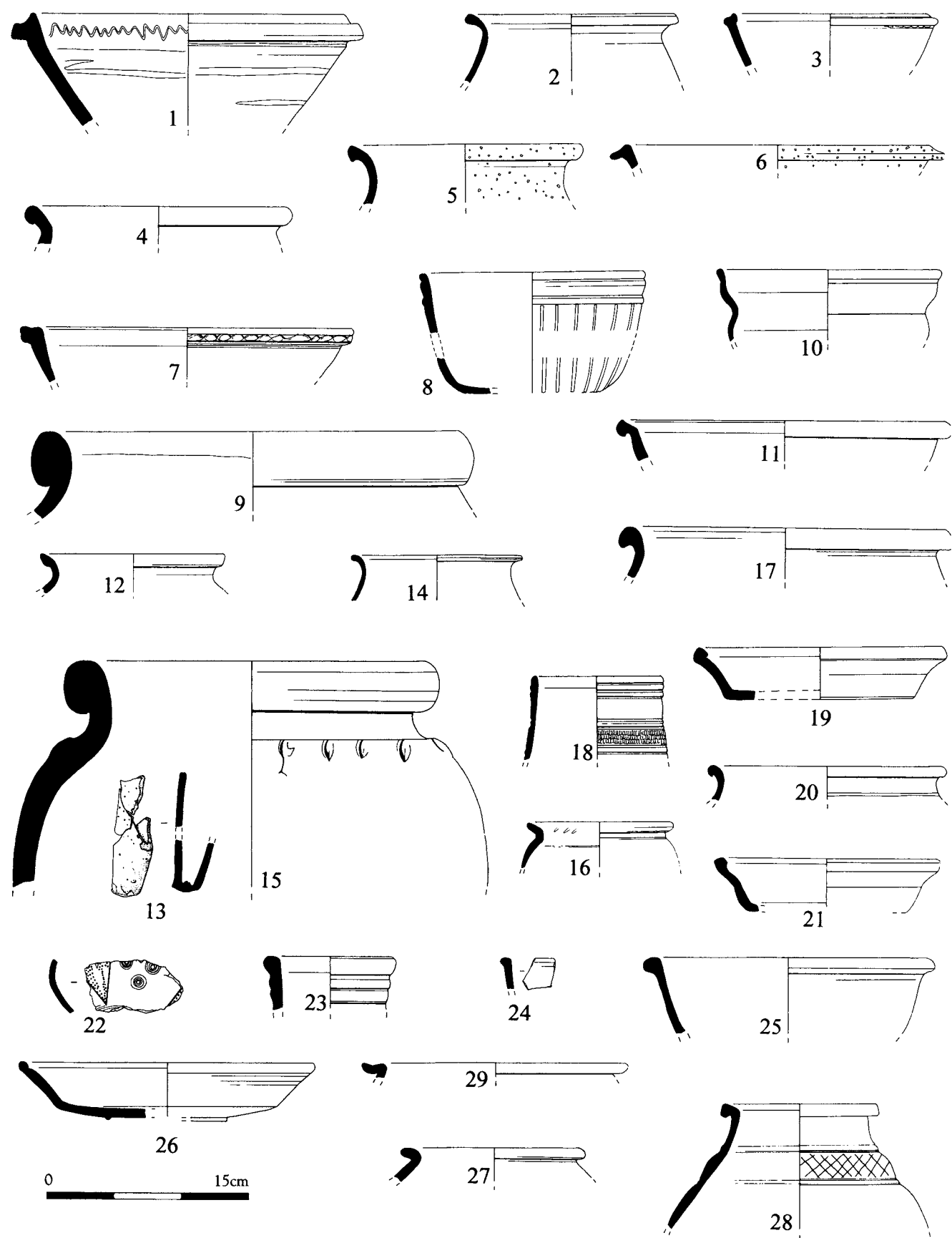
Fig. 5   Kelvedon, Star & Fleece, Roman pottery (scale 1:4).

Quarry Group (Fig. 5)

17.	1102	BSW G24	Hard, slightly sandy fabric with medium grey core, brown/orange margins and dark grey surfaces. The rim appears to have been burnished. Inclusions comprise quartz, sparse fine grog and lime/calcite.
18.	1103	GRF H	Beaker, only a small proportion surviving. It has a fine micaceous sandy fabric with a light grey core and medium grey surfaces. The surface is smooth and has at least one zone of rouletted decoration.
19.	1103	BSW A2	Platter in a hard, slightly soapy, sandy fabric with a light grey core. Thin orange margins and patchy burnished surfaces. The main inclusions are sparse quartz, sparse to common grey grog and rare large black flint.
20.	1106	?HAR G	Very hard, fine fabric with a light grey burnished surface which appears in bands. It is close to forms in G23. The core is medium blue-grey. The fabric is micaceous with abundant fine quartz and sparse black iron ore.
21.	1106	GROG A2	Small sherd from a platter. It has a brown core and black surfaces. The internal surface is burnished. Although a fairly hard fabric it has a slightly soapy feel and is tempered with abundant brown grog. Some clear quartz is also present.
22.	1114	WEST	Fabric represented by a single sherd from a bowl. One of the few decorated sherds at Kelvedon, it has stamped circles and dotting within triangles. The fabric is hard, slightly sandy, with a medium grey core and dark grey surfaces. The fabric is fine and has abundant horizontal fine voids and sparse burnt out ? organics.
23.	1135	COLB F154	Few of the sherds in this fabric are diagnostic and this sherd from a flagon is in poor condition. A fine, soft white to buff fabric throughout, with sparse mica, fine red iron ore and common fine horizontal voids.
24.	1135	GRF C14	Hard fabric with a medium grey core and dark grey highly burnished surfaces. Only a small sherd. The fabric has common fine mica and common irregular calcitic inclusions.

Other Features (Fig. 5)

25.	1014	HAB B2-4	Dish in a hard fabric with a medium grey core and black burnished surfaces. The fabric has an irregular fracture and is dominated by abundant, fairly well-sorted dense quartz. Other inclusions are sparse mica and red and black iron ore.
26.	1024	BSW A2	A large percentage of this plate was recovered, including part of the footring. It is a hard fabric with both a slightly soapy and sandy feel. The surfaces are dark grey to black with a small amount of burnishing below the rim on the external surface. The core is mostly light grey, although in parts it is brown. The fabric is a combination of sparse calcite, common grog and quartz and fine ferrous inclusions.
27.	1048	BSW G3	Hard, slightly soapy fabric with pimply black surfaces. The core is grey with orange margins and inclusions of ill-sorted quartz and grog with sparse calcite.
28.	1049	BSW G17	Hard slightly soapy fabric. The core is light grey with orange margins. The external surface is dark grey and slightly burnished. The jar is decorated with a band of lattice enclosed by two cordons. The fabric has common quartz, grog and sparse black ferrous inclusions.
29.	1064	GRS C16	Reed rimmed bowl in a hard sandy fabric. The core is light grey with orange/brown margins. The surface of the rim appears smoked, a feature found on many of the Verulamium region ware examples; however the inner surface is light grey. Inclusions are abundant, ill-sorted quartz and mica, sparse red iron ore and calcite.

the mixture of Southern and Central Gaulish samian ware, and in particular products of the latter from Les Martres-de-Veyre. The coarseware forms also confirm this date range e.g. the majority of jars are those from the forms within G17 (necked jars often with beaded and out-turned rims) and G19 (recurved profiles with a variety of rims) which date to the pre-Flavian period and the early 2nd century (Going 1987, 24-25). Similarly, the platters are mostly from the A2 range (those with convex or S-shaped profiles) and are dated pre-Flavian to the end of the 1st century (Going 1987, 13). In comparison with the dating sequence at Chelmsford (Going 1987, 106-116), the pottery from the lower contexts of the quarry is broadly comparable to ceramic phases 1 (c.AD 60-80), 2 (c.AD 80-120/125) and perhaps extending into 3 (c.AD 120/5-160/75).

Table 3 presents the latest phases of the quarry fill (1032 and 1040), although these layers are slightly more disturbed with small amounts of earlier material, for example, CGSW, COLB and

GROG; however, these fabrics are few in number and are in poor condition. The pottery in these contexts is dated to the later 3rd century and to the 4th. There are no continental imports (see above); however, these contexts are characterised by the arrival of Romano-British rural nucleated fineware fabrics, for instance, NVCC (Lower Nene Valley) and OXRS (Oxfordshire potteries).

The coarseware assemblage in this period also changes, reflecting the later date. There is a significant presence of LRSH (from Harrold in Bedfordshire) and later products of the Hadham kilns (HAWO). Another trend is the displacement of BSW by the GRS and GRF fabrics which now account for around 40% of the assemblage whilst BSW is 9%. Similarly, RET now appears, a fabric datable to the final decades of the 3rd century (Going, 1987, 10). Many of the coarseware forms in BSW and in particular GRS and GRF are those with a long life (G24, oval bodied jars and G25, high shouldered jars). Nevertheless, a significant number of forms are those dated to the later period (G27, necked oval bodied jars with out-turned squared and beaded rims, B6 dishes/bowls which are fully flanged). The association of LRSH and OXRS is a common later trend which has been noted at other Essex sites, for example, the small town of Heybridge (Wickenden 1986, 36-44). The later

Table 1. Quarry F1042, analysis of forms.

Ceramic Phase	Jar	Dish	Bowl	Flagon	Plate	Cup	Mortaria	Beaker
Flavian to early/mid 2nd C	11.43 (67%)	1.62 (10%)	1.40 (8%)	0.21 (1%)	0.8 (5%)	0.52 (3%)	-	0.82 (5%0
Later 3rd to 4th	4.04 (44%)	1.82 (20%)	1.82 (20%)	1.00 (11%)	-	0.07 (1%)	0.11 (1%)	0.29 (3%)

Table 2. Quarry F1042, ceramic phases 1-3 (Flavian-early/mid 2nd century).

FABRIC	SHERD No	%	WEIGHT	%	EVES	%
AMPH	3	Present	885g*	-	-	-
BB2	4	Present	83g	1%	0.35	2%
BSW	665	42%	7719g	48%	7.67	48%
BUF	68	4%	614g	4%	-	-
CGSW	10	1%	199g	1%	0.19	1%
COLB	39	2%	702g	4%	0.51	3%
COLMB	1	Present	8g	Present	-	-
ESH	1	Present	3g	Present	-	-
FAB1	3	Present	37g	Present	-	-
GRF	187	12%	1155g	8%	2.09	13%
GROG	33	2%	290g	2%	0.06	Present
GRS	362	22%	4507g	28%	2.89	18%
HAR	11	1%	72g	Present	-	-
HGG	3	Present	16g	Present	0.08	1%
LEST	1	Present	12g	Present	-	-
LIME	4	Present	149g	1%	0.15	1%
LOND	3	Present	16g	Present	-	-
MIC	1	Present	21g	-	-	-
NGMO	1	Present	54g	Present	-	-
NKG	5	Present	76g	Present	0.10	1%
RED	17	1%	207g	1%	-	-
SEGL	5	Present	60g	Present	0.19	1%
SGSW	25	2%	174g	2%	0.75	5%
STOR	163	10%	15357g*	-	0.98	6%
TN	1	Present	4g	Present	-	-
VRW	10	1%	81g	1%	-	-
WEST	1	Present	21g	Present	-	-
TOTAL	1627		16280g		16.01	

* excluded from weight calculation

deposits in the quarry can be placed toward the end of ceramic phase 7 (c.AD 300/10-360/70) and securely into 8 (c.AD 360/70-400+) at Chelmsford (Going 1987, 110-116).

The dating of the middle phases of the filling in of the quarry is problematical; there are fewer sherds and diagnostic examples are sparse. Those which can be identified are mixed, dating to the early and late phases. The pottery in these contexts is also in a generally poor condition. Joins also occur with the upper half of the earlier phase and lower half of the later phase. However, a small number of sherds (COLC and COLBM) date to the mid 2nd and early 3rd centuries which may indicate activity around this period.

The other features excavated on the site are not securely stratified and often contained few sherds, in poor condition, with little diagnostic value. Nevertheless, a number clearly contained pottery contemporary with the earlier phase of the quarry pit (F1011, F1023, F1036 and F1047) and this is demonstrated by both fabric and form. Interestingly, analysis of the form percentages shows a direct comparison to the earlier phases of the quarry pit (Table 4).

The pottery assemblage from the Star and Fleece supports the interpretation of the infilling of the quarry pit and also evinces trends comparable with sites across Essex.

Table 3. Quarry 1042, ceramic phases 7-8 (later 3rd to 4th century).

FABRIC	SHERD No	%	WEIGHT	%	EVES	%
AHFA	1	Present	11g	Present	-	-
AMPH	2	Present	334g*	-	-	-
BB1	2	Present	13g	Present	-	-
BSW	56	8%	624g	9%	0.72	9%
BUFM	4	1%	89g	1%	-	-
CGSW10	1%		47g	1%	0.04	Present
COLB5	1%		24g	Present	-	-
COLBM	3	Present	171g	3%	0.11	1%
COLC	1	Present	4g	Present	0.12	1%
FSR	1	Present	22g	Present	-	-
GRF104	16%		1030g	15%	1.58	20%
GROG	2	Present	18g	Present	-	-
GRS	162	24%	2007g	30%	1.54	20%
HAB	16	2%	132g	2%	0.14	2%
HAR	3	Present	54g	1%	0.12	1%
HAWO	47	7%	303g	5%	0.02	Present
HAWMO	1	Present	8g	Present	-	-
HAX	4	1%	48g	1%	-	-
LRSH	74	11%	727g	11%	1.17	15%
NVCC	29	4%	309g	5%	0.98	12%
NVG	1	Present	2g	Present	-	-
OXRS	57	9%	469g	7%	0.54	8%
RED	11	2%	58g	1%	-	-
RET	55	8%	467g	7%	0.89	11%
STOR	15	2%	1463*	-	0.04	Present
VRMO	3	Present	92g	1%	-	-
VRW	1	Present	22g	Present	-	-
TOTAL	669		6751g		8.01	

* excluded from weight calculation

Table 4. Forms present in Roman deposits other than the quarry 1042.

Jar	Dish	Bowl	Plate	Cup	Mortaria	Beaker
1.83	0.27	0.28	0.29	0.17	0.04	0.15
60%	9%	9%	10%	6%	1%	5%

ROMAN BUILDING MATERIALS

Andrew Fawcett

A total of 761 fragments of Roman building material, weighing 40,731g, were recovered. The Roman tile (Table 5) is unremarkable. Most of it was from quarry F1042. It is fragmentary with few joining pieces, and the only measurable dimension is depth. The majority of tile comprises orange and reddish fabrics with varying amounts of sand and occasionally chalk. Some fragments were reduced completely. Detailed fabric analysis has not been undertaken because all the examples were various combinations of the above. This compares with the study of material from Coggeshall (Major 1995, 99) and Heybridge (Wickenden 1986, 21), both in Essex, where it was not considered useful to further divide the fabrics because of the variability of clay deposits in the county. It is probable that the tiles were locally made. There are no examples of the pale gault, clay fabric found on other sites in Essex (Major 1995, 99; Wickenden 1986, 21).

Tegulae comprise 16% of the assemblage occurring in contexts 1012, 1030, 1032, 1040, 1076, 1090, 1101 and 1102. Thirty-six measurable flanges were recorded with a height range of 30-50mm; all but five are in the range 35-46mm and the average is 41mm. The internal height range of flanges is 14-30mm, excepting three fragments. The majority occur in the short range of 15-24mm, and the average height is 21mm. The actual range of *tegulae* depths (the unraised flat mid section of the tile) is 15-33mm, all but five fragments are in the range of 18-23mm and the average depth is 21mm. Only one cut away measurement was possible, and it is 40mm. Only one fragment has markings: thumb and fingerprints on the upper and lower surfaces occurring when the tile was handled when wet. The undersides of all *tegulae* are rough, and all were made using a mould. Only a few fragments exhibit signs of being knife trimmed when leather hard.

Imbrices represent 3% of the assemblage, and occur in contexts 1012, 1024, 1032, 1040 and 1098. *Imbrex* tiles, in relation to *tegulae*, represent around one fifth of the assemblage. Using a ratio of 7 *tegulae* to 4 *imbrices* (Groarke 1989, 19) based on average weights (*tegulae* 5,820g and *imbrex* 2,470g, Brodribb 1987), the expected weight of *imbrices* in comparison would have been 2,415g. Only 1,208g have been recovered which is fifty percent less of the anticipated weight. The range of depths for imbrices is 10-18mm with an even spread. This depth range is consistent with material recorded from the GlaxoWellcome site, Ware, Hertfordshire, where the average depth is 14mm (Fawcett, HAT Report No.482). Only one marking was observed, a knife scored line, 2mm wide and 4mm deep which runs vertically along one side. It is not known if it runs the length of the tile.

The term 'flat tile' is used here to describe any tile which is flat and cannot be identified as part of a *tegula* or box flue tile. The study follows that applied to material from Great Cansiron Farm (Foster 1986, 205). Flat tile is the most common tile type recovered from the site, accounting for 60% of the assemblage. The range of depths is wide, 14-40mm, with an average depth of 26mm. The thickness of the tiles is plotted against the number of examples so as to highlight peaks and clusters. The results were then compared to the range of values for *tegulae* thickness (see above), because the flat tile category contains many indistinct *tegulae* fragments. The results show that any flat tile with a depth of 26mm to 15mm can safely be attributed to *tegulae*. The cut-off point for thickness of *tegulae* recorded at Great Cansiron Farm was 28mm (Foster 1986, 205). Ninety-four pieces of flat tile fall into this category which equates to 58% of the total. The remaining 42% are true flat tiles. It is not possible to assign the latter to any other tile group, for example, *bessalis, pedalis* and *lydion*, because of their fragmentary nature. Only a small number of markings were recorded within the flat tile group. They comprise two thumb prints, two rainbow marks, and one sub-conical hole. The latter had a circumference of 30mm tapering to 10mm on the underside of the tile. One fragment, which did not belong to the box flue group, had traces of combing. A three-pronged instrument was used with a width of 27mm. Only one fragment from the flat tile group, from context 1040, may be classified as brick. It is 44mm thick and on the criterion of a thickness of 42mm, used at Coggeshall (Major 1995, 100), it may be considered brick and not tile.

Box flue tile accounted for only 2% of the assemblage, and occurred in context 1032. Only six small fragments were recovered. There were no joins and therefore no full side sections. All pieces were keyed by combing; however, only three fragments are measurable. On one piece a comb with eight teeth has been used with a width of 29mm. No other fragments have complete comb markings. The thickness of all samples is 15mm, except one which is 20mm. The average at Great Cansiron Farm is 16mm (Foster 1986, 205).

The unidentified Roman material comprises 19% of the assemblage, by weight. This figure is

Table 5. Tile categories, breakdown by weight and number.

Type	No	%	Weight (grams)	%
Tegula	50	10%	5,433g	16%
Imbrex	14	3%	1,208g	3%
Flat tile	161	33%	20,914g	60%
Flue tile	6	1%	805g	2%
Unidentified	260	53%	6,679g	19%
Totals	491		35,039g	

comparable with the site at Rayne, which recorded just under 20% of Roman building material as unidentifiable (Groarke 1989, 19).

There is no evidence of the re-use of tile. No mortar adhered to any tile. The quantity of flue tile and roof tile is small suggesting that there was no substantial building complex close by. There is also a lack of vitrified fabrics present which indicates that there was not a kiln close by.

Only five fragments of mortar (197g) were found. All were located in quarry F1042, within the upper fills, L1032 and L1040. All the fragments are white/pale pink, lime-rich mortar with moderate gravel and tile inclusions.

The daub was very fragmentary: 265 fragments (5,495g) were found. It occurred within contexts 1032, 1040, 1077, 1091, 1092, 1094, 1098, 1103, 1106, 1135 and 1138. It was found almost exclusively within quarry F1042, except for six fragments from ditch F1047, and four from post hole F1093. Many fragments have wattle impressions, but none are large enough to identify horizontal or vertical patterning. Five fragments from 1032 and 1040 have small fragments of a light grey finishing coat.

SMALL FINDS

Nina Crummy

The assemblage is composed of mostly Roman objects, though a copper-alloy lace tag and pin are of late or post-medieval date, and a fragment of quern from the same context as the lace tag may also be of similar date.

Among the Roman material casually-lost dress accessories figure large, ranging in date from early to late. The hairpin (Fig. 6, No. 6, SF 48) is likely to be of 2nd-century date, and the wide armlet 1st-century (Fig. 6, No.1, SF 57), while both bangle-type armlet fragments are 4th-century (Fig. 6, Nos. 2-3, SFs 21, 27). The plain finger-ring (not illustrated, SF 31) cannot be dated accurately, though it too may be 4th-century.

The other Roman pieces can all be seen as originating from domestic occupation, though the lead weight (Fig. 6, No. 5, SF 10) could have been used in commercial transactions. A range of non-local stones is present. The quernstones, now only represented by small fragments (not illustrated, SFs 36, 38, 59), came from Germany and could be seen as standard Roman household equipment, while the limestone mortar (Fig. 6, No. 7, SF 37) probably came from the south coast, and is a good quality item. Two fragments of granite, possibly originally wall veneer (not illustrated, SF 33 and context 1040), have not been sourced but may be from the British south-west.

Roman (Fig. 6)

1. SF 57 (1103). Fragment of a corroded copper-alloy tongue-ended strip. Slight curvature and traces of linear decoration on the outer face suggest this may be from an armlet of early form (Crummy 1983, fig. 40; 1992, fig. 5.5, 361-2; Stead 1986, fig. 52, 163-6; Hylton 1996, fig. 58, 13). Length 32mm, width 16mm. Not illustrated: fragment of corroded copper-alloy sheet, possibly part of the object. Length 20mm, width 17mm.

2. SF 21 (1032). Fragment of a copper-alloy armlet with very worn crenellated decoration. Bent, with original diameter probably greater than 51mm. Height 1mm, maximum thickness 3mm. This decoration appears on an armlet fragment from Baldock, Hertfordshire (Stead 1986, fig. 52, 168), and on two complete armlets from graves dated AD 350-70 in the late Roman cemetery at Lankhills, Winchester (Clarke 1979, Table 34, Type D1d, fig. 37, 437).

3. SF 27 (1032). Fragment of a copper-alloy three-strand cable armlet with a hooked terminal from a double-hook fastening. Bent, with original diameter probably greater than 42mm. 2.5mm thick. Similar armlets at Lankhills come from graves ranging in date between AD 330 and 370 (Clarke, 1979, Table 34, Type A2a). Fourth-century graves in Kelvedon have produced several cable armlets (Rodwell 1988, fig. 51, 89-92).

SF 31 (1032). Fragment of a copper-alloy finger-ring. Plain, rectangular section, height 3.5mm, thickness 1mm. Internal diameter approximately 18mm. Similar plain rings have been found on or among the finger bones of 4th-century skeletons at Rotherley, Wiltshire (Pitt Rivers 1888, pl. Ciii, 13), Lankhills, Winchester (Clarke 1979, Table 2, Grave 362, fig. 93, 593), and Colchester (Crummy 1983, fig. 50, 1749, 1755).

4. SF 6 (1030). Copper-alloy toilet or surgical spoon, with small flat round scoop. Length (bent) 79mm. The upper part of the shaft is missing, but does not taper, suggesting that this may have been a double-ended implement. However, some spoons can have very long, almost straight-sided, handles (Brodribb, Hands and Walker 1971, fig. 49, 79; Stead 1986, fig. 56, 249).

5. SF 10 (1032). Lead weight of rough polygonal truncated conical form with off-centre perforation. This was cast in an open mould, with the hole made by pushing a wooden stick through the cooling metal. Height 19mm, maximum diameter 22mm. Weight 52g, approximately two Roman ounces. This small amount suggests a domestic rather than commercial use for the object, though it may have been used commercially for weighing out small and probably expensive items such as spices.
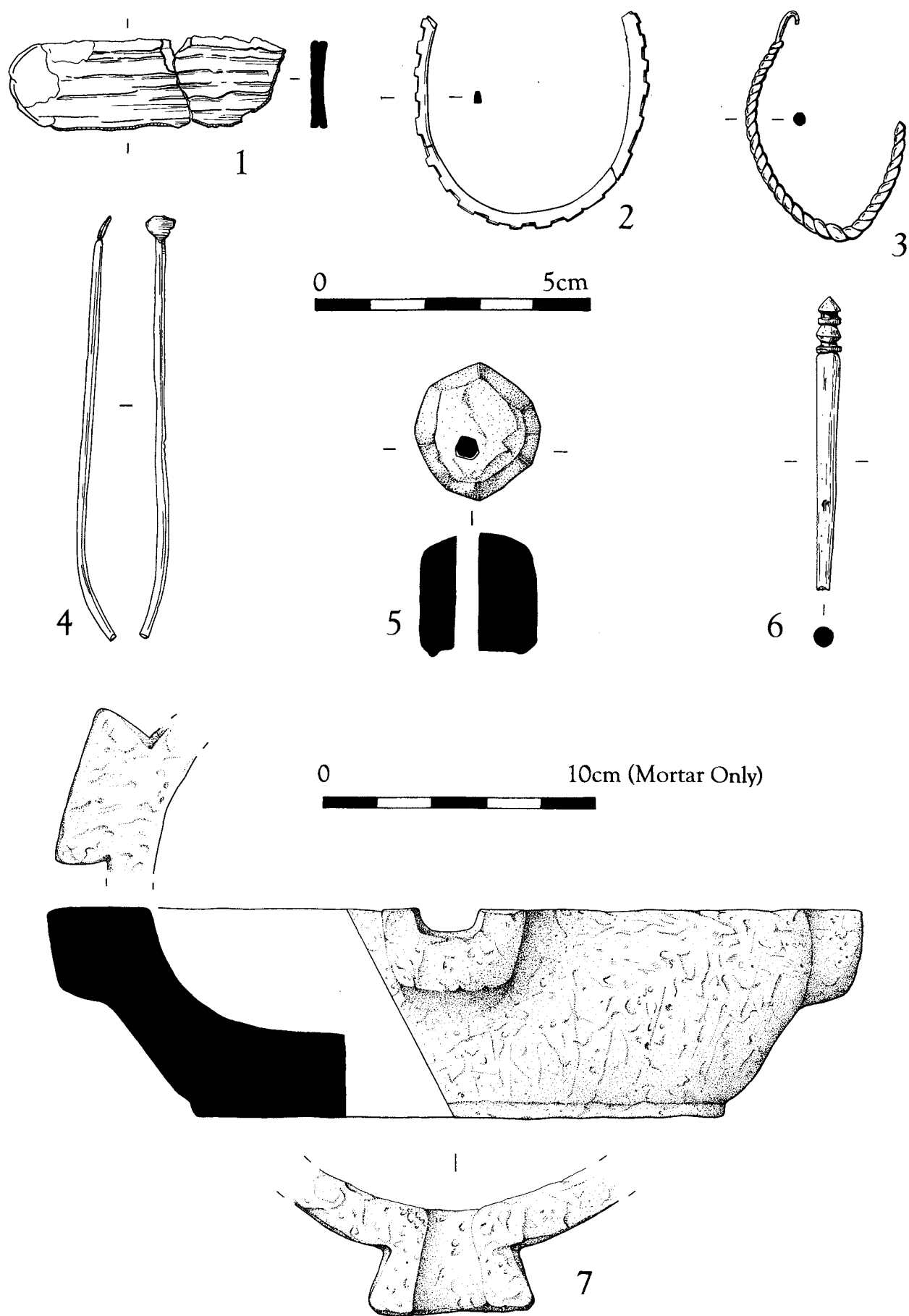
Fig. 6   Kelvedon, Star & Fleece, objects of copper alloy, lead, bone (scale 1:1) and stone mortar (scale 1:2).

6.   SF 48 (1077). Bone pin with decorative head, tip missing. Length 53mm. The head is a variant of an early type with grooves cut into a simple tapering shaft. Here the design has been developed into a bead and reel motif beneath a simple cone, related to Colchester Type 6 pins (Crummy 1983, 21, 24-5). Pins with the head design cut into, rather than standing proud of, the shaft date to the second half of the 1st and the 2nd centuries.

7.   SF 37 (1092). Fragment of a shallow mortar of coarse shelly limestone. The inside surface and rim are smooth, with the working area worn very smooth, the outer wall and flat base pecked. Two lugs remain of the originally four. One is channelled for pouring. Height 79mm, internal diameter approximately 214mm. The source is likely to be either the Purbeck beds of Dorset, or the Bembridge beds on the Isle of Wight. Though the latter are best known for their exploitation in the Anglo-Saxon and medieval periods, they were also quarried by the Romans, who used the stone in the construction of the fort at Portchester (Anderson 1990, 310).

SF 35 (1041). Bone needle fragment, broken across the rectangular eye, length 76mm. The shaft is short and may have been repointed.

SF 38 (1030). Fragment from the edge of a lower-stone from a quern of Mayen lava, with prominent harp dressing on the working surface and worn vertical tooling on the edge. Edge thickness 44mm, fragment too small and edge too worn to assess diameter. Querns of Mayen lava were imported into Britain almost continuously from the Roman conquest through to the late medieval or early post-medieval periods.

SF 59 (1104). Four fragments of Mayen lava, three small and with no worked surfaces, one larger and with a very worn surface, probably part of the thin lower-stone of a hand quern (e.g. Buckley and Major 1992, fig 5.16, 551). Maximum dimensions 95 by 90mm, 28mm thick.

SF 36 (1048). Three small fragments of Mayen lava. No worked surface remains. Probably from a quern.

SF 53 (1092). Bone pin or needle shaft fragment. Length 36mm.

SF 49 (1096). Bone pin or needle shaft fragment. Length 38mm.

SF 33 (1032). Worn fragment of dark brown-pink granite. One smooth but irregularly-shaped long edge remains, with possibly a short damaged length of a right-angled return. The other edges are broken. Both surfaces are smooth, one is slightly irregular, the other flat. Maximum dimensions 121 by 75mm, 41mm thick. Probably used as a cobble stone, but possibly originally used as wall veneer.

SF 62 (1135). Offcut from the edge of a sand-cast lead sheet. Roughly triangular, with the base of the triangle the edge of the sheet, and the apex folded

over and then back on itself. Maximum dimensions 130 by 59mm, 2-7mm thick.

SF 16 (unstratified). Fragment of a tubular bone object, with an internal rebate at each end. The outer face is decorated with longitudinal fluting separated by grooved ridges. The inside shows transverse marks and slight ridges from lathe-turning. Length 42mm.

Medieval

SF 19 (1030). Copper-alloy lace tag, the upper part broken and crushed. Length 25 mm. This tag probably belongs to the post-medieval type made from a piece of sheet metal with the long edges turned inwards to grip the leather or fabric of the lace (Bayley et al. 1985, 47, Type 2).

SF 17 (unstratified). Copper-alloy pin with large flattened globular head of wound wire. Length (bent) 65mm. This belongs to the second of the two types of pin described at Northampton (Oakley 1979, 260-2) and Colchester (Crummy 1988, 7-8), and at Chelmsford is Caple's Type C, in which the head has been stamped onto the top of the shaft using a pair of hemispherically-hollowed punches (Caple 1985, 47).

IRONWORK

Nina Crummy

Twelve iron objects were recovered during the evaluation of the site, and a further 62 were recovered from the excavations. The majority of the ironwork from the excavations is of Roman date deriving principally from the fills of quarry F1042. These finds were of long-lived Roman types which did not allow for more precise independent dating. Iron objects of later medieval and post-medieval date were also recovered.

Roman

The backfilling of quarry F1042 contained a small but interesting assemblage of Roman ironwork apparently deriving from the occupation nearby. A degree of affluence in the local community is suggested by the lock furniture recovered. An L-shaped slide key (Fig. 7, No. 1) was found in late 1st to 2nd century dumping, a padlock key (Fig. 7, No. 2) in 2nd century dumping and a lock bolt with a triple leaf spring (Fig. 7, No. 3) in ?3rd to 4th century silting. Each represented a different type of locking mechanism. The lock bolt (3) was part of a fixed lock for use on a box, casket or chest and opened by an L-shaped lift key with three teeth which compressed the springs so that the bolt could be withdrawn and the lid raised. Similar lock bolts were used on two casket burials of Antonine date from Skeleton Green, Puckeridge (Borrill in Green 1981, Burial XXX fig. 112, l; Burial XLV fig. 115, h). An angled binding (SF 34, not illustrated) from a box

Catalogue of drawn iron objects (Fig. 7)

1. Iron L-shaped slide key of Manning's type 2 (1985, 93 and fig. 25.7) with rectangular-sectioned handle and pierced ring terminal with decorative moulding beneath, shouldered stem and rectangular bit with two pairs of four triangular chisel-cut teeth. Total length 90mm, handle width 19mm, bit length 40mm. SF 51. Context 1106, late 1st to 2nd-century dumping in F1042.

2. Iron barb-spring padlock key with strap handle, the narrower end rolled into a small loop terminal, the wider end turns at right angle into a double-pierced bit. Length 160mm, max. width 28mm. SF 45. Context 1077, 2nd-century dumping in F1042.

3. Iron lock bolt with triple leaf spring, with pierced terminal articulating with a small split-spiked loop with broken arms. Length 98mm, width 30mm. Context 1040, 3rd to 4th century silting in F1042.

4. Iron horse bit link with a looped ring terminal at each end in opposite planes. Length 90mm, terminal diameter 24mm. Context 1041, 3rd to 4th century silting in F1042.

5. Iron oxgoad, small spiral ferrule with long point. Minerally preserved wood from the haft present within the socket. Total length 40mm, diameter 12mm, point length 25mm. Context 1092, late 1st to 2nd-century dump deposit in F1042.

6. Iron needle with oval stem broken before the tip and oval/figure-of-eight shaped eye with suggestion of a groove above. Length 28+mm, width 3mm, eye length 4mm. Context 1032 fill 19, 3rd to 4th century silting in F1042.
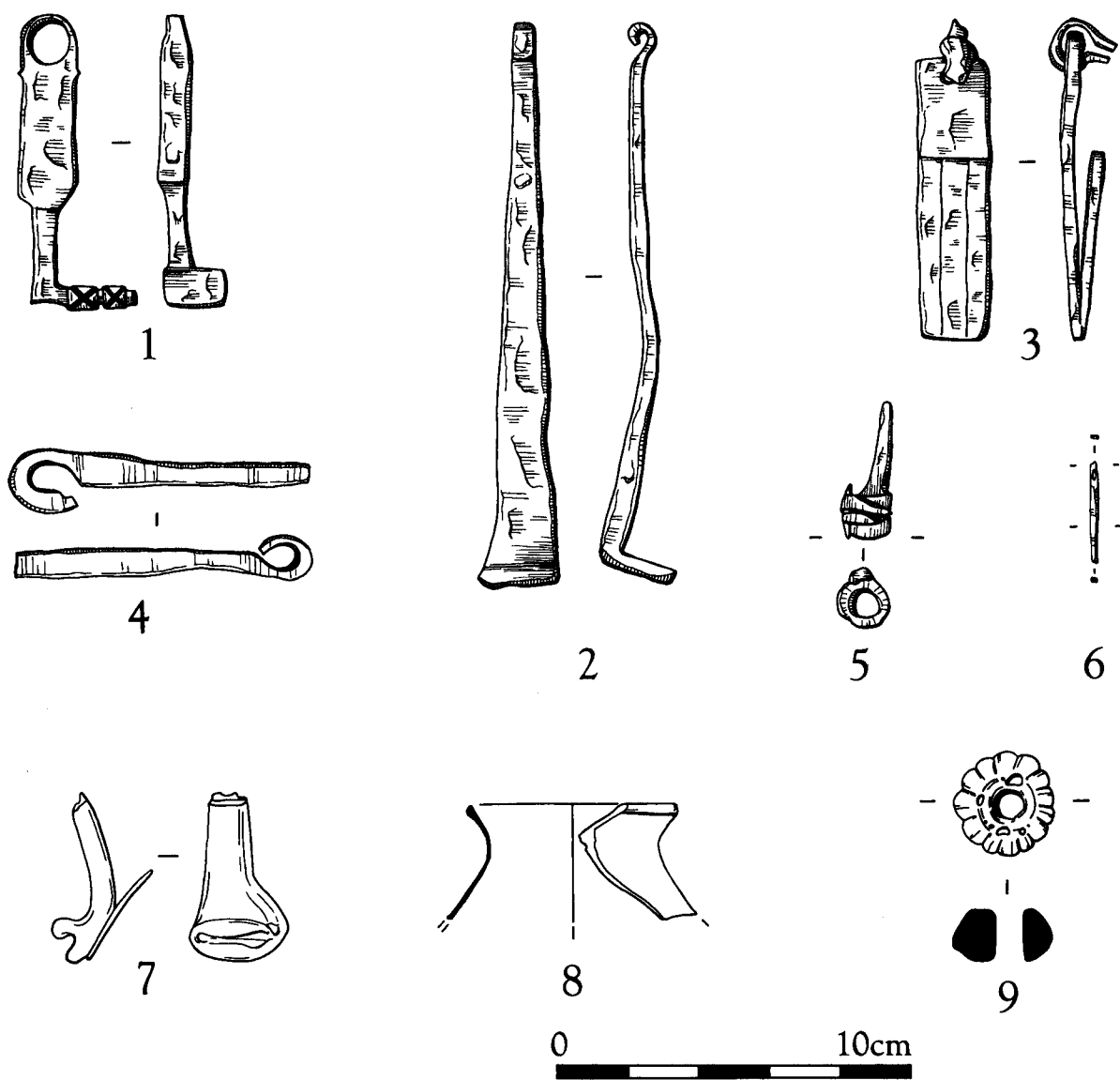
Fig. 7   Kelvedon, Star & Fleece, objects of iron and glass (scale 1:2).

was found in the same context. Also from this deposit was the link from a horse bit (Fig. 7, No. 4) and a wing (SF 32, not illustrated) broken from a hipposandal of Manning's type 1 (1985, 63-5 and fig. 16.1), the most commonly occurring type. These indicate that horses were ridden, probably on a metalled road.

An iron oxgoad (Fig. 7, No. 5) used to urge on a plough team or drive loose animals was found in late 1st to 2nd century dumping. A broken needle (Fig. 7, No. 6) found in a ?3rd to 4th century deposit indicates textile working.

Post-medieval

The basal fill of pit F1029 contained a branch broken from a horseshoe (SF 43, not illustrated) likely to be of later medieval or later date. Amongst the small ironwork assemblage from the upper fill (L1030) was a scale tang knife (SF 40, not illustrated) probably used as a boning knife in meat preparation, a table knife with a bolster (SF 41, not illustrated) dating to the mid 16th/17th century, and a non-ferrous metal plated fitting with a swivel hook the exact use of which has yet to be identified.

Flat, round-headed nails of a type occurring from the Roman period onward were found in very small quantities within various fills of quarry F1042, features cutting through the quarry (F1011, F1078) and an adjacent post hole (F1036). They also occurred in pits of post-medieval date (F1005, F1009, F1029).

Small radio-opaque specks within the iron corrosion products visible in radiographs occurring on the majority of the iron from both Roman and later deposits suggest that the iron was deposited in proximity to debris from metalworking.

GLASS

Hilary Cool

The vessel glass assemblage recovered from this excavation is small but can make a useful contribution to dating the site as, unusually, a high proportion of the fragments can be identified quite precisely. As a whole the group may be dated to the later 1st to mid 3rd century, with all of the closely dated forms belonging to the later 1st to mid 2nd centuries.

Two jugs may be identified with certainty. Catalogue No.1 (not illustrated) is from a long-necked jug of Isings forms 52 or 55. The single ribbed handle is most common on the conical form in use during the later 1st century and into the middle of the 2nd (Cool and Price 1995, 120). Fragments from these jugs are very common in Roman Britain, and one of the few identified fragments from the earlier excavations came from a similar jug (Rodwell 1988, mf 1.D5 no. 5, fig. 62.5). The other jug (Cat. No. 2, Fig. 7, No. 7) was most probably a globular spouted jug with a wide mouth such as those recovered from the Flavian middens at Leadenhall Court, London (Shepherd 1993, 110 nos. 144-51), an example from a late 1st to early 2nd century context at Colchester and another from Claydon Pike, Gloucestershire, dated to the first half of the 2nd century (Cool and Price 1995, 133 no. 1128). Such spouted jugs are not as common as the long-necked jugs like Cat. No.1 but appear to have been in use contemporaneously. It is possible that the yellow/green chip (Cat. No. 7, not illustrated) might have come from another long-necked jug as the thickness of the fragment suggests it came from a handle and this colour was used to make such jugs.

Catalogue

The EVE measurements quoted have been derived using the method outlined in Cool & Baxter 1996.

Blue/green vessels
1. Jug; handle fragment. Elongated bubbles; iridescent surfaces. Angular ribbon handle with central rib. Section (excluding rib) 22x4mm. EVE 0.14. u/s; SF 64.
2. Fig. 7, No. 7. Jug; handle and side fragment. Elongated bubbles; black impurities. Convex-curved side retaining lower attachment of ribbon handle with one pinched projection. Handle section 12 x 4mm. EVE 0.28. 1103; SF 54.
3. Fig. 7, No. 8. Jar; rim and body fragment. Dulled surfaces. Outbent rim, edge fire-rounded; slightly convex-curved side sloping out. Rim diameter 55mm, wall thickness 1mm, present height 30mm; EVE 0.33. 1106; SF 52.
4. Jar or jug?; body fragment. Streaky iridescent surfaces. Convex-curved side curving out to rim or open-pushed in base ring. Dimensions 37 x 35mm, wall thickness 1mm. 1032; SF 25.
5. Bottle; body fragment. Straight side. EVE 0.14. 1103; SF 56.
6. Body fragment. Convex-curved. 1098; SF 55.

Yellow/green vessel
7. Jug? Thick chip from handle. Dimensions 25 x 16 x 9mm. 1032; SF 20.

Glass object
8. Fig. 7, No. 9. Melon bead. Translucent deep blue glass, many large bubbles appearing as voids on surface; heavily worn and chipped in places. Length 16mm; diameter 28mm, perforation diameter 12mm. 1135; SF 58.

A jar is represented by Cat. No. 3 (Fig. 7, No. 8). This has a fire-rounded rim, a feature that appears most commonly to have been used on jars during the 1st and earlier 2nd centuries (Cool and Price 1995, 113). A body fragment (Cat. No. 4, not illustrated) might have come from either a jug or a jar but the form cannot be identified with certainty. The normally prolific blue/green prismatic bottle of the 1st to early 3rd century (Cool and Price 1995, 179) is

represented here by a single body fragment (Cat. No. 5, not illustrated).

Although a small assemblage, this is a useful group as it may well reflect the typical forms in use in Kelvedon during the later 1st to mid 2nd centuries. A survey of the glass vessel assemblages from a wide range of sites in Roman Britain has suggested that during that period the rural and the urban populations were using glass vessels in different ways. The rural populations favoured bowls and bottles while the urban population used a higher proportion of drinking vessels and jugs (Cool & Baxter forthcoming). Small towns were under-represented in this survey, but this tiny group from Kelvedon might suggest that such sites followed the urban rather than the rural pattern of glass use.

The single glass object found was a deep blue melon bead (Cat. No .8, Fig. 7, No. 9). Glass examples like this were in use contemporaneously with the commoner frit melon beads and disappear during the Antonine period (Guido 1978, 100). It has long been suspected that melon beads could have been used to ornament horse harness, and good evidence of this was recently published from the cemetery at Krefeld-Gellep where a horse had been buried wearing a necklace or collar of glass and frit melon beads (Pirling 1997, 58-9, Taf 152)

METAL-WORKING DEBRIS AND RELATED MATERIALS

Jane Cowgill

A total of *c.*8kg of smithing slags and associated materials (193 pieces) were submitted for recording (Table 6). The slag was identified solely on morphological grounds by visual examination, sometimes with the aid of a x10 binocular microscope.

The plano-convex hearth bottoms, smithing slag lumps, hammerscale and tuyères and probably most of the cinder and 'slags' were produced by iron smithing, the fabrication of bar iron and recycled iron into objects. There is an unusually large quantity of vitrified-hearth lining and although it is similar in appearance to those associated with other smithing assemblages some maybe from another high temperature process. The smithing slags are morphologically very variable and represent a heterogeneous assemblage. Those produced by a single smith usually have some consistent characteristics that often relate to the density, form and sometimes the size of, for example, the hearth bottoms produced. The amount of fuel incorporated into the slags also tends to be reasonably consistent. In this assemblage, however, if the hearth bottoms are used as an example, every aspect is variable with some extremely thick and dense fragments from very large hearth bottoms with no charcoal

inclusions (for example 1103), to much smaller examples with very frequent charcoal inclusions (for example 1122). This assemblage therefore probably represents the waste products of a number of different smiths working in the town or perhaps, but less likely, several different smiths working at the same forge.

Charcoal, sometimes in quite large pieces (20 x 20 x 10mm), is the only fuel type present within and associated with the slags (a piece of coal recorded is almost certainly intrusive). Charcoal is a clean, high temperature fuel and is therefore ideally suited for iron smithing. This is the standard fuel used in the Romano-British period although coal is occasionally encountered as an additional fuel type in urban and villa contexts.

The tuyères and vitrified-hearth linings are made from a range of fabrics but these have not been studied for this report. Four pieces have been confidently identified as tuyère fragments. Three were probably cylindrical in form and have well made holes, although less than a quarter of the circumference of the best preserved survives. One tuyère may have been square or rectangular (context 1103) although the straightish edge maybe due to heat distortion.

Many of the pieces of vitrified-hearth lining are fragmentary. This has made the reconstruction of many of these pieces impossible and it is likely that more tuyères exist amongst this group. Much of this material is quite thick (up to 32mm) and the heat has been so intense or of long duration that in a number of instances the slag has penetrated 25mm into the wall. A few pieces, including a tuyère, have probably been repaired. The amount of this material recovered when compared with the amount of slag suggests that either another industry was involved in their generation or that there was some selectivity in terms of the material dumped at this site.

Table 6. Categories of iron-smithing and associated debris by weight and count.

Type	Quantity	Weight (g)
Cinder	18	208
Coal	1	1
Daub	3	23
Hammerscale	*	*
Hearth bottoms	41	5765
Iron objects	4	70
Ironstone	1	274
Unspecified slag	24	262
Smithing-slag lumps	27	644
Slagged stone	4	24
Tuyere	4	376
Vitrified hearth lining	70	632

* Present but not quantified

The slag assemblage discussed here represents only a small proportion of the slag that actually existed on the site because, in accordance with current excavation techniques, only a small section across most features was excavated. The amount of material from quarry F1042 in particular will be a fraction of the amount present because only a 1.5m section was excavated across this 16m+ x 10m feature with a depth of 1.6m.

Most of the metal-working debris from the excavation (6.25kg of a total of 6.4kg) was recovered from the sequence of fills in gravel quarry F1042 (Table 7). The majority of the slag is from the lower 12 fills of the 19 main fills that have been identified, which were deposited before the sand and gravel was dumped over the area (L1114) to seal the pit and create a level and stable surface.

Many of the pieces of slag from the quarry are coated with cess or encrusted with iron, making it difficult to assess the degree of abrasion and their general condition. It is clear, however, that many pieces are fragmentary and more are abraded than the Table 7 suggests. As has been discussed above the assemblage is variable in character and therefore probably derived from more than one smithy or a smithy operated by a succession of smiths over a period of time. The pottery assemblage is equally abraded and this suggests that rather than being primary dumps of rubbish this material is probably redeposited from middens composed of both slag and domestic rubbish that had had time to wear and weather.

The only group from quarry F1042 that may be different is that from L1122. This is the most homogeneous group from the site in appearance and hearth-bottom size, and many of the pieces have large quantities of charcoal incorporated within them. Perhaps more significantly it is the only deposit in which hammerscale was recorded, albeit in fairly small quantities (the slags had been washed so there was very little soil in the bags to check with a magnet). This context was recorded as a small deposit of dumped burnt clay and slag on the northern edge of the cut for the quarry and was initially interpreted as hearth F1121; there was no domestic rubbish amongst it. This material may comprise the only group of primary dumped material from the site.

Conclusion

The metal-working debris from the site is a heterogeneous collection of slags that were mainly used to infill a large Romano-British gravel quarry. There was no evidence for the smithing of iron on or near the site. It is likely that the majority of the assemblage was the waste products of a number of smithies within the settlement or a single one that had been operated by a number of smiths over a period of time.

HUMAN BONE

Tony Waldron

The human remains from this site comprise a total of 22 adult bone fragments. These include nine skull fragments, mostly from the parietal bones, ten unidentified long bone fragments, the distal half of the right humerus and the lateral condyle of the left femur. It was not possible to detemine either the sex or the age at death of this individual and none of the fragments show any pathology.

Table 7. Quantity of slag from the various fills in pit F1042 compared with the pottery information.

Fill	Layer	Context date (century)	Pot condition	Slag wt in g.	Slag count	Slag condition
2	L1139	-	-	661	23	abraded + cess
4	L1138	-	-	115	3	cess coated
?	L1135	1st - Mid 2nd C	v frag. +abraded	97	3	-
9	L1103	1st - Mid 2nd C	293	5	-	
10	L1102	1st - Mid 2nd C	v abraded	912	3	cess coated
12	L1098 L1106	1st - Mid /Late 2nd C	v abraded	52 3506	3 102	cess coated cess coated
13	L1092	1st - Early 2nd C	v abraded	12	1	-
15	L1114	Mid/Late 1st - 2nd C	v abraded	17	1	cess coated
17	L1122	-	-	589	16	-

ANIMAL BONE

A.V. Roberts

Introduction

1108 animal bone fragments were recovered from the investigations at The Star and Fleece site, Kelvedon. 89.9% of the bones come from Roman contexts, the remainder being from Late Iron Age and post-medieval contexts. The bones were recovered by manual excavation. Identification was made using the author's comparative collection and the osteological collection of Liverpool Museum. Measurements were made following von den Driesch (1976) and are recorded in millimetres. Tooth wear in cattle, sheep and pig was recorded following the method of Grant (1982) and described below following O'Connor (1991).

The bones are well preserved, but few are complete having been reduced by breakage or butchery. There is little sign of weathering, less than 1% have been burnt and 4.9% have been gnawed. Ten species were identified: horse, cattle, pig, sheep, dog, cat, red deer, water vole, domestic fowl and duck. 64.8% of fragments were not identified to species, but grouped by type of bone and size of animal.

Horse

Twenty-four horse bones were recovered from nine contexts. The greatest number, 11, came from the upper fill of quarry F1042, 1032, and include a mandible from a horse of *c*.6 years old (Levine 1982). All the bones and teeth, with the exception of a femur from L1032, are adult. No limb bones are complete enough to provide estimates of withers height. There were no indications of butchery, and the only sign of possible disease was an area of porosity around the alveoli of a mandible from 1037. Gnawing was evident on four bones: two calcanei, a third phalanx from 1032; and a second phalanx from 1012. This may indicate that dogs were being fed horse meat, or able to get hold of horse bones.

Cattle

Cattle bones are numerically the most common from the site, being 14.35% of the total. 159 fragments, only nine of which are immature, come from 32 contexts and all phases. All parts of the skeleton are present, the most frequent being the mandible, but only four of these provide tooth wear data. The only bone to provide withers heights suggests an animal of 1.219m at the shoulder, following the method of Matolcsi (von den Driesch & Boessneck 1974). There is no evidence of disease, or bone change, in any of the cattle bones and teeth. Butchery practices are indicated by chop marks on limb bones, mandibles, and skulls, where horn cores have been detached. Metacarpi, metatarsi and humeri have been split

lengthways possibly for marrow extraction or preparatory to working. Gnawing by dogs is found on 11 bones, mostly on the ends of long bones, but also on pelvis and astragalus.

Pig

Pig bones form only 3.3% of all bones, with 37 found in 20 contexts. Most are single bones. The biggest group is again from 1032 with 13 fragments. Apart from teeth the most common bone is the scapula. Tooth wear data comes from two mandibles of a subadult (1114) and a young adult (1103). Most of the bones examined were adult, only seven being immature. There is little evidence of butchery: a scapula (1048) has knife marks, and a tibia (1064) has been chopped through. Four bones have been gnawed: scapula, humerus, ulna and pelvis. There is no sign of disease.

Sheep/Goat

Sheep bones are the second largest group with 13.2% of the total. They may include goat bones, but none were definitely identified. 146 bones come from 26 contexts, with four contexts containing 20 or more bones (1032, 1040, 1103, 1135). The commonest bone is the tibia, followed by the mandible, of which 17 provide tooth wear data. The ages at death range from juvenile to mature adult, but none are abundant enough in any phase to allow analysis. A mature adult mandible from 1103 exhibits a gross infection resulting in distortion of the jaw with swollen alveoli and ramus, and abscesses drained by three sinuses, one on the buccal surface and two on the lower edge of the bone. This could be the result of a condition known as pulpy jaw. The bones have been subject to butchery, with knife marks on scapula and femur, and chopping present on radius and tibia. Gnawing is evident on long bones, scapula and pelvis. A single bone has been burnt.

Table 8. Other species present in the Roman phase.

Species	No. of Bones	Comment
Dog	3	All adult, medium-size dogs. No indications of disease, butchery, gnawing or burning
Cat	3	Adult mandibles and humerus
Domestic Fowl	10	No indications of disease, butchery or burning
Duck	2	Probably domestic duck or wild mallard. A goose phalanx may also be present
Red Deer	1	Mid shaft of a metatarsus
Water Vole	2	

* Present but not quantified

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Discussion

The animal bone assemblage from this site is small, but some conclusions can be drawn from it. These have to concentrate on the contents of the large quarry 1042, from which 84.7% of the bones examined originate. These animal bones are the waste of a Roman town, including food animals: cattle, sheep, pigs, domestic fowl, duck and deer; companion animals, horse, dog and cat; and a single wild animal, the water vole, which may indicate the damp and marginal nature of the site. Most of the bones have been reduced either by consumption by humans and dogs, or by breakage after deposition.

There is no evidence for breeding in the assemblage, with no neonate or very young bones in any species. Nor is there evidence of particular butchery or industrial practices being carried out: the skeletal elements are general in all large contexts unlike the concentrations of certain bones as found at Baldock (Grant 1989), York (O'Connor 1988), and Lincoln (Dobney *et al.* 1996), where general butchery was carried out in distinct locations. The fills of the quarry resemble those from similar features at the Roman town at Sandy, Bedfordshire (Roberts unpublished), although the fills at Sandy are larger. There are not enough complete bones to comment on any change or development over the life time of the pit. There is a notable lack of disease, except for the case of pulpy jaw, with none seen in any long or foot bones where arthritic change is often noticeable.

Some of the bone was not initially deposited here, indicated by domestic fowl bone embedded in daub (1102). These bones then are a small indication of part of the life of a small Roman town. A good diet and status are shown by horse, deer and poultry. However it is as well to remember Grant's (1989) highlighting of Maltby's findings that there is a large amount of variation between the bones from different parts of a town.

CHARRED PLANT MACROFOSSILS
V. Fryer

Introduction

Samples were taken from various dump deposits within the Roman quarry and from the fill of post hole 1021. Ten samples were submitted for assessment. The samples had been processed on site using bulk-sieving/flotation, collecting the flots in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at low power and the plant macrofossils and other remains were recorded. Preservation was by charring unless otherwise stated. Modern contaminants were present throughout at a low density and included fibrous and woody roots, seeds/fruits and arthropods.

Plant macrofossils

Cereals/chaff and seeds/fruit were noted in all samples at varying densities. Preservation was poor to moderate. Grains of oats (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) were noted in all but 1076 and 1139, with wheat being predominant. Glume bases of spelt wheat (*T. spelta*) were present in 1102 and 1103 and abundant in 1138.

Seeds/fruits of common weed species were recovered from all but 1076 and 1139 and included brome (*Bromus* sp.), fat-hen (*Chenopodium album*), goosegrass (*Galium* sp.), indeterminate grasses, dock (*Rumex* sp.) and chickweed (*Stellaria media*). Fruits of wetland plants were noted in 1022, 1038, 1103 and 1138 and included sedge (*Carex* sp.), saw-sedge (*Cladium mariscus*) and spike-rush (*Eleocharis* sp.). A few elderberry (*Sambucus nigra*) seeds were found in 1138.

Charcoal fragments were noted at a moderate to high density in all samples. Other plant macrofossils included fragments of charred root, rhizome or stem and indeterminate culm nodes, seeds and inflorescence fragments.

Fragments of black porous 'cokey' material and siliceous globules are probably the residues of the combustion of organic material, including possibly cereals and grass/straw, at very high temperatures. Probable industrial residues included hammer scale, metallic (ferrous) globules and vitrified material. Other materials included small bone fragments, marine mollusc shell fragments and a single piece of avian egg shell.

Discussion

The quarry, from which all but one of the samples was taken, was used generally from the 1st to the 3rd centuries for the dumping of successive layers of rubbish. The excavator identified 19 main fills and various additional small dumps of material, most of which appeared to consist of domestic and industrial waste. The plant macrofossil evidence suggests that, in addition to this refuse, residues from the processing of cereals, principally wheat, were also being dumped. Layer 1138 is a good example of a 'typical' Roman spelt-rich cereal processing waste deposit, containing numerous glume and spikelet bases. Grains are present but not common and the occurrence of sprout fragments may indicate that these few grains represent the dumping of spoiled cereal which had accidentally sprouted during storage. It would appear from the poor preservation of some cereals, chaff and seeds that this refuse was burnt at a high temperature, and it is of note that there is contemporary evidence for the use of spelt chaff as fuel in industrial processes (Van der Veen, in press). The excavator noted that the site and its environs appear to have been an industrial zone in

the Roman period, and hammer scale or metallic globules were recovered from four samples (1022, 1076, 1103, and 1138). Unfortunately, this burning of the debris has almost certainly biased the assemblage. Small seeds and delicate chaff elements would have been destroyed by the high temperature of combustion, and therefore it is not possible to state with any certainty which stage of the processing procedure is represented. Weed seeds are present but the majority are from large seeded species, for example brome, goosegrass, black bindweed (*Fallopia convolvulus*), large grasses, meadow, creeping or bulbous buttercup (*Ranunculus acris/repens/bulbosus*), wild radish (*Raphanus raphanistrum)* and dock, or from small seeded varieties which would have been present as intact capitula ('seed heads'). As all these latter were too heavy to be removed by winnowing; they would have remained until the final stages of processing and have been removed by hand picking. The presence of fruits of sedge and spike-rush within this assemblage may indicate that some cereals were being cultivated on damp soils adjacent to the river Blackwater.

THE COINS
Peter Guest

Some 14 coins of Roman date were recovered from the site, the great majority from the fills of the quarry F1042. The coins span the Roman period, from the 2nd-4th centuries, though no 1st century examples were recovered. Coins of Hadrian, Antoninus Pius, Constantine, Valens and Theodosius were recorded, amongst others. An unstratified 16th-17th century Nuremberg jetton was also recovered.

DISCUSSION

The excavation revealed deposits principally of the late Iron Age and Roman periods. Both periods are well represented in Kelvedon. In common with previous excavations (Clarke 1988, Eddy 1982, Rodwell 1988), the site was located on the edge, rather than the core of the Iron Age and Roman settlements. Preservation of archaeological deposits on the site was generally good, although the High Street frontage had been truncated by the Star and Fleece building and the south-west part of Trench 7 had been truncated by cellars.

The earliest evidence for activity on the site comprises ten residual or unstratified struck flints. They do not form a homogeneous group and are typical of the small collections recovered during excavations at Kelvedon (Doucecroft, Clarke 1988) and elsewhere in Essex (Little Waltham, Drury 1978).

The Iron Age and Roman settlement developed on the west side of the river Blackwater, an important

communication route from central and northern Essex (Eddy 1982, 1), at the interface of the gravel terrace and flood-plain. The site lies *c*.100m south-west of a natural fording point, at Easterford, where Iron Age and Roman roads probably crossed the river. The settlement developed at a naturally defended location in the meander of the river, though cannot on present evidence be classed as an *oppidum*. The limited features of Iron Age occupation on the present excavation add little in this respect. However, finds of Gallo-Belgic coins, amphora and other imported pottery, found during the previous excavations at Kelvedon (Rodwell 1988, 133), indicate a range of economic links which may have included Gosbecks, 15km to the north-east and Little Waltham in central Essex (Drury 1978). The landscape surrounding the Iron Age settlement was divided into enclosures. A rectilinear enclosure system was present at the Doucefield site (Eddy 1982, 24), *c*.200m south-west of the present site and a complex of enclosures, containing two rectangular buildings, was located on the southern side of the settlement (Area J; Rodwell 1980, 15, fig. 15). The late Iron Age ditch identified at the Star and Fleece may have formed part of a similar boundary/enclosure on the northern side of the settlement, perhaps flanking the presumed line of a late Iron Age track believed to have crossed the settlement (Medlycott 1998).

A length of road, some 7m wide and flanked by ditches, was excavated in 1970/1 on the northern side of the Roman settlement (Rodwell 1988, 5). At the Star and Fleece, a cobbled road surface (L36) formed part of the road leading north from the town. A further area of cobbles (L1141) was found slumped into the edge of the Roman quarry, and may have been a remnant of the track, almost certainly dating to the late 1st century.

The major feature on the site was a quarry, respecting both the alignment of late Iron Age ditch F1047 and the road. The ditch may still have been open or at least visible when the initial quarrying took place. The lower fills of the quarry date to the 1st century AD and gravel from the quarry may have initially been used in the construction of the adjacent track and road surface L36, L1141 etc. Similar quarry pits have been found in association with Roman road surfaces elsewhere in Kelvedon, for example *c*.100m south-west of the site in Rodwell's Area B (Rodwell 1988, 5, fig. 3B), and the local gravel resources were used extensively during the construction of the early Roman town during the 1st century.

A variety of industrial activities took place in the Roman town. Sparse evidence for metal smithing close to the Star and Fleece site is provided by charcoal and concentrations of waste slag fragments in the quarry fills. The level of abrasion on individual pieces varied considerably and slag

fragments from a variety of locations may have been deposited within the former quarry during the mid 2nd to 3rd century. In addition, a homogeneous, primary dump assemblage of slag (including hammerscale), possibly from an adjacent hearth base, was present in L1122. All this suggests that the site was close to an industrial zone of the town. Examples of Roman ironwork found on the site suggest a reasonably affluent community, with elaborate lock furniture, similar to casket locks found on high status Antonine burials at Skeleton Green, Puckeridge (Borrill, in Green, 1981), and equine accessories (a horse bit and hipposandal) that suggest riding on the adjacent metalled road. Casually-lost dress accessories of the 1st-4th century were also present in the quarry fills (such as a hairpin, armlets and a ring). The agricultural hinterland of the small town is shown in the small environmental assemblage, reflecting the production and processing of cereals (notably typical Roman spelt wheat) as an element of the local economy. Standard-issue domestic quernstones (derived from Germany) were also found. The use of waste spelt chaff for fuel is also suggested here, and evidence of fruits of sedge and spike-rush was found (probably indicating cultivation of damp soils close to the Blackwater). The agricultural, domestic and wild animals of the small town were reflected in the small quantity of waste bone from the site; cattle, sheep, pig, fowl, duck and deer were present, along with horses, dogs and cats and a water vole from the nearby river. These suggest a well-fed town of moderate status, though no evidence of livestock breeding was found. Another interesting detail of the Roman lifestyle is found in the glassware discovered on the site, where the assemblage seems to support the theory of different drinking vessel groups for urban and rural populations (Cool, above), with the small town of Kelvedon joining the urban group in the higher proportion of drinking vessels and jugs as opposed to bowls and bottles.

Pit F1023 contained fragments of disarticulated human bone, and is almost certainly a grave. A late 2nd century inhumation cemetery and mausoleum lay outside the southern corner of the town (Rodwell 1988, 26-52) and another outside the eastern corner (Eddy 1982, 17). The Star and Fleece inhumation may suggest another area of burials lies to the north of the town.

The Roman ceramics from the Star and Fleece site are in generally poor condition and characterized by undecorated coarsewares which account for 89% of the assemblage. These are largely of local origin (from Colchester and Chelmsford) and the jar is the most dominant form. Romano-British finewares comprise 2% of the assemblage and continental finewares (southern and central Gaulish Terra Sigillata) comprise 4%. All this follows trends in pottery assemblages of the period throughout Essex.

The bulk of the ceramic assemblage (80%) was recovered from the quarry pit F1042, and can be divided into two main periods of activity, ceramic phases 1 to 3 (c.AD 60-130) and the end of 7 to 8 (c.AD 360-400+), as recorded at Chelmsford (Going, 1987). The build-up of deposits in the quarry, especially within the earlier phases, appears to have been a slow process. The upper silting of the quarry, contained abraded, 'late' (later 3rd to 4th century) pottery sherds, mixed with industrial waste, and resembles 'dark earth' layers, characteristic of the disuse and decay at the end of the lifespan of many Roman towns.

The remaining Roman artefacts largely occurred in post-medieval features and were residual. These features contained poor quality finds assemblages, with a low pottery sherd count per feature insufficient to provide reliable dating for their respective contexts (Martin n.d.). Most of the post-mediaeval features were either boundary ditches or else associated with the Star and Fleece and its brewery.

Archive

The archive is deposited at Braintree Museum

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St. Mary and All Saints church, Rivenhall.
An analysis of the historic fabric

by A. Letch

The 1999 survey on the occasion of the re-rendering of much of the exterior of the church provided the opportunity to complete the comprehensive survey of the building by the Rodwells. The findings of the recent survey largely support their conclusions and have also brought new evidence to light.

Introduction

Rivenhall is a large rural parish situated 18 km south-west of Colchester and 1.6 km north-west of the A12 trunk road. The church is located to the northern limit of the village and stands on an artificial mound overlying the remains of a major Roman building (Fig. 1). This forms part of a larger villa complex located within a landscape rich in archaeological remains. Domesday Book mentions the existence of five manors in the parish, the largest and most important of which was *Rhuenhale*, having 2.5 hides of land. This manor was a royal vill before the conquest, owned by Edith, the wife of Edward the Confessor, afterwards passing onto Count Eustace of Boulogne. Although not recorded in

Fig. 1 Rivenhall, St. Mary and All Saints, site location plan.

Domesday, having such rich patronage, it seems likely that a stone church existed at this time.

The opportunity to view the fabric of the church followed the removal of cement render from the nave and south chancel walls in 1999. At the time of the 1838/39 restoration, the church had been covered in Roman cement, which had been replaced in the 1950s. In the 1970s, this render was removed from the north chancel wall because damp was being trapped behind it. In the early 1990s, the cement render had been renewed in lime on the tower and the east wall of the chancel. The 1999 programme saw the completion of the work of re-rendering the entire church using a traditional lime mortar. A detailed survey was undertaken to record the exposed underlying fabric before it was covered up again. The structural analysis was based on a series of rectified photographs and measured elevations drawn to a scale of 1:20. From these, phased and interpretative drawings were produced. A further series of photographs were taken to record important detail. The work follows on from an archaeological and architectural survey of the church undertaken by Warwick Rodwell in the 1970s (Rodwell 1985), with particular reference to the north chancel, which he recorded in 1971 (Fig. 4).

The standing building

The church consists of a nave, chancel, tower and porch (Fig. 2), built mainly of coursed and uncoursed flint rubble, with Reigate stone, septaria and *opus signinum* (a hard pinkish Roman mortar), sometimes between courses of reused Roman tile. These were quarried from the former villa buildings in the Saxo-Norman and medieval periods. The mouldings around the doors and windows are in Reigate, with some rebuilding in Bath stone and other limestone. Later rebuilds and alterations are in brick, including the tower, parapet, buttresses and windows. The roof is low pitched and slated.

In 1971 Rodwell recorded the north chancel wall after the discovery of two blocked Saxo-Norman windows hidden behind the cement render. Supported by evidence from excavations within the area of the church and his own survey, Rodwell (1985) was able to conclude that the Victorian
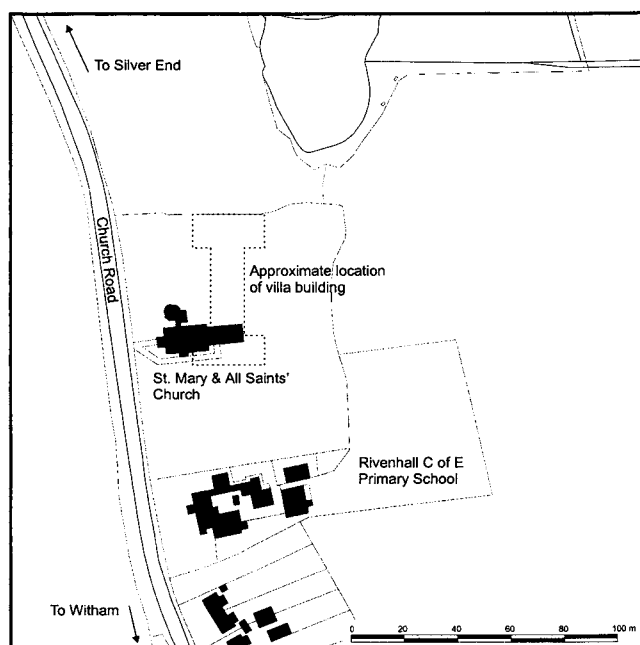
Fig. 2   Ground plan of St. Mary and All Saints church, Rivenhall.
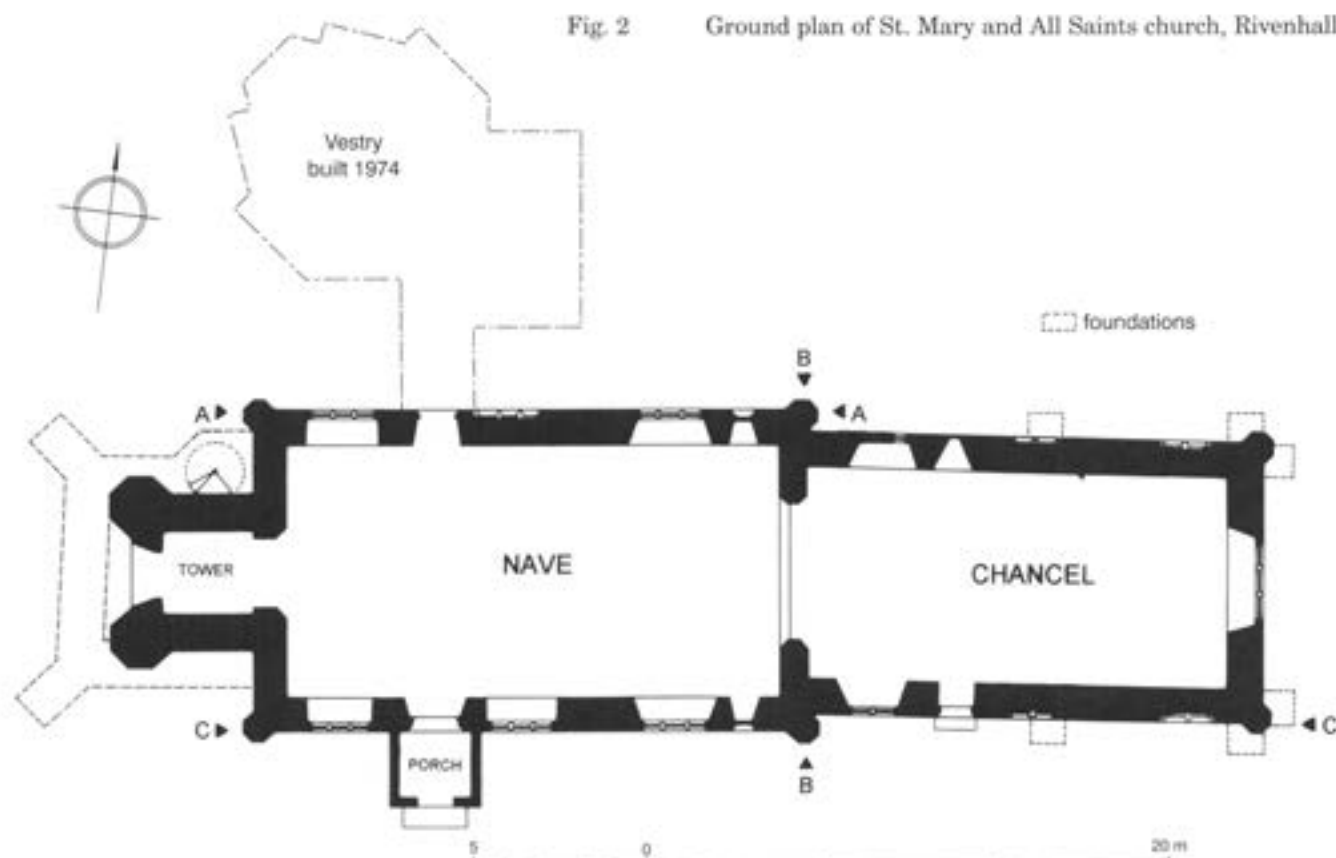
Plate 1   Rivenhall, St. Mary and All Saints, the south elevation as exposed after the removal of cement render (photo A. Letch).

rebuilding had not destroyed as much of the early fabric as had been thought.

Much of our understanding of Rivenhall church is based on the results of Rodwell's excavations and his analysis of the building, primarily his detailed investigation of the north chancel wall. From this evidence, he identified a number of building phases. Rodwell (1985) argued that the present church was pre-dated by an earlier timber-built structure identified as a proprietary chapel for the use of a local Saxon manor house. This was superseded in the 10th or 11th century by the existing stone church, which was built abutting the western wall of the former. The church was a simple two-celled building, consisting of a nave and chancel built from flint rubble set into a dull pinkish-yellow fine mortar. Roman tile, quarried from the former villa buildings, was used for levelling courses. The windows had single lights and round heads, within surrounds constructed from Roman tile. In fact the fabric, form and fenestration are typical of other Saxo-Norman churches in the area, such as Great Braxted and Wickham Bishops old church (Rodwell 1985). Based on carbon 14 dating, Rodwell argued that an apse was added around 1090. In the medieval period the church was altered significantly. The apse was demolished and the chancel extended to the east. The earlier round headed windows were removed or blocked and new larger windows inserted to allow more light into the building. The chancel walls were heightened and a new roof added.

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Table 1. Building chronology as revealed in the 1999 survey, combined with Rodwell's original phasing.

Period	Phase/ Date	Rodwell Phase	Activity	Recorded Evidence
I Saxo-Norman	I (a) 10th-11th century	5B	First phase of construction of nave and chancel. Possible seasonal break or result of subsidence.	Distinctive steep break in flint/coursed tile build at east end of north and south nave walls. Pinkish yellow brickearth mortar with shell inclusions
I Saxo-Norman	I (b) 10th-11th century	5B	Completion of nave and chancel. North nave doorway, tympanum revealed in 1999 survey. Single light, round-headed windows.	Construction to Phase 1 level with better coursed flint and less tile coursing. Then continuing in two further builds up to roof level, characterised by variations in tile and quality of coursing. Pinkish yellow mortar with shell.
I Saxo-Norman	I (c) c.1090	5C	Addition of apsidal end, not observed in 1999 survey.	Evidence of apse in footings of north chancel wall, seen by Rodwell.
II Medieval	II (a) Late 13th century	6A/6B	Nave roof removed to insert uncusped Y-tracery windows. Walls raised and new roof constructed.	Roughly coursed material used in nave heightening layer with more limey, light brown mortar. Greater reuse of materials. Scars for insertion of windows into Period I wall fabric contain light greenish brown mortar.
II Medieval	II (b) c.1300	6B	North nave doorway possibly inserted into Period I opening (acc. to Rodwell) Removal of roof, demolition of apse and extension of chancel with addition of cusped Y-tracery windows. Subsequent re-roofing. Likely addition of buttresses to extension and nave.	Chalky yellow brown mortar in chancel extension; light brown mortar in heightening layer. Roughly coursed materials. Voussoirs to contemporary south chancel windows. Little remaining tracery. Associated wall plate dated dendrochronologically to c.1300.
II Medieval	II (c) 15th century	6C	Addition of original west tower. Insertion of Perpendicular south-west chancel window.	According to Rodwell (1985). Distinctive light whitish brown mortar around window.
II Medieval	II (d) 15th-16th century	7A	Insertion of rectangular low-side windows into to nave to light nave altars.	Dated stylistically as 16th/17th century 'domestic style' by Rodwell (1985) but similar in materials and mortar to medieval nave windows.
III 18th century	III (a) 1714-1717	7B	Collapse of tower along with west end of nave. Subsequent rebuilding in brick.	Straight joint between different builds. Documentary evidence (Rodwell 1985).
IV Victorian	1V (a) 1838-1839	7C	Addition of brick parapet and buttresses. Refenestration. Flue inserted.	Documentary evidence (Rodwell 1985) Brick alterations built onto earlier fabrics. Lining of flue in identical bricks.
IV Victorian	1V (b) 1877-1878	7D	Low-side windows re-faced. Blocking of flue in window splay.	New jambs set into former window. Documentary evidence (Rodwell 1985).
V Modern	V (a) 20th century	7E	Application of cement render. rebuilding above chancel door. Repointing of wall bases.	Exposed rebuilt fabric around south chancel door. Documentary evidence (Rodwell 1985).

A tower was erected at the west end. When the tower collapsed in the early 18th century, along with the western end of the nave, it was rebuilt in brick within the earlier foundations. In the early Victorian period the church was restored, substantially altering the structure to conform to pre-conceived ideas of symmetry and purity found in the Early English style of architecture. To this end, new gothic windows were added with fancy parapet and buttresses, and the building was covered in Roman cement.

The survey recorded those parts of the church which were being re-rendered, i.e. the north side and east end of the nave, and the south walls of the nave and chancel (cf. Plate 1). The phasing in this report reflects the conclusions reached by Rodwell, showing

Period I

Period II

Period II (e)

Period III

Period IV

0   15m
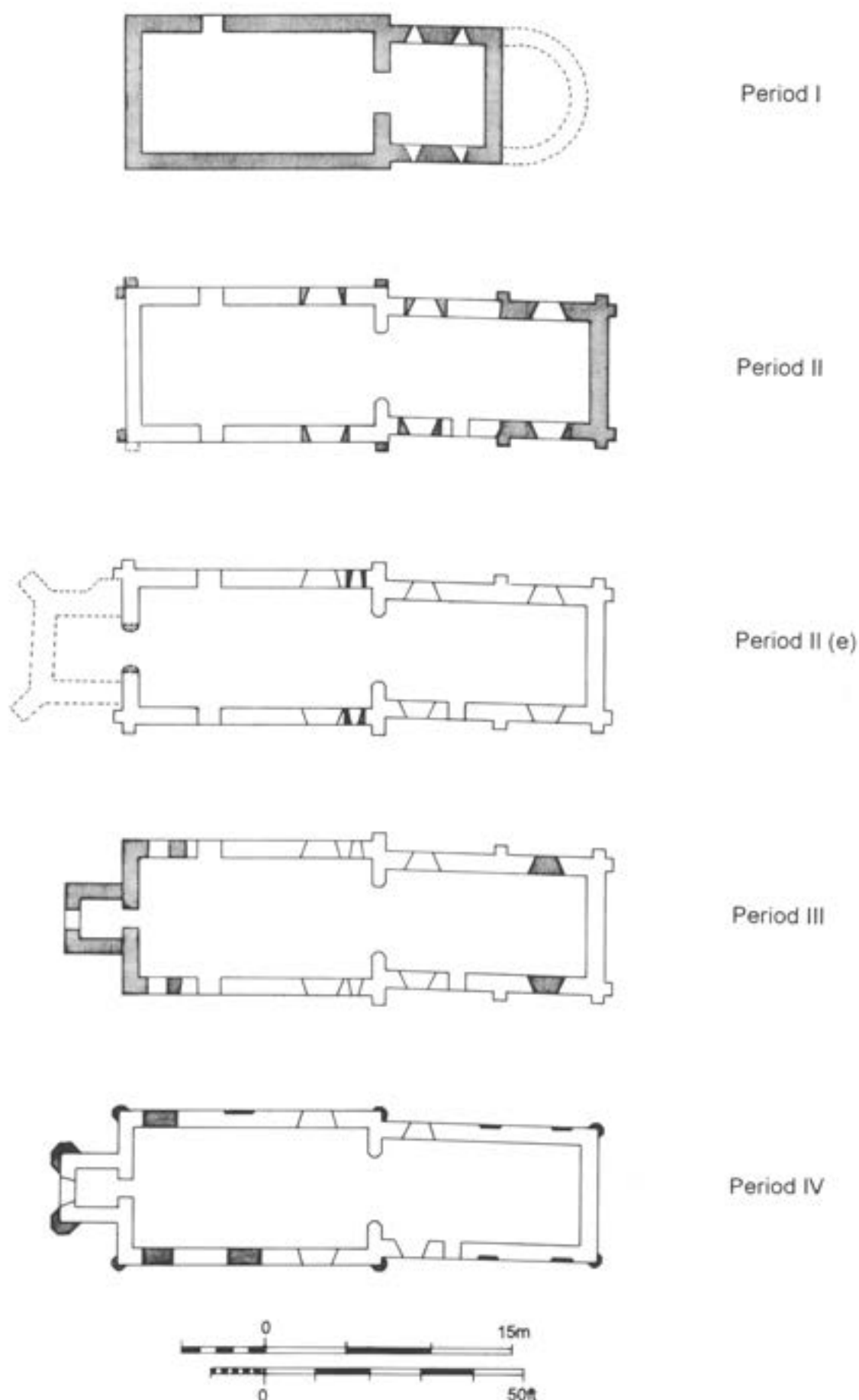
0   50ft

Fig. 3   Rivenhall, St. Mary and All Saints, plans showing the structural development of church.

a complicated series of builds and alterations occurring within five main periods of activity: the Saxo-Norman, medieval, 18th century, Victorian and modern (Fig. 3). It incorporates additional information from the latest survey, and also from watching briefs conducted during the intervening years.

Period I. *Saxo-Norman*

Period I represents a sequence of two broadly contemporary phases leading to the completion of the Saxo-Norman church. Within these phases, four main builds were recorded. Each of these builds contained lifts, changes in the quantity of inclusions, or variations in colour of the mortar, often seen as hairline cracks. Lifts are indicative of a short period of construction, possibly a day's work, and the time required for the mortar to go off. They can be difficult to detect, depending very much on the quality of light, dampness of the fabric and the duration of exposure. Some attempt has been made to estimate the number of lifts within each build.

Though varying between lifts, the mortars are light pinkish yellow colour with a low lime content. The lack of a sandy aggregate suggests that the local brickearth type soil was used (Rodwell 1993, 191). However tiny fragments of cockleshell within the mortar imply that at least some sand was being imported from the coast.

In areas where the stone facing to the walls had come away with the render, sections of the wall core were observed. The uncoursed nature of the core material, in contrast with the coursed facing stones, suggested that the walls were built by shutter construction, whereby the facings were built both internally and externally against wooden shutters. Once dry, the space in-between was filled with rubble and mortar and the shuttering removed and moved up for the next lift. Alternatively, the relatively short heights of the lifts may suggest that the walls were built free standing, without the employment of shutters (D. Andrews pers. comm.).

Putlog holes, apertures in the outer walls used to tie the scaffold beams to the building during construction, were identified at every stage of the Saxo-Norman build. These were commonly found on both sides of the nave capped with Roman tile and blocked with mortar, but were absent in the chancel. There is evidence for scaffold stages set at four levels (Figs. 4 & 5). Four putlogs placed 1.60m from present ground level indicate the first scaffold run on both sides of the nave. The second run is less apparent, evidenced by one remaining putlog, situated at 3.00m. The third stage, at a height of 4.50m from ground level, is represented by two putlogs on each side. One putlog remains from the top run, set at 5.60m on the north nave wall. This stage would have been used in the construction of

the original roof. The spacing between scaffold runs, at approximately 1.50m (except for the final stage at 1.10m) provides a good working height.

No putlogs were recorded in the south chancel wall, due perhaps to infilling in antiquity, later features or the remains of repointing and old render. However, four, possibly five, runs were identified in the north chancel wall (Rodwell 1985). The runs were set at similar intervals to the nave stages, but began at a lower level (0.70m) from the present ground surface (Fig. 4). This does not imply that the nave and chancel were built separately, rather that the scaffolds were constructed independently. The consistent run of the first stage from Phase I (a) to 1 (b), shows that the scaffold was in use in both phases, which is not only logical, but supports the idea that the two phases were roughly contemporary. The lack of identifiable medieval putlogs suggests the reuse of earlier putlogs in the ensuing period.

Phase I (a). *10th-11th century* (Figs. 4 & 5)

Evidence for the initial phase was identified on either side of the east end of the nave as a low section of wall, terminating in a steep diagonal scar, at the interface with the Phase I (b) fabric. This scar was first seen internally during a watching brief on the south wall in 1990 and interpreted as probably 14th century in origin (Rodwell 1993, 192). Phase I (a) is 2.00m high and extends from below the east nave windows and continues for a distance of 5.20m to the beginning of the chancel. On the north nave wall, a capping of Roman tile shows the top, absent on the south side, where it was recorded as a change in the mortar, or lift.

This build possibly continues into the chancel, at a lower height of 1.20m, a level proportionate to the height difference between this and the completed Period I nave, to finish at the east end. Contemporary tile quoining was present in the north chancel (Rodwell 1985) but was absent in the south chancel, where the fabric was damaged by the removal of buttresses in the Victorian period, and later rebuilding around the chancel door.

The fabric is characterised by coursed medium and large flints often placed between regular courses of reused Roman tile. These are bound in a loose, pale pinkish yellow, fine brickearth-type mortar, with a low sand content, and fine flint and shell inclusions. Lifts are typically between 0.20 and 0.30m high in the nave, but lower in the south chancel, appearing to occur every 0.15 or 0.20m. Not all lifts are capped with tile, making them difficult to identify. However, from the information available, it can be estimated that the Phase I (a) build contained ten lifts in the nave and perhaps seven in the south chancel wall.
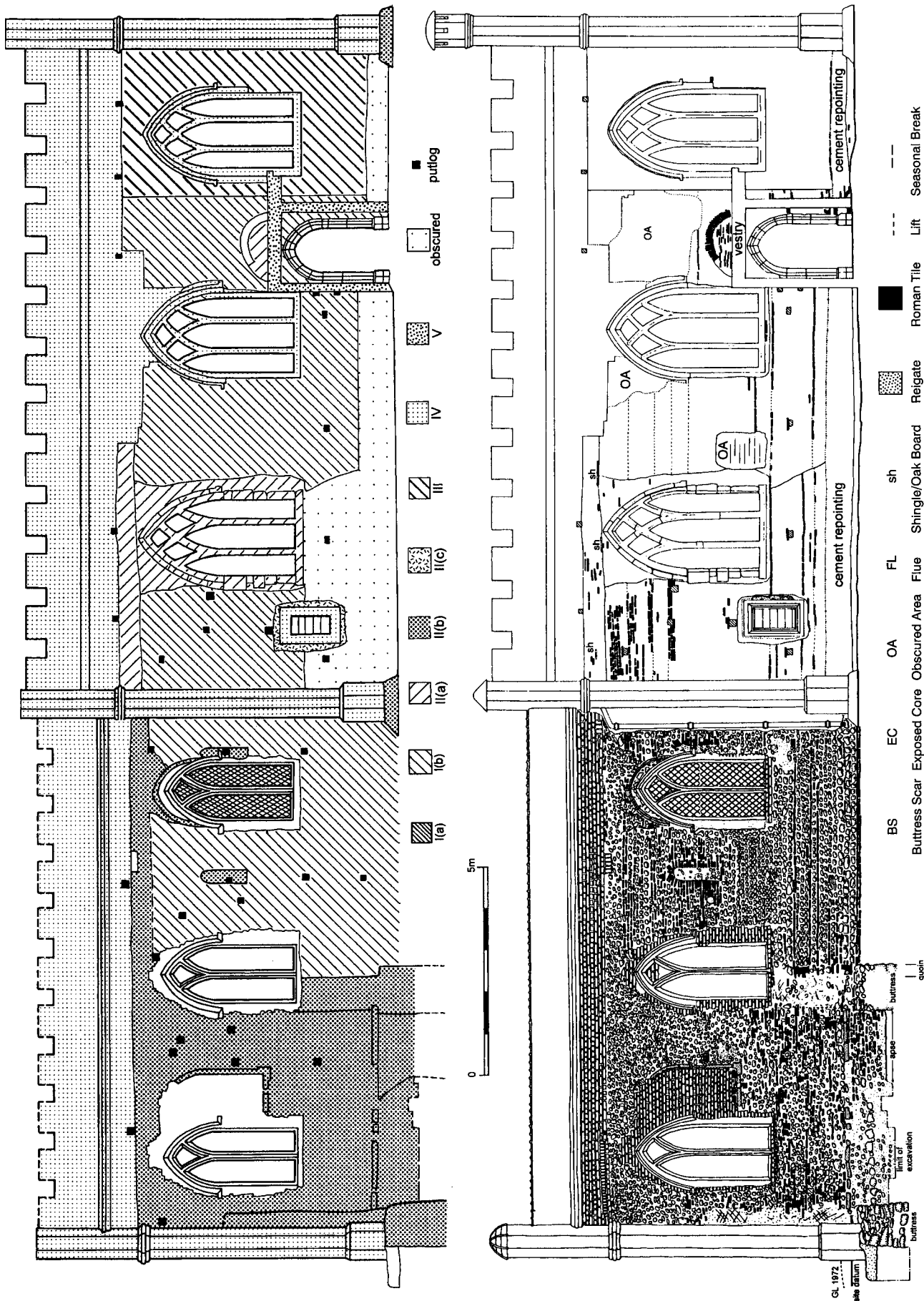
Fig. 4   Rivenhall, St. Mary and All Saints, elevation and interpretative drawing combining the north nave wall with the existing north chancel wall as surveyed by Rodwell in 1971 (reproduced by courtesy of Warwick Rodwell).
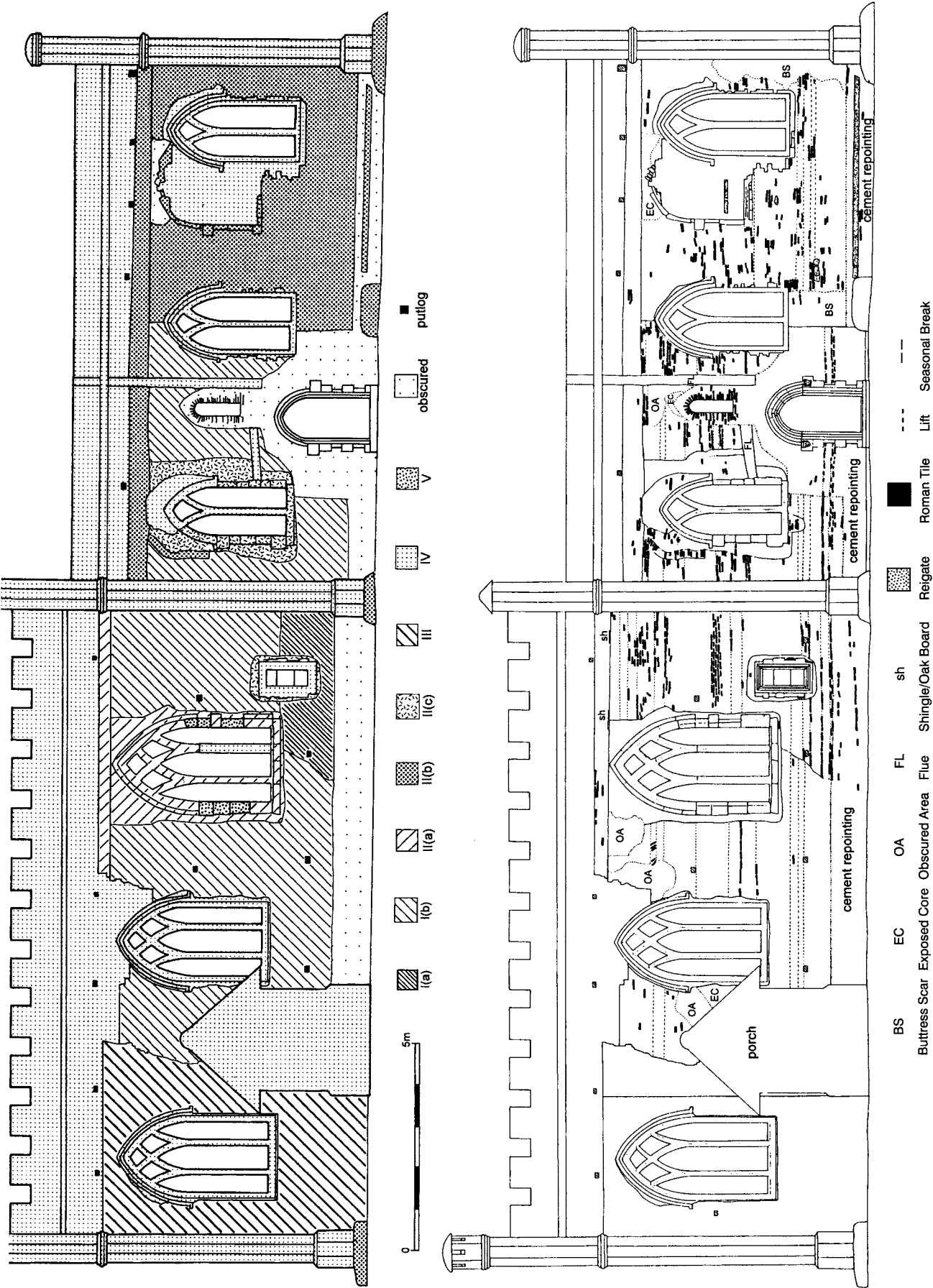
Fig. 5   Rivenhall, St. Mary and All Saints, elevation and interpretative drawing showing south side of church.

The end to the Phase I (a) build indicates a break in work, the reasons for which are unknown. It may represent a seasonal stoppage, in advance of the winter frosts. However seasonal breaks generally finish on a horizontal level, rather than at an angle, which after all might expose the fabric unnecessarily to the elements and create a weakness in the structure, though a similar oblique building break occurs in the 11th- or 12th-century north nave wall of Tillingham church (D. Andrews pers. comm.). An alternative and more dramatic explanation might be that it was due to collapse. Fig. 1 shows the south wing of one of Rodwell's villa buildings (Building 2) beneath the south nave wall. It is possible therefore that the foundations of this building caused a partial collapse of the nave early in the building programme.

Phase I (b). *10th-11th century* (Figs. 4 & 5))

Phase I (b) represents the completion of the Saxo-Norman church, with three distinct horizontal (presumably seasonal) breaks in the nave and two in the chancel. Both those in the chancel were recorded in the original survey (Rodwell 1985). The Phase I (a) nave was 15.00m in length and 6.20m in height. The chancel was 7.00m long, proportioned to be approximately half the length of the nave, and built to a lower height of 5.60m. Part of the original west end wall foundations can be seen beneath the 18th century rebuild.

The first break carries the Phase I (a) build of the nave to the western end of the church. This is represented on the northern elevation by the continuation of the Phase I (a) tile capping, which ties the two builds in, and forms a levelling course for the second build. In the southern wall where there is no tile course, the interface continues as a lift. The fabric is composed of more consistently sized and better-coursed flints, and tile is generally placed randomly within the fabric. Lifts are at similar heights to I (a), though being separate events, these do not continue across from one phase to the next.

The overlying second break extends the whole length of the church, approximately 2.00m high in the nave and 2.10m in the chancel. The fabric is different, combining less well-coursed flint of a more variable size, together with occasional fragments of septaria and Reigate. Relatively little tile is used, and this is generally placed randomly within a more chalky mortar mix. Lifts were similar, identified between 0.25 and 0.30m thick in the nave and between 0.15 and 0.20m in the chancel. Based on this information, it can be estimated that there are eight lifts in the nave and twelve in the chancel.

The third and final break measures approximately 2.00 to 2.60m in height in the nave wall. The lifts,

though few were seen, are shorter, varying between 0.15 and 0.20m. There are perhaps eight lifts in the north wall and eleven on the south side. This build is identified by a large concentration of Roman tile within the fabric, occasionally coursed. The fabric is also characterised by common fragments of Reigate stone and septaria and large fragments of *opus signinum*. As the height of the church increased, it appears that larger quantities of material from the former villa were used in the fabric. Mindful of the limited amount of available good building material, it is likely that the Saxo-Norman builders kept some back, so that the final courses would be strong enough to tie the building together. This especially applies to the reused tile, which could be knitted together in the same way as brick bonding. Additionally, the high density of tile present in the final break may be due to difficulties in lifting and handling more irregular and bulky materials high up on the top runs of the scaffold.

In the chancel the final Saxo-Norman build is 2.30m high, comprised of approximately fourteen lifts. Here the only reliable evidence of quoining was observed, a short column of tile at the east end of the south chancel wall, butted by the later medieval extension.

The height of seasonal breaks varies from nave to chancel, but on average is around 2.00m. Therefore anything above or below this figure might represent

Plate 2   Rivenhall, St. Mary and All Saints, phase I (b) tympanum above modern vestry (photo N. McBeth).

either a good or bad year's work, dependent on changes in the workforce and the supply of materials and the weather. The same factors may influence the height of lifts. The level of putlogs to seasonal breaks appears to be fairly random, relating to the distance from the previous run, rather than wall height or height of break. Occasionally breaks finish at a point where a window is to be inserted or where the putlog will be formed in the initial lift of the subsequent season.

The threshold to the original north nave doorway was seen in the 1971 excavation and interpreted as being earlier in date than the inserted 14th- or 15th-century doorway above it (Rodwell 1985, 131). The tympanum of the original romanesque door was exposed in 1999 (Plate 2). It is set 3.55m from ground level above the medieval north nave door, is semi-circular in form and constructed from reused Roman tile. Although the modern vestry roof obscures the base of the tympanum, it was possible to record the dimensions of the arch as being 0.70m high, with an inner radius of 0.57m. Originally recessed, the tympanum was blocked with Roman tile flush to the surface of the wall when the new doorway was inserted in the medieval period. Traces of fine white plaster on the soffit of the arch suggest the tympanum was painted.

The area around the north nave doorway, which was dated by Rodwell as either 14th or 15th century, was hard to view because of overlying render and limitations of space. However, when inspected, a partially obscured Reigate stone arch was observed just to the east. This might be a remnant of the Saxo-Norman door head; if so, it would indicate that there was a segmental arch below the tympanum rather than a stone lintel. Certainly good tile coursing (indicative of Phase I (a) work) was observed around the jamb to the west, showing that the later doorway was set tightly into the former surround (Rodwell 1985).

Phase I (c). *c.1090*

The original east end of the chancel was demolished to build an apse in this phase. Rodwell (1986) observed this during excavations around the foundations of the north chancel wall. The observations on the south wall of the chancel found no evidence of this feature.

Discussion of phasing

The seasonal breaks seen by Rodwell in the chancel also appeared in the nave. Although set at lower levels in the chancel, their basic characteristics are the same. The heights of breaks in the south chancel are comparable with those recorded by Rodwell on the north side. If these breaks represent a season's work, it is interesting to speculate as to the length of time spent in building the early church. If the Phase

I (a) interface represents a seasonal break, then a construction time of four years might be estimated. If, however, this represents rebuilding soon after collapse, then a shorter time span of three years might be expected.

Period II. *Medieval* (Figs. 4 & 5)

Period II consists of four phases, the first two of which form part of a comprehensive refurbishment of the building, carried out individually to nave and chancel. Phases II (a) and II (b) necessitated the removal of the earlier roof and a heightening of the church walls to accommodate the new, taller windows. In addition the chancel was extended to provide extra space. The sequence in which the work was undertaken remains unclear, though Rodwell dated the work on the nave as earlier, on stylistic grounds. The third phase involved the replacement of the south-west chancel window in the 14th or 15th century, and the fourth the insertion of low-side windows to the nave. No lifts were seen in either part of the heightening fabric

The components of the medieval wall fabric are similar to those of the Saxo-Norman period. The dominant material is flint rubble, arranged in a semi-coursed, sometimes randomly coursed manner, alongside larger quantities of *opus signinum* and septaria. Roman tile is randomly placed within the fabric. In addition components such as chalk, Kentish Ragstone and Reigate are used.

The mortars are harder, more limey and light yellow brown in colour. In common with the Period I mix there remains a low sand content, although there is an absence of shell. The same material binds the core. Around the windows the mortar sometimes has a greenish tinge, the result perhaps, of the inclusion of material from the working of Reigate stone as dressings. A higher lime content makes for a harder, more adhesive mix. This mortar survived the stripping of the modern render better than the less limey Saxo-Norman mortar. In some areas this may have represented the remains of medieval lime render. Although chalk flecking in the mortar shows inefficient firing within the lime kiln, it also provides aggregate to bind the mortar.

Phase II (a). *Late 13th century* (Figs. 4 & 5)

Major changes occur to the church in this phase, the result of a refurbishment, caused in part by the need for extra room and light inside the church. It would be logical to assume that each part of the church was worked on separately, to enable the building to continue to function over a relatively long period of time. Rodwell (1985) suggested that work began on the nave first, dating this period to the late 13th century based on the uncusped Y-tracery of the windows.

The round-headed Saxo-Norman windows at the east end of the nave were replaced with big three-light double uncusped Y-tracery windows dressed in Reigate, possibly added to light side altars. It is unknown whether matching windows were added to the west end at the same time, as any evidence was removed with the collapse of the western bay in the 18th century. The dimensions of these windows are 3.90m high and 2.40m wide. The insertion cuts can be clearly seen in the Saxo-Norman wall fabric on both sides of the nave filled with random flint set into a crumbly light greenish brown mortar, flecked with unburnt lime. The south nave window shows signs of repair to the jambs and tracery in the Victorian and modern periods.

The wall height of the nave was increased by 0.50m to 6.70m to accommodate the larger windows.

Although vague, a scar representing the height of the rebuilt medieval roof can be seen through the render on the east side of the tower. Four wooden boards, 240-650mm in length and 20mm thick, laid horizontally at the base of the heightening layer, may be reused wooden shingles from the former roof. The masonry of the wall heightening consists of the same random materials within a very pale brown chalky mortar.

The stripping of the east wall of the nave led to the discovery of a timber collar within the gable end, beneath fabric from the Phase II (a) heightening layer (Fig. 6). The collar is set into a fabric containing flint, septaria and reused Roman tile, which is occasionally arranged in short courses. The materials are typical of Saxo-Norman build, although the coursing is less regular, with a higher proportion of reused material. The mortar is pale yellow in colour and is generally firm, although towards the top of the gable it is quite crumbly, possibly due to weathering. The low chalk and sand content with shell inclusions however are consistent with a Period I mortar and easily identifiable against the remnants of the wall-heightening layer.

The collar measures 3.10m by 0.14m. The fact that its thickness is identical to a medieval wall plate found during watching brief work in the chancel in 1990 (Rodwell 1993, 193), and the low chances of it surviving from the Saxo-Norman period, suggests it to be a Period II replacement, inserted when the gable was heightened. From the height of the collar, an estimate of the total height of the medieval nave can be made. Based on observations made inside the church in the late 1980s, it was estimated that the nave roof had a pitch of 52° (Rodwell 1993, 191). Using this as a guide, a total height of 13.30m can be estimated, 1.30m higher than the present roof.

Phase II (b). *c.1300* (Figs. 4 & 5)

At the east end of the church, the roof was removed, the apse was demolished and the chancel extended. The single light round-headed Period I windows were replaced by larger, cusped, Y-tracery windows. The walls were then raised to better accommodate the larger windows, before the roof was replaced. Cement mortar still partially adhered to the face of the south chancel wall, making analysis difficult.

The chancel extension (Plate 1) butted the original Period I work with a straight joint, almost doubling its length to 13.56m, and increasing the total length of the church to 29.90m. The extended chancel was built onto a Reigate stone plinth with clasping buttresses on both corners. Single buttresses were located centrally each side. The buttresses at the western end of the nave were probably added at this stage, but this cannot be proven. All original buttresses were removed in the
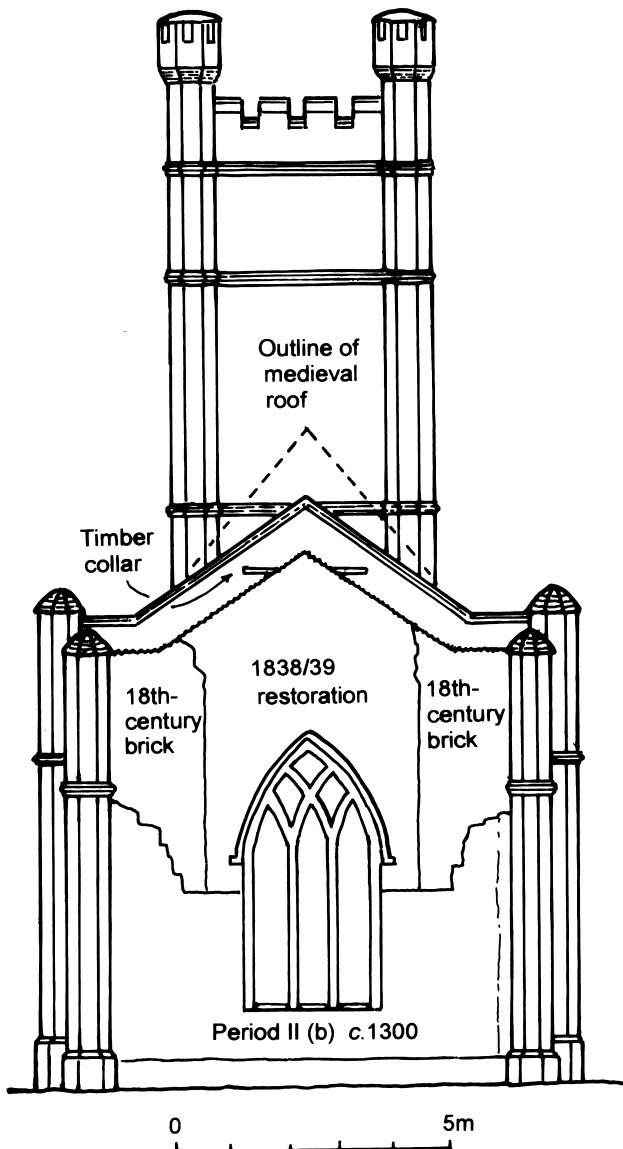

Fig. 6   West elevation of the church, showing the collar in the nave gable with the line of the medieval roof reconstructed, and features found in the east wall in 1994, notably the outline of the Georgian east window.

19th century, leaving only scars and the remains of foundations.

The remains of two previously obscured windows contemporary with the chancel extension were identified in the south chancel wall. The most complete of these, the south-east window, preserves approximately half of the outer frame, which shows the remains of a short, two-centred window topped by a depressed arch. The eastern half of the window was lost when the Wyseman monument was constructed inside the church, sometime between 1594 and 1608 (Rodwell 1993, 22). Latterly, a 19th-century dummy window was inserted into the frame, obscuring the remains further. The window is dressed in Reigate, and its head surrounded by an outer arch of chalk voussoirs, bonded in the same mortar that binds the extension fabric. Its sill is situated 3.00m above ground level and its height can be estimated at approximately 2.50m. This window was identical to that at the east end of the north chancel wall, which Rodwell estimated to be approximately 2.60m in height.

A similar window was probably inserted at the west end of the south chancel wall, but most of the evidence was removed by a 15th-century replacement (Rodwell 1985, 147). A possible section of tile voussoir remains, amidst the Saxo-Norman wall fabric, cut through when the later window was inserted. This feature is curved and is set at a height similar to the voussoir exposed above the south-east window, discussed above. The tile lies within a hard light yellowish brown chalky mortar mix, similar to that seen in the extension. However this voussoir is not as well finished as the chalk voussoir, and it is possible that this feature was built to consolidate soft Period I fabric when the later window was inserted.

The height of the chancel was raised by 0.40m. This event has been dated to c.1300 by tree-ring dating a piece of contemporary wall plate, removed during internal repairs in 1990. The latest dated tree ring was 1284, which, allowing for sapwood, gave a felling date of around 1300 (Rodwell 1993, 193).

Although comprising similar materials to the Saxo-Norman chancel which it abuts, the build of the Phase II (b) extension is essentially rougher. The flint is unevenly, sometimes randomly laid, densely packed, with arbitrary additions of Roman tile. A diversity of reused material proliferates in the form of septaria, Reigate, ironstone, opus signinum, and chalk. Some of the tile was seen to have Saxo-Norman-type mortar adhering, suggesting that material was being robbed not only from the villa but also the former east wall or apse of the church. Characteristically the mortars are light yellowish brown in colour, a little paler than the typical Saxo-Norman mortar. The chancel heightening layer contains the same materials as the extension but the coursing is less random and the colour of the mortar

subtly different, a very light brown with less chalk flecking.

The Phase II (b) extension mortar had a more consistent mix, which meant that only a few lifts were detected. Generally the lifts were between 0.10 and 0.20m, lower than in the Saxo-Norman Period, a result perhaps of a wetter mix needing more time to go off. Other lifts are doubtless obscured by remnants of later lime render, as well as the more recent cement repointing up to and just above medieval plinth level. No putlogs were seen in the south wall of the chancel extension, although Rodwell found six in his analysis of the north side (Fig. 4). It is possible that those in the south chancel were either filled in antiquity, obscured by render, or removed through later developments.

Phase II (c). *15th century*

A tower was erected at the west end in the 15th century, which collapsed during a storm in 1714. In the south wall of the chancel a Perpendicular window was inserted (Rodwell 1985 147), probably replacing a smaller Phase II (b) window (see above). This window, which measures 3.10m by 1.50m, retains its original Reigate surround, except for the head, which was replaced along with the original tracery in the 19th-century restoration. The Perpendicular window was reconstructed by Rodwell (1985, 147, plate XXVIII) on the basis of a watercolour painted in 1835, three years before the restoration. Rodwell describes the window as being two-centred, with trefoiled cusped sub-arches, and datable to c.1440.

The cut for this window is only slightly narrower than those seen in the nave. It rises from just below the base of the window sill upward to the full height of the Saxo-Norman chancel wall, cutting around the inside of the possible late 13th-century voussoir. Contemporary blocking between the cut and window frame consists of roughly coursed flint rubble with small amounts of Roman tile, Reigate stone (possibly reused from the earlier window tracery) and septaria, set into a whitish brown hard chalky mortar, which is different to the mortar around the earlier windows. The window is sealed by the Period II (b) heightening layer. When the window was inserted, it appears that the looser Saxo-Norman masonry was removed up to the height of the harder medieval material to give a more solid build.

Phase II (d). *15th-16th century*

Two low-side windows inserted at the east end of the north and south nave walls may date from the end of the medieval period. Low-side windows are generally found at the west end of chancels, but in the nave could have the benefit of lighting side altars, the existence of which on the south side is implied by a piscina found in 1991 (Rodwell 1993, 191). The

windows were constructed in Reigate, although today only part of the jambs survive, the result of re-facing in limestone in the later Victorian period. It is therefore difficult to gauge their dimensions. The insertion cuts for the windows measure approximately 1.60m x 1.20m. Between insertion cut and window frame, the material consists of randomly placed flint in a light greenish brown lime mortar, similar to the mortar around the large Y-tracery windows in the nave (Phase II (a). It is possible that these windows date to the first half of the 16th century, rather than after the Reformation as Rodwell (1986, 152) proposed.

Period III. *The 18th century*
(Figs. 3, 4 & 5)

In 1714 the tower collapsed, taking the western end of the nave with it. By 1717 this had been rebuilt in brick and a replacement tower added within the area of the extant foundations (Morant 1768, vol. 2, 149). The exposed fabric showed that the ends of the west nave walls were firstly consolidated in red brick built up to a straight joint. The western bay was then rebuilt abutting the joint.

Period IV. *The 19th century*
(Figs. 3, 4 & 5)

Major alterations in 1838 and 1839 transformed the appearance of the church in an attempt to recreate a romanticised vision of the Early English style. Consequently parts of the earlier fabric were destroyed. The old uncusped Y-tracery windows were replaced with brick copies and new central windows inserted to add symmetry. The roof was rebuilt at a lower pitch behind a brick parapet. New slender corner buttresses replaced the medieval buttresses and the whole was rendered in a layer of Roman cement.

A flue discovered on the south side of the chancel probably belongs to this phase. It took smoke from a stove located within the church. The flue was a mortar-lined shaft leading horizontally from the south-west chancel window, to emerge between the round-headed window and the chancel door (Fig. 5). It then rose vertically to the top of the parapet, where it is lined on the outside with brick.

Graffiti scratched onto the top light of the medieval south-east nave window provides evidence for two of the many routine maintenance jobs to a church that mostly go undetected. The first, from 1806 relates to the re-leading of the window and the second, in 1856 probably refers to maintenance work on the window frame itself.

Conclusions

With the opening up of hitherto unseen areas, the 1999 survey at St. Mary and All Saints church has resulted in a deeper understanding of the building's development. This new information generally supports Rodwell's original survey of the church and the work in the intervening years, which forms the basis for this report. Apart from areas obscured by cement repointing, the only external areas of the church which have not been the object of detailed recording are the eastern wall of the chancel and the tower.

The three seasonal breaks in the Period I building work seen by Rodwell in the chancel have now been found in the walls of the nave. A further break, interpreted as a sub-division of this period, seen in 1990 when it was dated to possibly the 14th century, was recognised in both sides of the nave. This has been re-phased as Saxo-Norman now that the fabric is better understood. The character of the Saxo-Norman mortar is typically pinkish yellow with a low sand and lime content and shell inclusions. A contemporary tympanum over the original north door, postulated by Rodwell (1985) as being from this period, was revealed and recorded.

The medieval mortars are typically harder and more limey, without shell and usually a light yellow brown colour. The main events of the medieval period, the refenestration, extension and wall heightening before re-roofing, are seen as being part of one overall improvement programme beginning in the late 13th century with the nave and ending in the early 14th century with the chancel. A medieval timber collar survives in the east gable of the nave. Before the 1999 survey it was not known that the nave was raised after refenestration. The more elaborate style of the chancel windows with their cusped tracery reflects the greater importance of this part of the church. It is now suggested that the low-side windows in the nave may date from before rather than after the Reformation. The 19th-century graffiti on the window glass and the brick-lined flue were interesting discoveries from later periods.

ADDENDUM: Observations on the restoration of the tower and the east wall 1994

D. Andrews

In 1994, the west tower and the east wall of the chancel were re-rendered. The early 18th-century build of the tower is in dark red well-fired bricks (205-215 x 100 x 55mm) laid to Flemish bond, and bonded with a whitish lime rich mortar. The outline of the round-headed 18th-century windows was visible either side of the pointed arches of the 19th-century windows. The 18th-century string courses were only poorly preserved. They seemed to be three courses deep, the top and bottom courses apparently being chamfered, though the top course had possibly been cut back to form the 19th-century string course.

The 19th-century build began from a level 800mm below the top string course of the tower. The 19th-century bricks (230 x 110 x 65mm) were laid to English bond, and bonded with a brown somewhat gritty mortar. The profile of the bulbous mouldings of the 19th-century string course were slightly altered in the restoration to achieve a detail that would weather better.

Removal of the render from the east chancel wall revealed disrupted masonry at the corners where buttresses have been removed, and the outline of the bottom and sides of the Georgian window (cf. Rodwell 1985, fig. 117), which was wider than the existing 19th-century one (Fig. 6). To either side of the Georgian window, and contemporary with it, the east wall had been extensively refaced in bricks (225 x 110 x 60mm) bonded with a hard white slightly gritty mortar, with penny struck joints. The larger size of these bricks indicates that this refacing is later than the tower rebuild, probably late 18th century or early 19th century. Cracks up to 1 inch wide where the 18th-century window aperture had been blocked show that the north and south walls have moved outwards, probably because the roof has caused them to spread. These cracks were stitched as part of the restoration. The 18th-century window opening had an outer rebate 4 inches deep, though what looked like a plaster glazing line deeper in the wall thickness indicated that the window frame was not set in the rebate but further back in the wall.

Acknowledgements

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Joan de Bohun, Countess of Hereford, Essex and Northampton, c.1370-1419: family, land and social networks[1]

by Jennifer C. Ward

The local lord or squire, owning much of the land in the locality, dominating local society and local government, and contributing to religious and cultural activities, is a well known figure to the historian. The role of the aristocracy and gentry changed over the centuries, but their position at the centre of rural society is undoubted from Anglo-Saxon times until the Second World War. What may seem unusual is to be taking a woman as epitomising this group, but the attitudes and beliefs of men and women had much in common, and factors such as inheritance and widowhood meant that some women became important and influential landowners. It was in fact due to exceptional circumstances that Joan de Bohun, countess of Hereford, Essex and Northampton, undertook a male governing role in the early fifteenth century. Her life and activities can therefore be examined in the light of the perennial concerns of the nobility and gentry. How were they to ensure the well-being of their family and the continuity of their lineage? How were they to manage their land and maintain their income? How were they to build up social networks? How were they to govern the county in order to ensure social and political stability and preserve law and order? How were they to try to ensure their salvation after death?

By birth and marriage, Joan was a member of the highest nobility. She was the daughter of Richard FitzAlan earl of Arundel (d.1376), and had two powerful brothers, Richard earl of Arundel who succeeded his father and was executed in 1397, and Thomas who became bishop of Ely in 1373, and was translated to York in 1388 and to Canterbury eight years later. She married into another comital family, her husband being Humphrey de Bohun, earl of Hereford, Essex and Northampton, who died in 1373. The marriage alliances of their two daughters connected her to the royal family.

Nothing is known about Joan's life as a child. In view of the fact that marriage negotiations were being conducted in 1359, she was probably born in the late 1340s; noble marriages tended to take place when the parties were young, and the Church accepted marriage at puberty, laying down the ages as twelve for girls and fourteen for boys. Arranged

marriage was the norm among the nobility, great importance being attached by parents to lands, wealth and advantageous alliances. Although the Church insisted on the parties giving their consent to the marriage, there was little question of them having any say over the choice of husband or wife. Parents may have felt that they were doing their best for their children, but there is no way of gauging the emotional effects on the children themselves. In Joan's case, discussions were in progress in 1359 between her father, Richard earl of Arundel, and William de Bohun, earl of Northampton, for a double marriage between Joan and William's son and heir, Humphrey, and her brother Richard and William's daughter Elizabeth; each father had picked the daughter he preferred. Dispensations were received from the papacy as the parties were related in the fourth degree i.e. they had a common great-great-grandfather.

Arrangements were made for land to be settled on the couples. We do not know the size of the dowry in either case, but it would have been substantial; it is possible that the 2,000 marks (£1,333.33) bequeathed to Joan by her father in 1376 was part of her dowry, as this was normally paid in instalments.[2]

Little is known of Joan's time as a wife. Her father-in-law died in 1360, soon after her marriage, and his brother, Humphrey earl of Hereford and Essex, died the following year. Her husband at that time was still a minor, and did not receive his father's and uncle's lands until he came of age in the spring of 1363. During the 1360s he was involved in war and politics, and was often overseas. He went abroad on pilgrimage early in 1363, and was overseas on the king's service in 1366 and 1367; in 1366, he was negotiating the marriage between Edward III's son, Lionel duke of Clarence, to Violenta Visconti of Milan.[3] He headed the list of the commission of the peace for Essex and Rutland in 1364 and 1368, and was a member of the Huntingdonshire commission in 1368 and 1369. As earl of Hereford he ranked as Constable of England, and he became a Knight of the Garter about 1365. With the renewal of the Hundred Years War in 1369, he was involved in fighting on sea and land in 1371 and 1372.[4] When he died in 1373 at the age of thirty,

there were two daughters, Eleanor aged seven, and Mary aged three or four. Joan was described in Humphrey's will as his 'very dear wife' and was appointed one of the will's supervisors.[5] She never married again, and lived as a widow for nearly fifty years until her death in 1419.

The role of the mother was considered especially important during her children's early years. Joan's main responsibility in 1373 was towards her daughters who were the heiresses to the Bohun lands; it must have been a great disappointment that no son had been born. As the two girls were under age they came into the king's wardship, and it was the Crown which decided on their marriages. Within a year, it had been settled that Eleanor should marry Thomas of Woodstock (b.1355), Edward III's youngest son, and he was granted some of the Bohun lands in order to maintain his position; the marriage probably took place in 1376, and Thomas was then referred to as Constable of England, the office previously held by the Bohuns.[6] Eleanor therefore appears to have been married at about the age of ten to a twenty-one year old husband.

The younger daughter Mary probably continued to live in her mother's household, with Thomas having custody of her share of the estates.[7] According to the chronicler Froissart, Thomas planned for Mary to become a nun so that he would obtain the whole of the Bohun inheritance. His elder brother, John of Gaunt, however, had other ideas. Once Thomas had departed on an expedition to France in 1380, Mary was invited to stay with her aunt the countess of Arundel, and her marriage to Henry Bolingbroke, Gaunt's eldest son, 'instantly' took place.[8] It is likely that the truth was more prosaic. John of Gaunt purchased Mary's marriage from the Crown in the summer of 1380, and the marriage took place by February 1381. The wedding was a splendid occasion, with music from the royal minstrels and those of Gaunt's brother, the earl of Cambridge. The bride received costly presents from her sisters-in-law, each one giving a drinking-goblet and silver-gilt ewer, and Mary was also given jewels.[9] As she was under age, she remained in her mother's care, but this did not prevent Henry from consummating the marriage, and Mary's first child, who did not survive, was born in 1382 when Mary
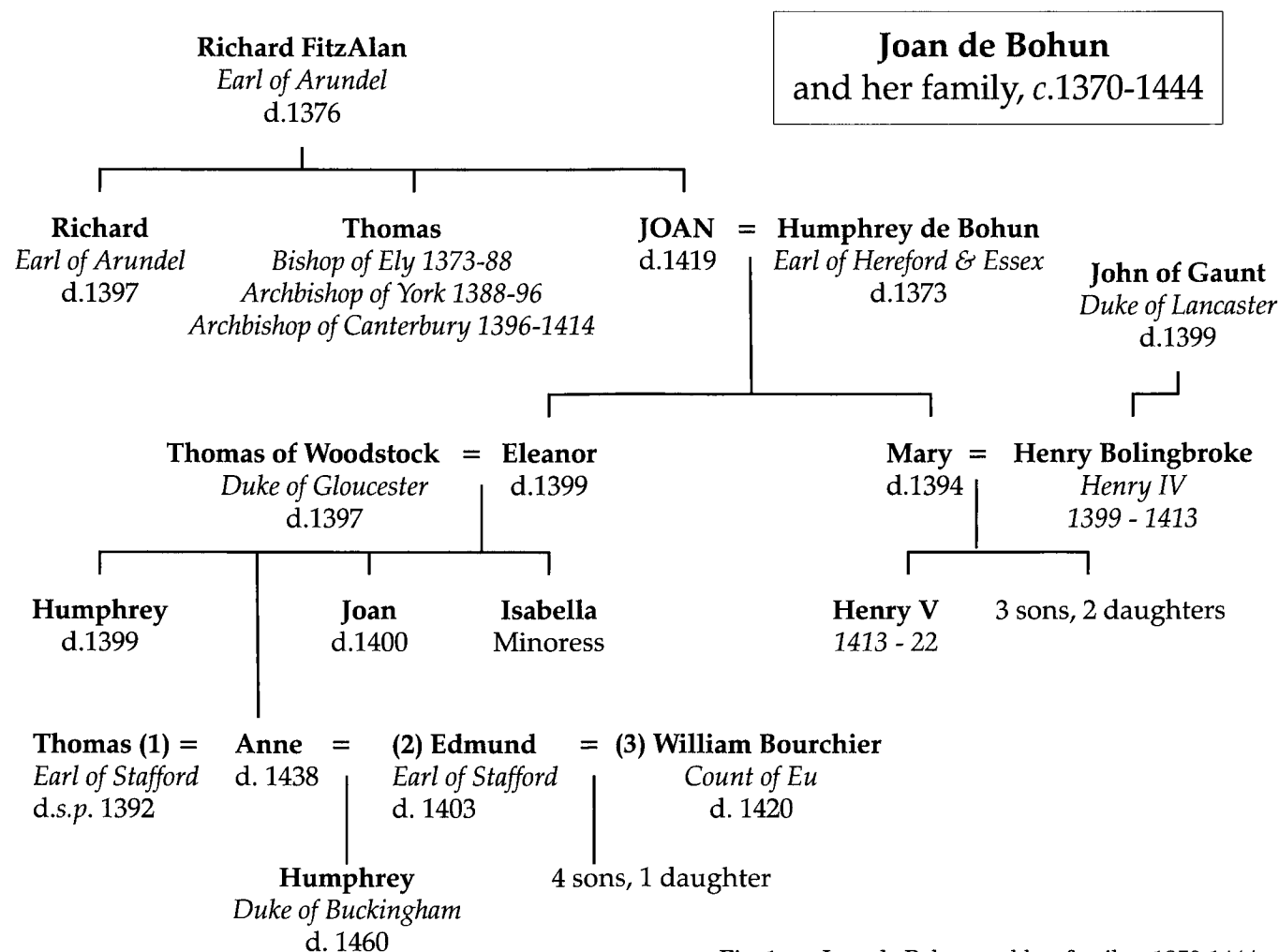

Fig. 1   Joan de Bohun and her family c.1370-1444.

was probably twelve or thirteen; she bore six more children before her death in childbirth in 1394.[10] She was the mother of Henry V, and of Thomas duke of Clarence, John duke of Bedford and Humphrey duke of Gloucester, all of whom were prominent in war and politics under Henry V and Henry VI; her daughter Blanche married Ludwig duke of Bavaria, while Philippa became the wife of Eric king of Denmark.

Responsibility for family and for land went together. Although it was taken for granted that property would normally be run by men, widows had to assume control of their dower lands, the dower comprising one-third of the husband's estates; many women also held jointure, i.e. land settled jointly on the husband and wife and held by the widow for life after the death of her husband. Joan therefore became an important landowner in her own right after Humphrey's death. The assignment of her dower was made at the end of March, 1373, when she took the customary oath not to remarry without the king's permission. Her dower lay in eight counties (Essex, Huntingdonshire, Buckinghamshire, Middlesex, Wiltshire, Berkshire, Oxfordshire and Surrey), but a substantial part was situated in Essex; she held the manors of Writtle, Hatfield Broad Oak with the half-hundred of Harlow, Saffron Walden, Debden, Quendon, Great Baddow, Fobbing, and one-third of Hallingbury without the park. She was also assigned knights' fees and advowsons, mainly in Essex.[11] This dower did not constitute her total landholding. She had a residence at Rochford, and other estates came into her hands during her widowhood by way of wardship and land transactions. She can certainly be counted as a major Essex landowner, and it is her Essex lands which will be discussed in this article.

The years of Joan's widowhood were a difficult time for farmers. The drastic fall in population as a result of the Black Death of 1348-9 and subsequent plagues led to the collapse of the corn market in the 1370s. Costs were rising, in spite of the prices' and wages' freeze imposed by the Ordinance and Statute of Labourers of 1349 and 1351. Whereas the immediate reaction of many lords was to enforce the status quo and insist on the dues and services previously received from free and unfree peasants, by the later fourteenth century they were increasingly adopting a policy of leasing their lands rather than farming them themselves. The second half of the fourteenth century, taken altogether, was a time of uncertainty and tension which boiled over in the Great Revolt of 1381.[12]

Early in her widowhood, Joan pursued a mixed policy of direct exploitation and leasing. The day to day running of her manors was in the hands of a hierarchy of estate officials, namely, steward, bailiffs and reeves. Overall policy decisions were in the hands of Joan and her council. There is no means of knowing how far Joan was herself directly involved in estate administration, but evidence from elsewhere indicates that supervision by the lord or lady helped to ensure efficient organisation. Accounts survive for Writtle for 1376-7, and for Hatfield Broad Oak for 1377-8, and in both places arable and livestock farming was carried on.[13] Both produced grain for the market as well as for consumption. Sheep farming was integrated with Joan's other manors. In 1377-8, 312 yearling lambs were received at Hatfield Broad Oak from Writtle, 142 lambs from Boyton in Roxwell (part of the Writtle estate), and 40 lambs from Great Baddow, while 40 yearling lambs were sent in April to Boyton, 60 to Great Baddow and 319 to Enfield.[14] The Writtle account referred to 281 sheep being driven to Amersham in Buckinghamshire, and lambs coming from Great Wakering.[15] Both manors ran a dairy which was leased out, 21 cows being kept at Hatfield, and 40 at Writtle. Other items were also leased: at Hatfield, the half-hundred of Harlow, and the windmill, market and fair; and at Writtle the market and fair. Customary rents constituted an important part of the receipts, amounting to £40. 15s 2 1/4d. at Writtle, and £22. 4s. 4 1/4d. at Hatfield. Problems are apparent on both manors. Hatfield Broad Oak may well have got run down; arrears amounted to £46. 7s. 2d., and a considerable amount had to be spent on the repair of buildings; £10. 16s. 1d. was spent on the hall and chamber, and on the farm buildings. It is not possible to see the acreage under arable cultivation at Hatfield because of damage to the account, but at Writtle only part of the demesne was under crops.[16]

To run her manors, Joan relied on the labour services of her tenants. At Hatfield, 4,818 1/4 works were due from the tenants between Michaelmas and the beginning of August, and 1,763 1/2 during harvest. Over half of these were not demanded, as they were covered by various allowances made to the tenants. 588 works were used in 1377-8 between Michaelmas and the beginning of August, and 968 1/2 sold; the tenants had to pay for not doing the works which the lady did not need. For the harvest, 465 works were used and 400 were sold, and most of the harvest boon works were demanded (83 1/2 out of 118 1/2); getting in the harvest was vital.[17] In addition to rents and services, unfree tenants were expected to attend the manor court, and the perquisites received indicate that the courts were active and peasant obligations were enforced; £8. 16s 3d. was received from the Hatfield court, and £8. 12s. 8d. from Writtle, and the Writtle court of Michaelmas, 1379, shows tenants being prosecuted for failure to perform labour services and for not attending the court.[18] Serfdom, labour services, and the operations of the courts were all grievances in 1381.

Peasant discontent is apparent on several of Joan's manors during the Great Revolt. The rising began at Fobbing in late May, and at the end of June rebels were meeting at Great Baddow to ride against Thomas of Woodstock. There is no reference to the revolt at Saffron Walden, but with the series of surviving court rolls beginning on 23 December, 1381, it is likely that earlier documents were burnt by the rebels. Both Debden and Hatfield were attacked and documents burnt, presumably in an attempt to obliterate the obligations of serfdom.[19] This, however, did not occur in the short term. Labour services continued to be used at Writtle until 1442 at least.[20] This may have been the case elsewhere, and does not seem to have caused further widespread discontent. The Writtle court rolls immediately after the revolt record occasional prosecutions of tenants for not performing labour services. More symptomatic of discontent in the autumn of 1381 were the numerous tenants trespassing and trampling in the lady's crops with their livestock, and this continued to be a matter prosecuted in the manor courts.[21]

Joan remained an energetic landowner after 1381, as is made clear by court roll evidence. The court rolls for Saffron Walden manor show that the lady and her officials kept a tight control over land transactions and servile obligations such as heriot; on the death of a serf, his best animal had to be given to the lord. Law and order required constant vigilance. The lady, however, was also concerned to develop the economy of the town.[22] Marketing was vitally important, and Saffron Walden had a wide hinterland in north-west Essex, east Hertfordshire, and Cambridgeshire, as far north as Cambridge. Both the victualling and the leather trades are recorded in the court rolls. For instance, a court held on 7 July 1403 fined 26 male and female brewers for breaking the assize of ale; 21 men and women for selling ale contrary to the assize; 20 male and female bakers for selling bread for human and horse consumption by false weight; and five male bakers for selling bread at too high a price. Nine butchers and two tanners were fined for selling their wares at excessive prices; in addition, the leather was badly tanned. On other occasions, fishmongers were also fined if their prices were too high.[23]

The lady was also concerned to develop dyeing of woollen cloth in the Buryhill area of the town. Thus, at the Easter court of 1384, it was recorded that John Wrighte, fuller, had built a dyehouse five perches long on Buryhill without the permission of the court, and without payment of rent; the lady agreed that he and his household should hold it at her will in return for a payment of three pence yearly rent, and he was fined for erecting the dyehouse without licence. It appears that this development on Buryhill goes back to the reign of Edward III, as John Hog showed a copy of the court-

roll of 1359-60 to prove his title to a dyehouse previously held by Roger Holdebourgh; John's tenure was confirmed by the lady.[24] Transfers of property were one of the duties of the messor; John Wrighte, fuller, in 1390 surrendered his property of half an acre and three dyehouses to the messor, and it was handed over to his wife and son.[25] The Writtle court rolls provide a similar picture of the lady's control over her lands, tenants and commercial activities.[26]

Although Joan could exercise active lordship over her tenants, it was clear from the late 1370s at least that direct farming of demesne land was not a policy worth pursuing, and her manors were therefore leased. Boyton was already in the hands of a leaseholder before 1376, and Writtle was leased in 1397 for £136. 13s. 4d. a year. The lease excluded wardships, marriages, escheats, fees, advowsons, the parks of Writtle and Horsfrith, the warren, the manor buildings within the moat, and abandoned chattels, the chattels of felons and fugitives, and strays worth more than £2 in any one year.[27] In 1403-4, Chignall St. James and Mashbury were also held at farm, Chignall for £13. 6s. 8d. a year, and Mashbury for £20 a year; Mashbury was in the lady's hands by way of wardship.[28] Several manorial accounts survive for the time when the manors came into the hands of Henry V after Joan's death on 7 April, 1419, and, except for Great Baddow, all had been leased out, Writtle and Boyton for £146. 13s. 4d. a year, Walden for £86, Debden for £36, Hatfield Broad Oak for £102. 13s. 4d, Mashbury for £22, and Chignall St. James for £17. 6s. 8d. These leases were drawn up on the same lines as for Writtle. There may have been some difficulty in persuading men to take up the leases, as in some cases the amounts due were reduced by the king; this happened at Writtle, Mashbury and Chignall St. James, and there were earlier reductions on Joan's manor at Great Dunmow which had been let in a number of separate parcels.[29]

Throughout the Middle Ages and beyond a great gulf existed in the social hierarchy between lord and peasants. In contrast, friendly relationships were enjoyed among one's social equals, and Joan was at the centre of both a family and county network. What is noteworthy about Joan is her maintenance of close ties with her natal family. Her father and the Londoner Adam Fraunceys acted with her in supervising the execution of her husband's will. She acted as one of her father's executors in 1376, and was bequeathed 2,000 marks and the earl's second coronet which was to be passed on to her heirs in remembrance of him; each of his four executors was bequeathed 500 marks (£333.33) to be conscientious in the execution of the will and to be good to the earl's children. Her brother Earl Richard drew up his will in 1392 and left her his cup decorated with hearts, and a three-leaved gold tablet, with the

crucifix inside and 'the coronation', probably of the Virgin Mary, on top, went to her daughter Eleanor. Joan was warned that she would not receive her bequest if she refused to accept the will.[30]

Household accounts can be more informative than wills, and these survive for Joan's brother, Thomas Arundel, while he was bishop of Ely. Joan and Thomas were on very good terms and often exchanged visits. In 1383, for instance, Thomas visited Joan at Rochford in February, Joan going to Wisbech to return the visit in August. The visit included a two-day excursion to Kings Lynn where they were entertained by the Austin friars and took a boat-trip down the River Ouse towards the estuary. On their way back, they dined at Terrington St. Clement, spent the night at Wisbech, and went on the next day to Downham where they celebrated the feast of the Assumption of the Virgin Mary. During October, Thomas entertained Joan at his manor of Holborn, a family party being assembled, including Richard earl of Arundel and his wife.[31] Joan was unable on occasion to accept Thomas's invitations. A later letter survives in which she explained why she could not spend Easter with him; she did not want him to think her hard-hearted, but she was due to be at Denny abbey in Cambridgeshire on Wednesday 11 April and was staying there for the Thursday, returning to Walden on Friday, and spending Easter there.[32]

There are no household accounts or will for Joan herself, so it is not possible to comment on her relations with her own children.[33] But a close relationship certainly existed in the next generation, judging by the will of her daughter Eleanor, drawn up in 1399. She left a coral rosary to her mother, but most of her possessions were divided among her four children, and she was concerned to highlight her own belongings and those of her husband and father. The importance attached to lineage is apparent. Her son Humphrey received the verse-history of the knight of the swan, the swan being the Bohun badge, his grandfather's psalter which was to be passed down the family from heir to heir, his father's coat of mail with a cross over the heart, and a gold cross which Eleanor described as her best-loved possession. Anne received a rosary which had belonged to her father, and Joan a devotional book used by her mother. Isabella, who became a Minoress, received various books, and a black and gold belt of her father's.[34] These bequests were all the more poignant in view of Thomas of Woodstock's probable murder in 1397.

The business and social networks built up by the nobility with their officials and the local gentry were a vital element in county power structures in the later Middle Ages. The Bohun family in the fourteenth century had close links with many leading Essex gentry, and many of Earl Humphrey's retainers became the followers of Eleanor and

Thomas of Woodstock, such as Thomas Mandevill, Richard Waldegrave, John Gildesburgh, and Thomas Coggeshale.[35] Countess Joan was an integral part of the Bohun network. Thomas Mandevill, for instance, acted as one of the attorneys for securing her dower in 1373.[36] Joan was a wealthy and powerful widow under Richard II, but local power was then largely in the hands of her son-in-law, Thomas of Woodstock. Joan was very much associated with the opposition to Richard II in 1386-8; Thomas led the five Appellants, who included Richard earl of Arundel and Henry Bolingbroke, and Thomas Arundel was also deeply involved. Joan's own influence was far greater once Henry Bolingbroke had deposed Richard II in 1399 and ascended the throne as Henry IV. This was not simply due to Henry being her son-in-law (although Mary had died in 1394), but because of the political vacuum at the top in Essex in the early fifteenth century, which meant that Joan, although a woman, was regarded as the leading noble in the county. Thomas of Woodstock had been arrested at Pleshey by Richard II in 1397, and probably murdered; his wife, son and daughter Joan died within the next two or three years. Aubrey de Vere earl of Oxford was ill at the end of his life, was succeeded in 1400 by a minor, and the dowager countess was stirring up support for Richard II.[37] This left Joan as the leading Essex magnate, and she proved her loyalty in the aftermath of the plot of January 1400 to seize Henry IV at Windsor. One of the conspirators, John Holland earl of Huntingdon, was captured in Essex, condemned by the commons, but taken by Joan to Pleshey with the intention of sending him under guard to the king. The commons clamoured for him to be produced; when this happened, he was killed by one of them.[38] This incident raises a number of unanswerable questions. Could Joan have held out against the commons in view of their threat to attack the castle? Was she glad or relieved when John Holland was put to death? Holland had been a close adviser of Richard II in the last years of his reign when Joan's son-in-law, Thomas of Woodstock, disappeared, her brother Earl Richard was executed, and her brother Thomas sent into exile.

Both Henry IV and Henry V granted her a number of custodies of noble estates, to be held on behalf of the Crown, such as her granddaughter Isabel's share of the Bohun lands, the holdings of Ingelram Bruyn, Richard Torell and Blanche Lady Poynings, and she also held the estates of the earl of Oxford during the heir's minority, and the lands of the duke of York. The heir of the earl of Norfolk, John Mowbray, was a member of her household between 1407 and 1410.[39] Many noblewomen were responsible for custodies of estates at some point in their widowhood, but Joan had a remarkable number in the early fifteenth century. What is virtually unheard of for a woman is to find Joan

serving on government commissions, and this underlines her indispensability to the king. In 1402, she was appointed to the Essex commission to arrest and imprison those who preached against the king; it is significant that the other people appointed had close connections either with Joan or with the king, such as William Marny, John Doreward, and Thomas Coggeshale. In 1410 Joan was put on a commission for Essex, Hertfordshire, Cambridgeshire and Huntingdonshire to raise loans in the localities for the king's urgent business; Joan loaned 500 marks (£333.33) to cover herself and all the lay people in Essex.[40]

Joan was rewarded with grants and privileges from the Crown, mostly under Henry IV and Henry V, although she received licences to hunt in the king's forests and parks in 1392 and 1395 from Richard II.[41] She may well have enjoyed hunting; Henry V in 1414 granted her the right to hunt in Hatfield Forest. More valuable were grants involving property, such as John Holland's London house and, temporarily, Hadleigh castle in 1400; the right to live in Rochester castle and to be responsible for its custody in the absence of Sir William Darundell, in 1399; and Leeds castle in Kent in 1414. Not all grants were permanent; in 1401 Joan was to hold the patronage of the hospital of St. Katherine by the Tower of London for as long as there was no queen.[42]

Countess Joan's position and influence meant that she was the obvious person to intercede with the Crown when local grievances arose. In about 1401, Laurence d'Allerthorpe, one of the St. Paul's cathedral clergy, asked for her help against the men of Maldon who had seized a ship and its crew unloading coal at Heybridge, which was a St. Paul's manor; the bailiffs of Maldon were ordered to release the ship.[43] Henry IV's grant of French prisoners to William de Worth of Winchelsea in 1411 as compensation for the loss of his ship to the French was made at the request of the Countess Joan. The following year, she and William Lord Roos were made responsible for sorting out the quarrel between William Maddy of Roydon and Thomas Melburne.[44]

Joan became the central figure in a strong network of county gentry. She enjoyed a two-way relationship with them; they served her as officials and counsellors, while she bestowed patronage, and acted as arbitrator and feoffee in property transactions. After 1397, some of Thomas of Woodstock's retainers remained with his widow, Eleanor, and at the same time built up their connections with Joan. Gerard Braybroke had been closely associated with Thomas, and supported Richard II's deposition. He acted as one of the executors of Eleanor's will, was an important member of Joan's household from 1400 until her death in 1419, and acquired land in Danbury early in the fifteenth century. The career of Robert Darcy

shows how service to Joan enabled a 'newcomer' to become established in the Essex elite. Robert began his career as a lawyer in north-east England; he was a member of parliament for Newcastle-upon-Tyne in 1401, and controller of customs there in 1401-2. He moved south in the early fifteenth century and built up his property in Maldon. From at least 1412, he was associated with Countess Joan, serving her as counsellor, steward, and ultimately executor, and there is little doubt that his presence in Joan's circle brought him into contact with leading members of the Essex gentry and with the nobility and the royal court.[45]

William Marny, whose tomb can still be seen in Layer Marney church, was an established member of the Essex gentry whose fortunes were promoted by Joan. He married her great-niece, Elizabeth Cergeaux, who became co-heiress to her family's lands on the death of her brother in 1396, an inheritance which greatly increased the Marny lands. William's father had serious financial and legal problems, and it was as a result of these that William conveyed rent in Great Totham, his wife's lands in Cornwall, and his goods to trustees, including Joan, Sir William Arundel and Robert Teye, in 1397. He was responsible, along with Joan and two others, for Isabel's share of the Bohun lands after her mother's death, and he often acted alongside Joan in land transactions. Joan handed over to him the wardship of his half-brother, Ingelram Bruyn, in 1406.[46]

Joan and members of her circle often became feoffees for each other's lands. For instance, in 1401, Robert Teye, son and heir of Sir Robert Teye, quitclaimed Marks Tey, Aldham and other lands to trustees, including Countess Joan, Sir John Howard, and Sir William Marny.[47] Joan also acted as an arbitrator, seeing to a just division of the Bataill lands after the death of John son of Thomas Bataill. The heiresses were John's two sisters, Margaret wife of John Boys, and Alice wife of John Barrington; John Boys served both Thomas of Woodstock and his wife Eleanor, acting in 1399 as the steward of the duchess's household, and her executor.[48] Joan also acted together with Essex gentry and clergy in making chantry foundations, often co-operating with members of her own circle. In founding the chantry in the chapel on Foulness in 1408, she was associated with her brother, Archbishop Thomas, and with others, including four prominent Bohun retainers, Sir Richard Waldegrave, Sir Gerard Braybroke, Sir William Marny and Robert Teye. The foundation in Coggeshall abbey, for which Joan was a trustee, was to pray for the souls of Sir Hugh de Badewe, Thomas Coggeshale and their wife, Margaret de Badewe, all of whom had been connected with the Bohuns and with Thomas of Woodstock. Other foundations for which Joan was a

trustee were made in Dunmow priory and Leez priory.[49]

Joan came of a pious family, and like her contemporaries expressed her piety through religious patronage and, as has been seen above, the foundation of chantries to pray for the passage of souls through purgatory. She was concerned that standards should be maintained in the religious houses of which she was patron, such as Bricett priory in Suffolk.[50] Her father and her brother Earl Richard established and endowed the family chantry at Arundel, and her brother Thomas was a leading churchman. Her husband, Earl Humphrey, is known to have gone on pilgrimage overseas in 1363, and Thomas of Woodstock founded the college of priests at Pleshey.[51] Her granddaughter Isabel became a Minoress (Franciscan nun) and later abbess of the abbey of Minoresses outside Aldgate in London.[52] Possibly Joan was involved with cultural patronage, as the Bohun family were the greatest patrons of manuscript illumination in the fourteenth century, and Joan's husband and her daughter Mary both commissioned works.[53] It is probable that Joan, like her contemporaries, combined private devotion with public worship, and she was a leading member of St. Helen's guild at Colchester, as were Sir John Howard and Sir Gerard Braybroke.[54]

Joan, like the rest of the Bohun family, was a great benefactress of Walden abbey. She contributed to the building, and gave vestments, altar vessels, and a gold cross in which were placed several relics of the true Cross. She enjoyed confraternity at the abbey and often attended Mass on saints' days. A Walden document described her as a woman devoted to God, watching in the temple of the Lord, living chastely like Anna (in St. Luke's Gospel) from the time of the death of her husband for the rest of her life. She died in April 1419, and was buried near her husband in the abbey.[55]

Although the evidence has nothing to say about the emotional side of Joan's life, she emerges as a vigorous personality. She was fully integrated into Essex society, working alongside members of the gentry, and dominating the peasantry, apart from 1381. Her life centred round her family, land management, and local affairs. She presumably enjoyed a high standard of living and a luxurious lifestyle. In her religious devotion she may well have been influenced by her brother, and her devotion may have become more intense as she grew older. Her responsibilities during Henry IV's reign make her stand out among English noblewomen. At the same time, she epitomises countless Essex men and women down to the twentieth century who have lived in a similar social climate, had the same interests and attitudes, and been rooted in the land.

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Footnotes

1. The first version of this paper was given to the Essex Archaeological and Historical Congress Local History Symposium, entitled Essex: the Land and its People, on 25 March, 2000.

2. G.W. Watson, 'Marriage Settlements, no. 13i, Humphrey de Bohun, earl of Hereford, Essex and Northampton, and Joan of Arundel,' *Genealogist,* xxxvi (1920), 198-203; *Calendar of Entries in the Papal Registers relating to Great Britain and Ireland. Papal Letters, 1342-62,* 606; *Calendar of Patent Rolls, 1358-61,* 304; N.H. Nicolas, *Testamenta Vetusta,* I (London, 1826), 94-6.

3. *Complete Peerage of England, Scotland, Ireland, Great Britain and the United Kingdom* (London, 1910-59), vi, 473-4; *Calendar of Patent Rolls, 1361-4,* 173, 299, 528-9; ibid. *1364-7,* 303-4, 347; ibid. *1367-70,* 41, 193-4, 266-7; T. Rymer, *Foedera, Conventiones, Litterae,* ed. J. Caley and F. Holbrooke, iii, part 2 (London, 1830), 686-7, 797.

4. Public Record Office (henceforward PRO), E101/31/15; E101/32/20.

5. *Calendar of Inquisitions Post Mortem,* xiii, 130-1; J. Nichols, *A Collection of All the Wills of the Kings and Queens of England* (London, 1780), 57-8.

6. *Calendar of Patent Rolls, 1370-4,* 472; ibid. *1374-7,* 337, 355; *Calendar of Inquisitions Post Mortem,* xiv, 90-1.

7. *Calendar of Patent Rolls, 1377-81,* 502.

8. *Chronicles of England, France and Spain by Sir John Froissart,* translated by T. Johnes (London, 1857), i, 623-4.

9. *Calendar of Patent Rolls, 1377-81,* 537; ibid. 1381-5, 95; T. Rymer, *Foedera, Conventiones, Litterae,* ed. J. Caley and F. Holbrooke, iv (London, 1869), 139; *John of Gaunt's Register, 1379-83,* ed. E.C. Lodge and R. Somerville, 2 vols. (Camden Society, third series, lvi, lvii, 1937), I, 178-80.

10. PRO, DL29/262/4070, m. 3; DL28/1/1, fol. 5r; E403/508/18. *John of Gaunt's Register, 1379-83,* ed. E.C. Lodge and R. Somerville, 2 vols. (Camden Society, third series, lvi, lvii, 1937), i, 210-11, 220, ii, 309; J.H. Wylie, *History of England under Henry IV* (London, 1884-98), iv, 131-4.

11. *Calendar of Fine Rolls, 1369-77,* 231-2, 271; *Calendar of Patent Rolls, 1370-4,* 267, 334; *Calendar of Close Rolls, 1369-74,* 22-5, 495-6, 508; ibid. *1374-7,* 28.

12. A recent discussion of the effects of the Black Death can be found in J. Bolton, '"The World Upside Down." Plague as an Agent of Economic and Social Change,' in *The Black Death in England,* ed. W.M. Ormrod and P.G. Lindley (Stamford, 1996), 17-78.

13. Essex Record Office (henceforward ERO), D/DQ 18; D/DP M560; K.C. Newton, *The Manor of Writtle* (Chichester, 1970), 68.

14. ERO, D/DQ 18, m. 2d.

15. ERO, D/DP M560, m. 3.

16. ERO, D/DQ 18, m. 1-2, 1d; K.C. Newton, The Manor of Writtle (Chichester, 1970), 69.

17. ERO, D/DQ 18, m. 1, 3d-6d.

18. Ibid. m. 1; ERO, D/DP M560, m. 2; D/DP M189.

19. *Essex and the Great Revolt of 1381,* ed. W.H. Liddell and R.G. Wood (Chelmsford, 1982), 86, 89-91, 97.

20. K.C. Newton, *The Manor of Writtle* (Chichester, 1970), 72.

21. ERO, D/DP M189, 14 September, 1381; D/DP M191, m. 1, 11.

22. ERO, D/DBy M1, M2; D. Cromarty, 'Chepyng Walden, 1381-1420, a Study from the Court Rolls,' *Essex Journal,* ii, 104-13; 122-39; 181-6.

23. Cromarty, op. cit. 124-33; ERO, D/DBy M2, m. 2d, 14, 28d.

24. Cromarty, op. cit. 106-13; ERO, D/DBy M1, m. 3d.

25. Cromarty, op. cit. 138-9; ERO, D/DBy M1, m. 13d; M2 m. 11d, 14d, 48.

26. ERO, D/DP M191, m. 1, 2, 7, 8, 11.

27. ERO, D/DP M561, m. 1. The usual yearly payment for the lease of Writtle was £146. 13s. 4d., so there may be a clerical error in the roll.

28. Ibid.

29. PRO SC6/836/4, 5; SC6/838/1, 2; SC6/839/35-7; SC6/840/15; SC6/844/8; SC6/849/1, 2, 40, 41.

30. J. Nichols, *A Collection of All the Wills of the Kings and Queens of England* (London, 1780), 57-8, 134-5; N.H. Nicolas, *Testamenta Vetusta,* I (London, 1826), 95-6.

31. M. Aston, *Thomas Arundel* (Oxford, 1967), 181, 184-7, 194-200.

32. *Anglo-Norman Letters and Petitions from All Souls MS. 182,* ed. M.D. Legge (Oxford, 1941), 84-5; M. Aston, *Thomas Arundel* (Oxford, 1967), 182, dates the letter to 1397, 1403 or 1408.

33. *The Register of Henry Chichele, Archbishop of Canterbury, 1414-43,* ed. E.F. Jacob, ii (Canterbury and York Society, xlii, 1937), 322, indicates that Joan drew up a will, but it appears that it has not survived; the reference records the dismissal of the executors on 18 November, 1425, presumably because they had finished their work. The executors were Gerard Braybroke, Robert Darcy, Margaret Rokyll, William Newbald, and Richard Rede.

34. J. Nichols, *A Collection of All the Wills of the Kings and Queens of England* (London, 1780), 177-86. A Minoress was a Franciscan nun.

35. A. Goodman, *The Loyal Conspiracy. The Lords Appellant under Richard II* (London, 1971), 94-104; J.C. Ward, *The Essex Gentry and the County Community in the Fourteenth Century* (Chelmsford, 1991), 17-19.

36. *Calendar of Fine Rolls, 1369-77,* 217.

37. *Thomae Walsingham quondam monachi Sancti Albani Historia Anglicana,* ed. H.T. Riley (Rolls Series, London, 1863-4), ii, 262; *The Chronicle of England by John Capgrave,* ed. F.C. Hingeston (Rolls Series, London, 1858), 285-6.

38. A. Goodman, 'The Countess and the Rebels: Essex and a Crisis in English Society (1400),' *Transactions of the Essex Archaeological Society,* third series, ii, part 3 (1970), 267-79.

39. *Calendar of Fine Rolls, 1399-1405,* 65, 74, 80, 125, 306; ibid. *1405-13,* 27-8, 157; ibid. *1413-22,* 136-7, 177-9; *Calendar of Patent Rolls, 1405-8,* 122, 372, 375; ibid. *1408-13,* 167, 220; *Calendar of Close Rolls, 1399-1402,* 215; ibid. *1405-9,* 27.

40. *Calendar of Patent Rolls, 1401-5,* 129; ibid. *1408-13,* 204-5, 216.

41. Ibid. *1391-6,* 71, 648.

42. Ibid. *1399-1401,* 60-1, 468; ibid. *1413-16,* 152, 168, 171, 258; *Calendar of Close Rolls, 1399-1402,* 34, 43.

43. *Anglo-Norman Letters and Petitions from All Souls MS. 182,* ed. M.D. Legge (Oxford, 1941), 416-17; *Calendar of Close Rolls, 1399-1402,* 349.

44. *Calendar of Patent Rolls, 1408-13,* 357; *Calendar of Close Rolls, 1409-13,* 395.

45. *The History of Parliament. The House of Commons 1386-1421,* ed. J.S. Roskell, L. Clark and C. Rawcliffe (Stroud, 1992), ii, 347, 749-52.

46. Ibid. iii, 693-5; *Calendar of Fine Rolls, 1399-1405,* 65, 73, 100-1; *Calendar of Patent Rolls, 1396-9,* 116; ibid. *1399-1401,* 372; ibid. *1405-8,* 122; ibid. *1413-19,* 161-2; *Calendar of Close Rolls, 1385-9,* 598; ibid. *1396-9,* 116, 121, 126; ibid. *1399-1402,* 161-3; ibid. *1413-19,* 161-2; *Calendar of Inquisitions Post Mortem,* xx, 60-1; *Feet of Fines for Essex,* iii (Colchester, 1929-49), 233, 259.

47. *Feet of Fines for Essex,* iii (Colchester, 1929-49), 233; *Calendar of Close Rolls, 1399-1402,* 396-7.

48. *The History of Parliament. The House of Commons 1386-1421,* ed. J.S. Roskell, L. Clark and C. Rawcliffe (Stroud, 1992), ii, 144-5; G.A. Lowndes, 'The History of the Barrington Family,' *Transactions of the Essex Archaeological Society,* second series, I (1878), 268-71; ERO, D/DBa T2/11; A. Goodman, *The Loyal Conspiracy. The Lords Appellant under Richard II* (London, 1971), 96-7.

49. *Calendar of Patent Rolls, 1405-8,* 386, 389; ibid. *1408-13,* 411; ibid. *1413-16,* 170-1, 400.

50. *Anglo-Norman Letters and Petitions from All Souls MS. 182,* ed. M.D. Legge (Oxford, 1941), 388.

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Helions Farm, Helions Bumpstead

by Trevor Ennis
with contributions by H. Major, P. McMichael, P. Ryan and H. Walker

Helions farm, built in the mid 19th century, is set within a medieval moated enclosure. Limited excavation and monitoring in advance of underpinning work to the kitchen and drainage works to the north and south of the house recovered evidence of continuous occupation within the moated enclosure from at least as early as c.1200. Improvements and alterations to the building appear to have taken place in the 16th and 18th century. Pottery from the southern arm of the moat suggests it had largely silted up by the late 15th-16th century. 18th-century brick features, including an infilled cellar and a culvert, are related to the immediate predecessor of the present house.

Introduction

Helions farmhouse is set within a moated enclosure scheduled under the Ancient Monuments and Archaeological Areas Act 1979 (no. 20742). Applications were submitted to the Department for Culture, Media and Sport for drainage works to the north and south of the farmhouse, and for the underpinning of the kitchen wall and the construction of a new floor slab, which required a minimum excavation depth of 0.37m. The work was undertaken in three phases between April and November 1999, commencing with the drainage work to the south of the house, followed by the underpinning of the kitchen and concluding with the drainage work to the north of the house. The archaeological work was carried out in accordance with a brief prepared by Essex County Council Heritage Conservation, and was monitored by Essex County Council in conjunction with English Heritage.

The site (Figs. 1 and 2)

The moated enclosure at Helions farm is situated amidst rising farmland c.750m south-west of the church and the main part of the village of Helions Bumpstead. The underlying drift geology is Boulder Clay. The moated enclosure, rectangular or slightly D-shaped, measures some 100m east-west by 85m north-south. The northern arm of the moat still retains water, as does the northern half of the

eastern arm. The remaining moat is dry and the southern arm was backfilled c.1870, although it can still be traced as a slight depression. The moat varies between 10m and 13m wide and is thought to be over 2m deep in its water-filled section.

The present farmhouse, built in the mid 19th century, stands a little west of the centre of the moated enclosure. The front of the house faces north and is approached via a late 18th-century bridge and a large circular gravel drive. There are outbuildings to the west of the house and the remainder of the enclosure is lawn and garden with a number of large trees and shrubs around the periphery. A small conical mound in the north-east corner of the enclosure is believed to be a garden feature.

The kitchen is located in the south-west corner of the farmhouse. A series of 24 underpinning trenches were dug externally below the south and west walls of the kitchen and internally below the north and east walls. A Y-shaped drainage trench ran southwards from the south-west and south-east corners of the kitchen to a soakaway pit located above the infilled moat. Another drainage trench with a series of small feeder trenches ran parallel with the front of the house and discharged into the western arm of the moat.

Historical background

Helions Farm is almost certainly the location of the medieval manor of Helions. This is mentioned in the Domesday Book as belonging to Tihel the Breton (Rumble 1983, 38), who came from Hellean in Morbihan, Brittany (VCH I, 350), and acquired several estates in the area after the Norman Conquest. In the early 12th century the manor was held by Robert de Helion and retained by the Helion family until their last male heir died in 1449. Anne Tyrell, grand-daughter of the last of the male line, married Sir Roger Wentworth, who in 1501 established part claim to the manor through his wife. There is no record of the estate after Anne's death in 1534. In 1553 Helions was one of a number of properties granted by Edward VI to the mayor, commonality and citizens of London (Morant 1768, II, 531). By the mid 18th century ownership of the property had been transferred to the governors of St.
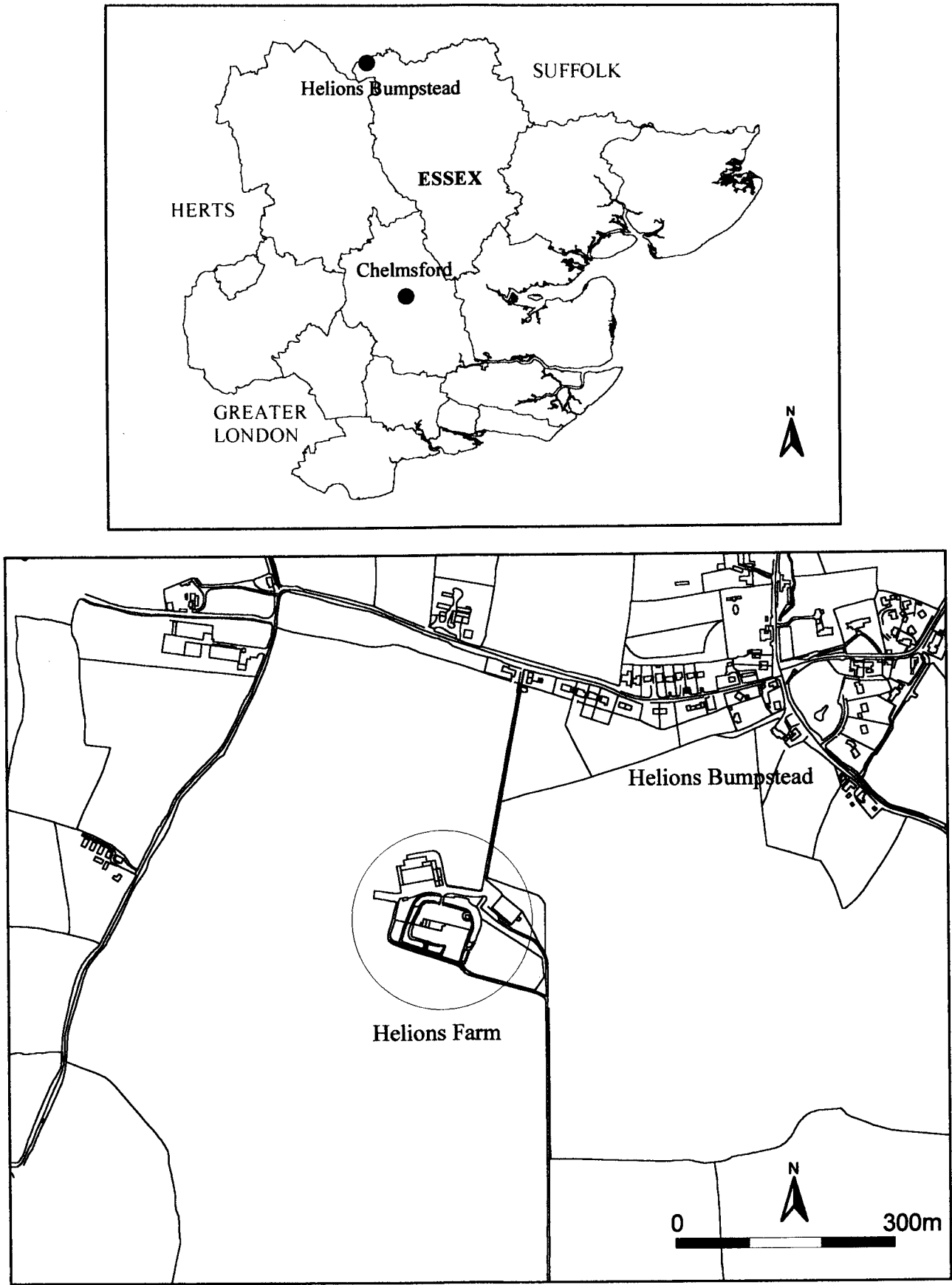
Fig. 1   Helions Farm, location map. (© Crown Copyright Ordnance Survey. All rights reserved MC100014800)

Thomas' Hospital who leased out the farm to various tenants until the early 20th century, when it returned to private ownership.

In the later 18th century Morant (1768, II, 531) described the house belonging to the manor of Helions as a 'mansion-house'. The farmhouse, probably that described by Morant, is known to have burnt down around 1825, and the present 19th-century farmhouse is believed to date from c.1830. The full extent of the moat is shown on the 1841 tithe award map, at which time access to the enclosure was only by the late 18th-century bridge on the north side.

The archaeological investigation
(Fig. 3)

The archaeological monitoring and excavation was required to provide a full record of archaeological deposits which would be destroyed by the underpinning of the kitchen walls, the laying of a new floor slab and the construction of new drains. Excavation of the drainage trenches was begun using a small tracked mechanical excavator under archaeological supervision. Archaeological deposits, where encountered, were excavated by hand prior to further ground reduction by machine to the appropriate depth. The kitchen area was cleaned over after removal of the concrete floor slab. Hand excavation of the archaeological deposits then took place before final levelling off at the appropriate depth by machine. As the lower deposits in the centre of the kitchen were to be left undisturbed, an area measuring c.2 x 1m (corresponding with an area of underpinning work) was fully excavated down to the base of the archaeological deposits in the south-east corner. A watching brief was maintained
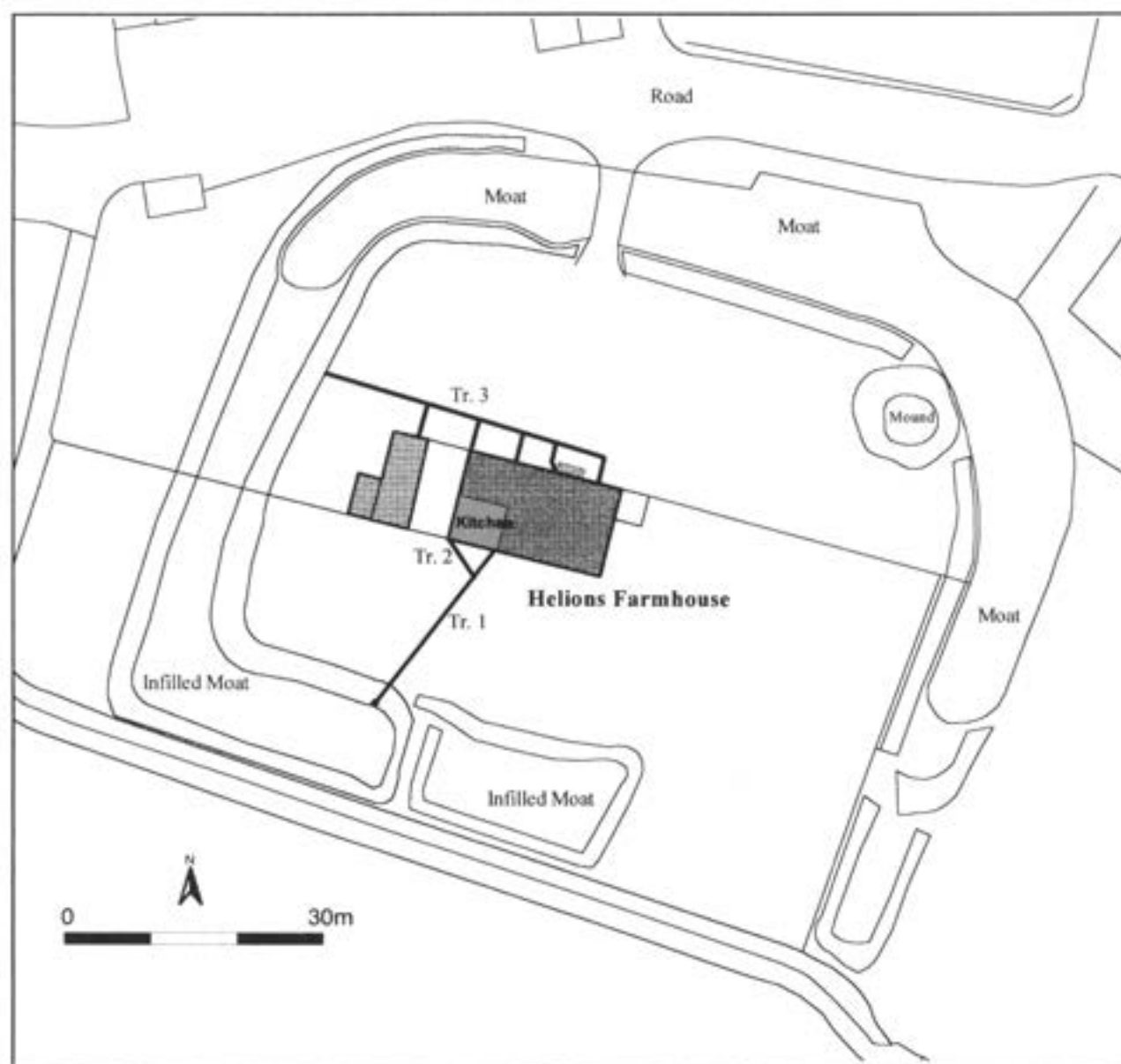
Fig. 2   Helions Farm, moated enclosure and farmhouse. (© Crown Copyright Ordnance Survey. All rights reserved MC100014800)

on the remainder of the underpinning trenches excavated by machine.

The southern drain run was Y-shaped and comprised two trenches (nos. 1 and 2) leading to a soakaway above the infilled section of moat 21.3m to the south-west. The northern end of the longest trench (trench 1) was disturbed for over 5m and the northern end of trench 2 for 2m.

Trench 3, the drain run to the north of the farmhouse, consisted of one long (36.7m) east-west trench parallel with the house and emptying into the western arm of the moat. Five north-south trenches (A to E) linked the main trench with the house. A 6m wide area of modern disturbance was found towards the centre of the trench.
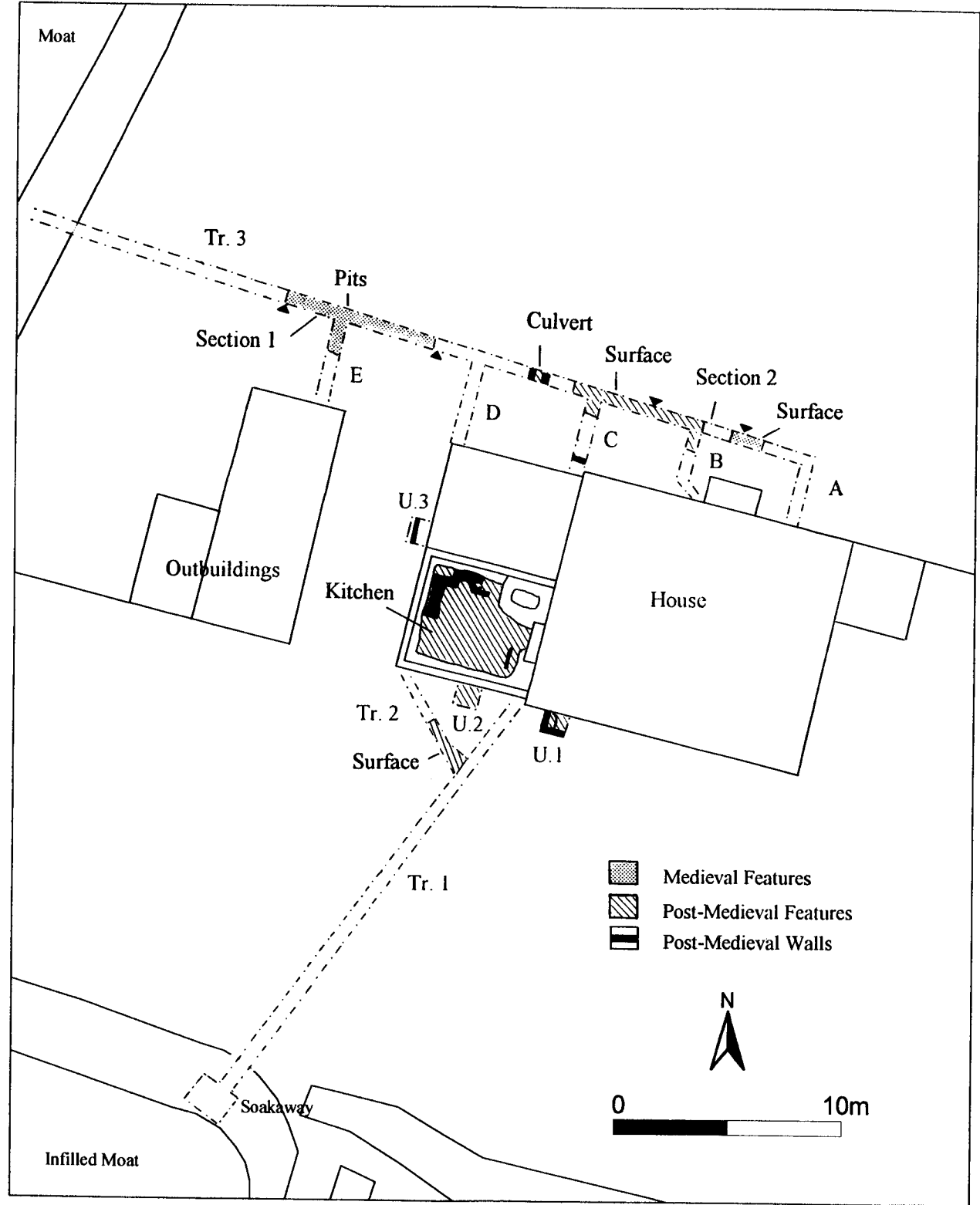
Fig. 3   Helions Farm, trench location.

The archaeological deposits within the kitchen area were bounded by the foundation trenches of the standing 19th-century walls. These clearly cut all the deposits and features within the kitchen with the possible exception of feature 56 in the north-east corner. Disturbance was also caused by an east-west pipe trench running across the middle of the area, a large concrete block inserted at the east end of the area in front of the chimney, and a trench for a gas pipe running from here to the south wall.

Medieval (Figs. 3 and 4)

Medieval deposits were encountered at the base of well-stratified sequences within drainage trenches 2 and 3.

A mid grey silty clay deposit (4) was revealed at the base of the south-eastern half of drainage trench 2, at a depth of 0.58m. This deposit was only partially excavated as it continued below the required depth of the drainage trench. It produced a few sherds of medieval coarse ware and an unglazed sherd of sandy orange ware pottery.

At the eastern end of trench 3 (Fig. 3) the earliest deposit in the stratified sequence was a surface (58, not visible in section) composed of common pieces of chalk, occasional small-medium flints and occasional pieces of local stone. This surface was not fully exposed as it dipped below the required depth limit of the trench. Medieval coarse ware, including a B2 cooking pot rim datable to c.1200, was recovered from the top of surface 58 at the interface with the overlying layer, a light brownish grey clay (79) over 0.24m thick.

Another stratified sequence, including two large pits, was recorded towards the west end of trench 3 (Figs. 3 and 4, S.1). Neither pit was fully excavated as they both extended below the required depth of the drainage trench. Clean brown natural clay was recorded at a depth of 0.7m, and although it was truncated over most of the length of section 1, in the west it was sealed by a 0.3m thick layer of charcoal-flecked mid greyish olive clay (72), probably representing disturbed natural.

The easternmost of the two pits (69) would have been cut from a higher level, but any relationships with adjacent surfaces were truncated by the second pit (71) to the west and a modern drain (84) to the east. Very little of the profile of pit 69 survived, but it was at least 2.9m wide, and over 0.4m deep. It was filled with dark grey clay silt (68) containing pottery dating to the 12th to early 13th century, and, further east, a second fill of mid brownish olive grey clay (67) that did not produce any dating evidence. The westernmost pit (71) cut both pit 69 and clay 72. It was 4.25m wide and at least 0.5m deep, with gradually sloping sides. It was filled with olive grey silty clay (70) containing pottery dating to the early 13th century.

Residual medieval pottery was also recovered from a mid-dark greenish grey silty clay (36) that might represent disturbed natural, at the base of the sequence in the kitchen area.

Discussion

The pottery evidence from the excavation dates the earliest archaeological activity on site to the end of the 12th/beginning of the 13th century. This activity chiefly comprises a chalk and flint surface and an area of pitting in trench 3 and a clay deposit in trench 2. It is not clear if this activity relates to the time before or after the construction of the moat. The thick deposit of clay sealing the chalk and flint surface in trench 3 might provide an answer to this problem. It is possible this material could have come from the construction of the moat and subsequently been spread about within the enclosure. This might have been done to raise and level-up the enclosure interior as well as essentially disposing of the large
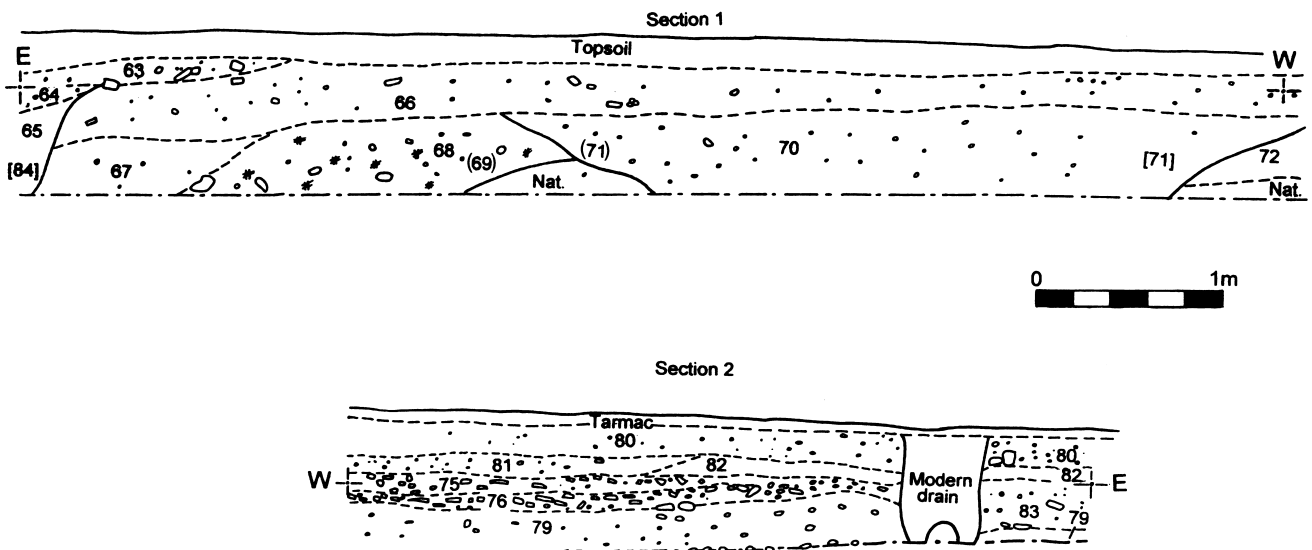

Fig. 4   Helions Farm, trench 3 sections.

quantities of up-cast material that moat excavation would have generated. The similar clay deposit at the base of trench 2 might also be accounted for in this way. No evidence for any other buried surfaces was uncovered.

The disturbed natural clay from the base of the sequence in the kitchen area produced a good quantity of residual medieval pottery, suggesting that there was activity in the vicinity in the medieval period.

Tudor (Figs. 3, 4 and 6)

In trench 2 (Fig. 3) the medieval clay was sealed (at a depth of 0.53m) by a surface which comprised frequent medium to large flints and occasional pieces of brick and tile in a chalk-flecked silty grey clay (3). This clearly represents an external flint cobbled surface and given its thickness (up to 0.2m) probably includes several re-surfacings. This surface produced medieval and late medieval pottery including the base of a sandy orange ware ?bowl with a sparse internal glaze of late medieval type, one fragment of Tudor brick, and part of an early post-medieval copper alloy book clasp (see *Miscellaneous finds* below).

Surface deposits were also encountered above the clay at the eastern end of trench 3 (Fig. 4, section 2). Here there were two rough external surfaces composed of frequent pieces of tile with occasional pieces of brick, flint cobble and chalk in a greyish silt matrix (76 and 75). Both surfaces were similar, with the main difference between them being that the lower (76) was noticeably more compact and had more flint inclusions than the upper (75). Pottery from both surfaces is dated to the 16th century. To the east of a modern drainage pipe trench deposits 75 and 76 appeared to merge together into a more mixed deposit (83), of greyish silt with common flecks of chalk and occasional pieces of tile.

A rubble surface (34), similar to those in trench 3, composed of frequent fragments of brick and tile, was excavated above the disturbed clay at the base of the sequence in the kitchen area (Fig. 6). Finds from this surface included 20 sherds of predominantly late medieval pottery and 45 fragments of Tudor brick. The east-end of surface 34 was cut by a distinct feature (37). This appeared to be orientated north-south and was at least 0.95m long. It sloped from west to east and was 0.4m at its deepest before being truncated by the foundations of the standing kitchen wall. The lower fill of this feature was a mid to dark grey charcoal-flecked clay (38) containing late medieval pottery, including a sherd of Cistercian ware and the base of a Frechen stoneware jug dating from the second half of the 16th century. Deposit 35, a mid to dark grey clay silt, represents the upper fill.

Tudor pottery was recovered from a wet grey silt (10), machine excavated from the bottom of the

soakaway, dug through the in-filled moat at the south end of drainage trench 1 (Fig. 3). The silt was over 0.5m deep and produced a few large sherds of pottery, including a Cistercian ware handle dating the deposit to the late 15th to 16th century. The large size of the pottery sherds suggests that they are not residual, and that the moat had largely (although not completely) silted up by the end of the medieval period.

Discussion

Surface deposits dating to the 16th century were excavated in trench 2, trench 3 and in the kitchen area. These were fairly widespread and suggest the presence of an extensive external yard area at this time. All these surfaces were laid on top of clay deposits and this might suggest a prior episode of levelling. Feature 37 from the kitchen area, dating to the latter part of the 16th century, was aligned with the east wall of the present kitchen, and might be the edge of a foundation trench for the wall of an earlier building.

17th century (Figs.3 and 6)

The Tudor deposits within the kitchen area (Fig. 6) were sealed by a compact, cobble surface (32), composed of frequent small to medium flints and occasional fragments of brick and tile. This surface appeared thicker above deposit 35 in an apparent attempt to create a level surface. Surface 32 was succeeded by a less firm, more mixed and patchy deposit (31) that may represent a poorer re-surfacing or repair. Both contexts 31 and 32 produced pottery dating to the 17th century.

A flint cobble surface was also observed in underpinning trench 2 to the south of the kitchen (Fig. 3, U.2). This surface, up to 0.15m thick and composed of frequent medium rounded to sub-angular flints, was only visible in the southern section at 0.4m below present ground level. Although, no dating evidence was recovered, this seems likely to be a southern continuation of surface 31/32.

18th to early 19th century
(Figs. 3, 5 and 6)

The 17th-century flint cobbles were sealed by a slightly raised chalky dump deposit (51) found only in the south of the kitchen area. Above this was an extensive layer of brick and tile rubble (30) with occasional pieces of flint and chalk in an ashy silt matrix (Fig. 6). This produced residual 17th- and 18th-century pottery.

The earliest wall (39) within the kitchen area was a short length of east-west orientated brickwork in poor condition that survived for two courses in height (Fig. 5). It measured 1.24m long by 0.36m wide and was bonded by a pale yellowish brown

clayey sand mortar. The wall was made of 17th- to early 18th-century bricks, and re-used Tudor bricks, some of which had a different mortar adhering. The wall was constructed within a shallow cut (47) that truncated an underlying yellowish brown clay (46). It is likely that wall 39 was broadly contemporary with deposit 30.

A little to the east were the poorly preserved remains of further brick walling (50 and 44) made of reused Tudor, 17th- and 18th-century brick types. Wall 50 was aligned on wall 39 to the west, and was constructed on top of a grey silty flint cobble deposit believed to be the equivalent of surface 31. Wall 44 to the north may have been a truncated part of wall 50 and together they may represent a later extension of wall 39. Walls 50 and 44 were separated from wall 39 by an irregular robber cut (33), 0.6m wide and filled by a pale yellowish grey sandy clay (21) containing one residual sherd of later medieval sandy orange ware.

A feature (42, 43) in the north of the area is interpreted as a hearth, abutting earlier wall 39 to the south, and cut to the north by the foundation trench of the north wall of the kitchen. The feature lay in a shallow construction cut (48), and like wall 39 it cut the clay levelling 46. Walling 0.24m wide, composed of 18th- to early 19th-century bricks

bonded with pale pinkish white mortar (42), survived to two courses along the south and east sides of the feature, and was constructed on a base of flat bricks with the same mortar bonding as (43). The base extended beyond the walls to form the floor of the feature. A northern return existed at the east end of wall 42, but had been robbed away to the west. A pale yellowish brown sandy clay (45) found here probably represented the backfill of this robber cut. A deposit of ash and clinker (19) from within wall 42 and above surface 43 suggested that the feature was a north-facing hearth, although no evidence for burning or sooting of the brickwork was noticed.

Isolated to the south of robber cut 33, and possibly truncated by it, was a small rectangular piece of brickwork (49) leaning slightly to the north. This was made up of two courses of 18th/early 19th-century bricks bonded with a pale yellowish buff mortar, and was constructed upon a grey silty flint cobble deposit, an equivalent of surface 31 recorded in the south-east of the area. This brickwork may have been a buttress to the back of a chimney above the hearth.

Running south from wall 39 was a further stretch of walling (40) 0.48m wide, that turned a right angle and continued westwards (41), before being cut to
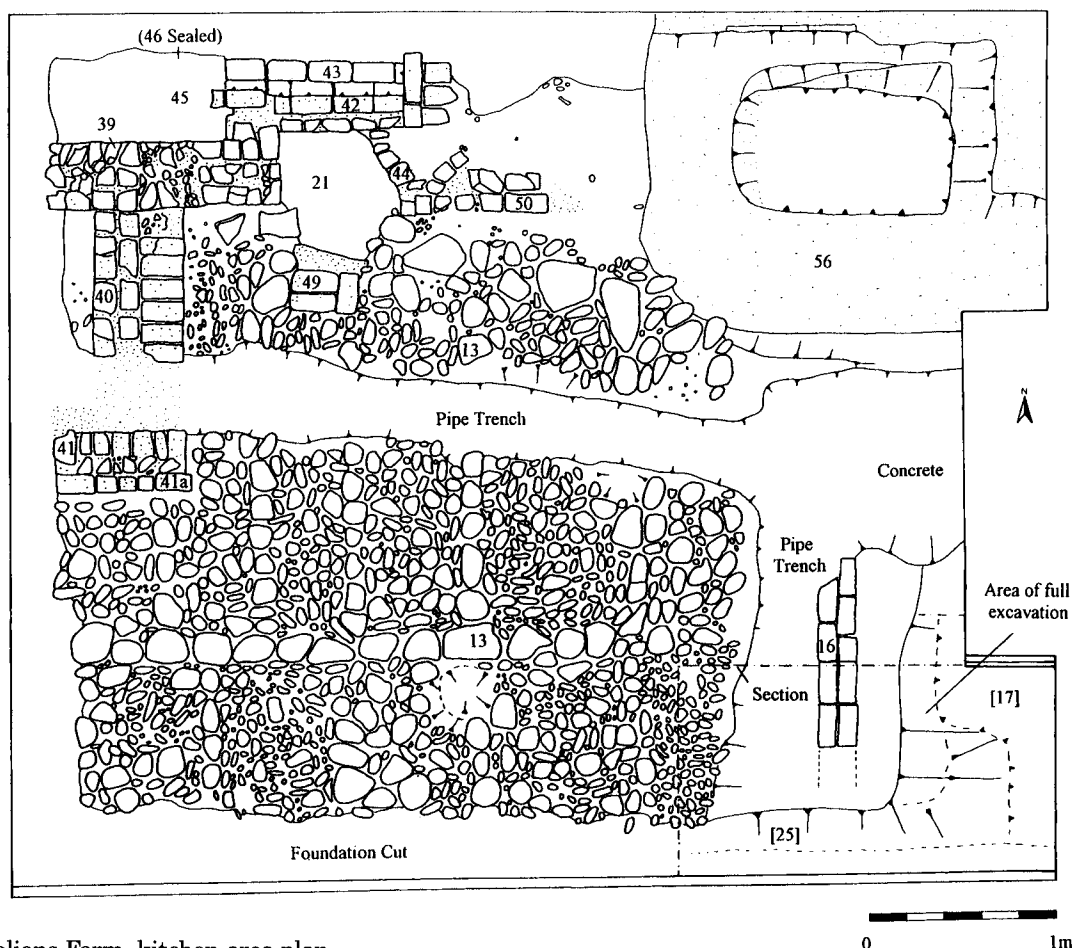

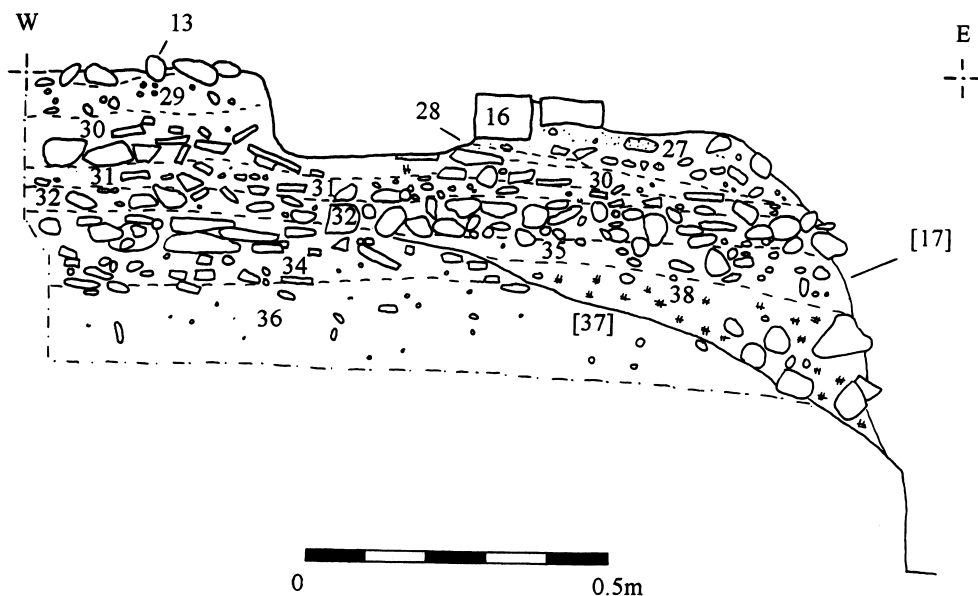Fig. 5   Helions Farm, kitchen area plan.

0   1m

160

Fig. 6   Helions Farm, kitchen area section.

series of rectangular outlines filled with smaller medium-sized boulders. The cobbles appeared to respect walls 40 and 41. Wall 41a, a line of bricks on the south side of 41, constructed on the clay bedding deposit (29) was probably a later insertion. Surface 13 appeared to peter out before reaching the more northerly walls 39 and 50. The brown grey silt matrix between the boulder cobbles produced a small amount of early 19th century pottery which would be consistent if the cobbles survived up to the demise of the previous farmhouse in the first half of the 19th century.

the west by the foundation trench of the west wall of the kitchen. These walls were both bonded by a pale yellowish brown clayey sandy mortar and stood to one course in height. The junction of the two walls had been cut by a modern pipe trench, although the walls could be traced as a thin layer of pale yellowish grey sandy mortar. Both walls sat upon the underlying rubble deposit 30 and were clearly a later addition to the south side of wall 39. One line of bricks had clearly been lost from along the north side of wall 41. The remaining bricks were dated as Tudor and 18th- to early 19th-century; a number were fragmentary and clearly reused.

At the eastern edge of the excavation area were a few localised deposits that varied from the main sequence (Fig. 6). Here, above surface 30, was an irregular patch of distinct whitish grey clay silt (28) with a grey silt deposit (27) above that. On top of deposit 27 was the bottom course of a small stretch of north-south orientated brick wall (16). This was composed of two lines of stretcher bond bricks, 1m long by 0.22m wide, cemented with a hard white lime mortar. Bricks from this wall were dated as 18th/early 19th-century. The wall was cut to the north and to the south: a flat area on the same alignment showed clearly where the wall had once been. On the east-side of this wall was a mid grey clay-silt deposit (26) (not shown in section) containing frequent pieces of oyster shell.

Rubble surface 30 was sealed by a layer of brown silty clay (29), which covered the majority of the kitchen excavation area, and had been deliberately laid down as a bedding for a cobbled surface. This surface (13) was constructed of medium to large rounded stone boulders tightly packed in a patterned formation (Fig. 5). The patterning consisted of one east-west line and a series of north-south lines of larger boulders that together create a

Underpinning trench 1 on the south side of the house (Fig. 3, U1) revealed part of the west and south walls of a brick cellar (53), 1.75m deep, and cut by the south wall of the modern farmhouse. The cellar was built of 18th- to early 19th-century bricks bonded by pale buff mortar with lime flecks. The west wall survived to four courses high at its northern end with the lowest brick course continuing below the base of the floor. Only the wall facing was visible and the full thickness of the wall was not exposed. The south wall was two brick widths wide and six courses high, built in an irregular bond. The floor was made of a single layer of mostly whole bricks bedded onto an orangey yellow mortar. The foundations of the present farmhouse were built directly over the west wall of the cellar, and were constructed of coursed brickwork rather than rubble at this point for greater stability.

The cellar continued northwards under the present farmhouse as well as east beyond the confines of the underpinning trench. A few sherds of 19th-century pottery were recovered from the mixed backfill (54) above the cellar floor, one of which was decorated in a style used in the 1830s. The cellar clearly predated the modern farmhouse and was broadly contemporary with the brick structures and cobbled floor in the kitchen area.

A north-south orientated brick wall (52) was revealed in underpinning trench U3 adjacent to the west door of the farmhouse (Fig. 3, U.3). Located 0.85m west of the farmhouse, the wall was over 1.1m high, 0.22m wide and appeared to be constructed in header bond from 18th/early 19th-century bricks. The ground to the east of the wall was clearly

disturbed and the west side of the wall corresponded with the edge of the trench. This wall was not observed in the underpinning trenches to the south.

Within the disturbed part of trench 3 (Fig. 3) was a north-south orientated culvert (61) built of 18th/early 19th-century bricks. The culvert was 0.72m wide and over 0.3m high with vertical sides and an arched roof. The floor was made of half bricks laid flat, aligned at a slight angle to the actual orientation of the culvert. Within the culvert was a dark grey silt (62) that contained one piece of clay pipe.

A narrow east-west orientated wall (77) was revealed at the southern end of trench 3C (Fig. 3). It was located 0.4m north of the house and was truncated by a modern pipe. Two courses of 18th/early 19th-century bricks were visible.

Discussion

The top of the sequence in the kitchen area contains a number of deposits and walls all dating to the 18th or early 19th century. Most of the walls would have been standing when the well-preserved cobble surface 13 was constructed. Pottery from the silt within this surface suggests it was still in use in the early 19th century before the construction of the present farmhouse.

None of the 18th-century brick walls within the kitchen area had deep foundations and they may represent ancillary buildings rather than parts of the earlier farmhouse itself. These buildings clearly continued north and west of the confines of the present kitchen with a succession of external yard surfaces to the south. The 18th-century cellar found within underpinning trench 1 may actually be part of the earlier farmhouse. Other 18th-century structures include the wall in underpinning trench U3 and the brick drain culvert in trench 3. The general impression given by these finds is that the site of the pre-19th-century house lay to the east of the kitchen beneath the main body of the existing house.

Mid 19th century - modern
(Figs. 3, 4 and 5)

The boulder surface and walls within the kitchen area were sealed and preserved by an extensive deposit of grey silty clay (11 and 12), above which was a thin covering of sand and the modern concrete floor slab. In the north-east corner of the kitchen area was a large sub-rectangular feature (56) backfilled with brick rubble 9 (Fig. 5). This was a late feature that cut all the surrounding deposits so was not investigated as part of the main excavation, but was observed during the underpinning phase.

The feature was exposed after the builders removed 0.3m of brick rubble from above it, and further brick rubble from a central sub-rectangular

void just over 1m long by 0.6m wide by 0.5m deep. The walls of the surrounding structure were between 0.4m and 0.6m thick, and were constructed of mortared brick rubble (56) composed of small chunks of brick and tile bonded by a pinkish yellow sandy mortar. Internally it seemed to have a banded construction, with looser brick rubble at the base and firmer mortared brick above. The construction included reused mid 18th/19th-century cream flooring brick. The interior of the structure had nearly vertical sides (disturbed in places) and a flat base. The top of structure 56 appeared to have been truncated and levelled off, although a raised area adjacent to the kitchen walls also appeared to be part of the structure.

The relationship between the brick feature 56 and the standing northern wall of the 19th-century kitchen was not clear. The brick feature backed up to the wall foundation with only a thin sliver of clay separating the two. The brick feature did appear to cut all other deposits in this area. The likelihood seems to be that the brick feature post-dated the construction of the kitchen wall and was a 19th-century feature that was later demolished and sealed beneath the concrete kitchen floor slab. The interior of brick structure 56 did not provide any evidence for its having being used for heating purposes or for containing liquids, but its most likely function was as the base for some form of container like a tank or copper.

Sealing the grey silt in the soakaway at the southern end of trench 1 (Fig. 3) was a thick deposit (c.0.7m) of mixed brown clay. This almost certainly represents the deliberate backfilling of the moat known to have taken place in the 19th century. Other archaeological features recorded in trench 1 were all of 19th- or 20th-century date and associated with garden activity or drainage works.

Sealing the Tudor deposits at the east-end of trench 3 were two undated brown silts (81 and 82) and a sandy gravel make-up deposit (80) for the modern tarmac (Fig. 4). Towards the west end, the medieval pits were sealed by a mixed layer of mid grey silt containing fragments of brick and tile and flecks of chalk and mortar (66). Overlying this was a shallow topsoil deposit.

The medieval and post-medieval pottery

by H. Walker

Introduction

A small quantity of pottery (226 sherds weighing 4.2kg) was excavated, ranging in date from the medieval to Victorian periods. The pottery has been classified according to Cunningham's typology for post-Roman pottery in Essex (Cunningham 1985, 1-

16), and some of her vessel and rim-form codes are quoted in this report. The pottery is quantified in Table 1 showing fabric by sherd count and weight of pottery per context. All the fabrics mentioned have been described in previous volumes of *Essex Archaeology and History*, and Drury (1993) also defines several fabrics that figure in this report.

The small medieval assemblage consists mainly of coarse ware. An interesting find is the rim of a Hedingham fine ware ?bottle. Late medieval sandy orange ware is common, comprising fragments from bowls, lids and cisterns, which are typically dull orange, thick-walled with a thin internal glaze. Most could be from the same source. There is nothing particularly distinctive about the fabric, which is similar to other sandy orange ware found in this part of Essex. The presence of small amounts of Cistercian ware and Staffordshire-type mottled ware may indicate a Midlands sphere of influence in the late medieval and post-medieval periods. A full description of the pottery can be found in the archive. Presented here is a description of the

Table 1. Pottery from Helions Farm by feature, fabric, sherd count and weight of pottery per context

Area	Feature/context	Fill	Relationship	shell-and-sand-tempered ware	early medieval ware	medieval coarse ware	Hedingham coarse ware	Hedingham fineware	sandy orange ware	Cistercian ware	post-medieval red earthenware	Surrey-Hants white ware	Frechen stoneware	Metropolitan slipware	black-glazed ware	tin-glazed earthenware	English stoneware	mottled ware	white salt-glazed stoneware	yellow ware	flowerpot	pearlware	modern white earthenwares	slipped kitchen earthenware	Wt (g)
Tr 1 & 2	surface 3		above 4			1			5		/														43
	layer 4					3			1																50
Tr 1	dump 5																			29	8				627
	ditch? 7	6				2																1			20
	moat fill 10								2	1															657
kitchen	unstratified 55										4				5	1							10		205
	wall foundation 25	23	above 13 & 20								2	1			3										190
	layer 20		above 21								2														19
	robber cut 33	21							1																84
	foundation cut 17	14	above 27								2						1								6
	layer 27		above 28								2														20
	layer 28		above 30								5														74
	cobble surface 13		above 30												1								1	1	9
	surface layer 30		above 31								9	1		2			7	3	6						237
	surface repair 31		above 32								2	1													22
	surface 32		above 35								3			1											29
	layer 35		above 38						1																12
	cut 37	38	above 34		1	1			3	1	1		1												374
	surface 34		above 36						20																408
	layer 36					3		2	1															186
UP2	cellar backfill 54																					5		165
Tr 3	tile surface 75		above 76						3		1														106
	tile surface 59		?same as 75						2																15
	tile surface 76		above 58			3			8																113
	tile surface 60		same as 76														1								8
	surface 58					5																		34
	unstratified 78					3	1				2						1							62
	pit 71	70	above 68	1	2	9																			236
	pit 69	68			3	9	2																		194
				1	6	39	3	2	45	2	37	1	3	2	9	1	10	3	7	29	8	1	16	1	4205

medieval pit groups, a catalogue of notable items (Fig. 7), and a discussion of the pottery that was found. Table 1 summarises the pottery by context.

The medieval pit groups

Both pits produced entirely medieval assemblages. Pit 69 contained sherds of early medieval ware, medieval coarse ware and Hedingham coarse ware from fill 68. The only rim present is an early medieval ware abraded beaded rim, probably from a cooking pot. Other featured sherds comprise part of a sagging base from a jug or cooking pot, and the shoulder of a vessel, most likely a cooking pot, showing a dusting of finely crushed shell around the shoulder, both in medieval coarse ware. The presence of early medieval ware and medieval coarse ware in the same context indicates a 12th to early 13th century date.

A larger but similar group was excavated from pit 71 (from single fill 70), which was stratified above pit 69. The earliest sherd is a very abraded shell-and-sand-tempered ware with a simple everted rim. The rest of the pottery largely comprises cooking pot rims: these are dated using Drury's typology at Rivenhall (Drury 1993, 81-4):

* One B2 cooking pot rim in early medieval ware.

* Two B4 rims in medieval coarse ware, one showing wavy line combing on the rim and above the shoulder, commonly found on rims of this type (cf. Drury 1993, fig.39.51).

* One H2 cooking pot in medieval coarse ware.

The B2 and B4 rims are datable to c.1200 in Drury's typology, the H2 rim is slightly later and is an early to mid 13th-century type. An early 13th-century date seems most likely for this group and

may be slightly later than, or contemporary with pit 69.

Catalogue (Fig. 7)

1. Rim of Hedingham fine ware bottle or part of aquamanile; creamy orange fabric; wheel-thrown; dimpled decoration perhaps made with a narrow rod-shaped implement; very small patch of red slip at the base of the fragment; plain lead glaze with patches of green; rim chipped and abraded, shows the remains of a spout or possible handle attachment. This is an unusual form, but an example of a Hedingham fine ware bottle was excavated at St. Mary Magdalen's Hospital, Colchester (Walker in prep.). Alternatively this could be the filler hole, or even the pouring spout of an aquamanile, as this form is also known in Hedingham ware (Cunningham and Farmer 1983, fig.3). Layer 36 (kitchen area).

2. Knob from ?conical lid: sandy orange ware; dull orange fabric, unglazed apart from single splash in interior; very uneven four-sided knob; roughly made, poorly finished. Layer 36 (kitchen area).

3. Part of flat lid: sandy orange ware; thick grey core; orange margins and darker surfaces; patches of greenish glaze on upper surface. Its fabric shows sparse rounded or lens-shaped inclusions of buttery-coloured ?clay. Similar inclusions were found in the fabric of a cistern from Thaxted (Walker 1996, fig. 32.1); both vessels may therefore share the same source, perhaps somewhere in north-west Essex. Surface 76 (trench 3).

4. Bowl rim: sandy orange ware; dull orange fabric; pale grey core where vessel walls are at their thickest; thin partial internal glaze; knife-trimmed above and below basal angle. Moat fill 10 (trench 1).

5. Bowl rim: sandy orange ware; uniform orange fabric with darker surfaces, partial internal glaze; sooting on top of rim. Fill 21, robber trench 33 (kitchen area).
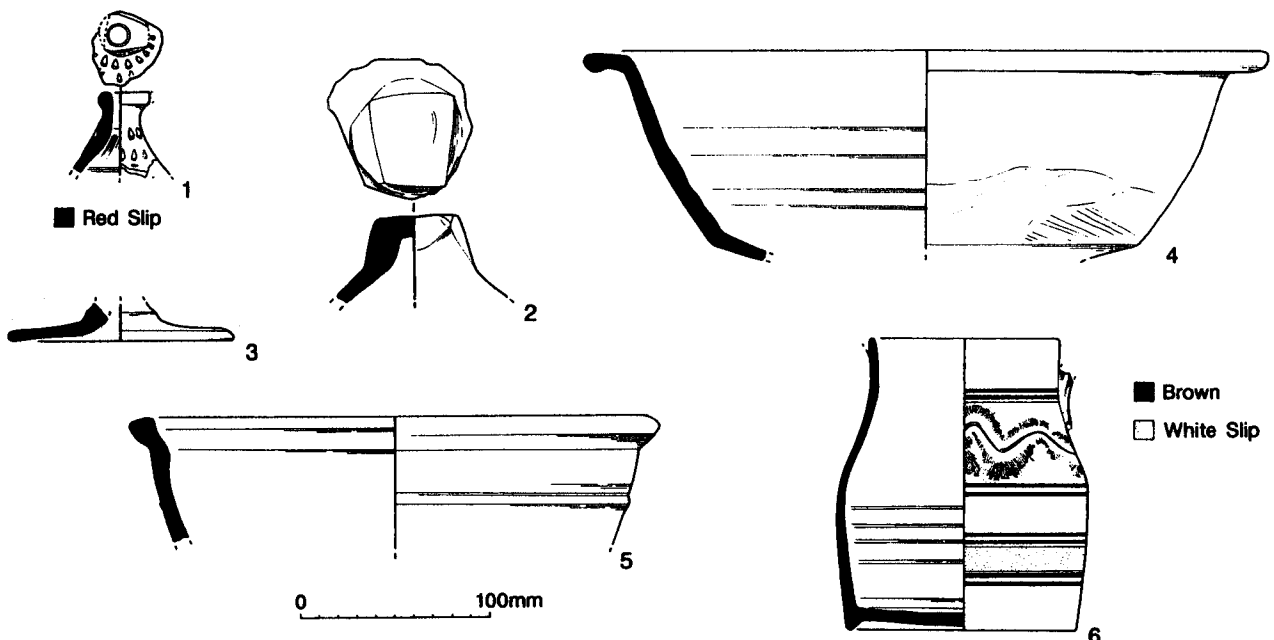

Fig. 7 Helions Farm, medieval pottery.

6. Barrel-shaped jug: yellow ware; pale yellow fabric; clear glaze giving buff-yellow colour; dark flecks visible on surface; mocha decoration; glaze crazed on lower part of vessel. Deposit 5 (trench 1).

Discussion

Medieval pottery is distributed across the site as follows: it occurs in pits 69, 71 and surface 58 of trench 3, in layer 4 of trench 2 and at the bottom of the sequence in the kitchen area, in layer 36. A few sherds are residual in later contexts; that from layer 36 may also be residual as a late medieval fragment is present. Featured sherds comprise mainly coarse ware cooking pot rims typical of medieval sites, and dating mainly from the late 12th to earlier 13th century. The wheel-thrown Hedingham fine ware ?bottle may be later, perhaps dating to the late 13th to mid 14th century. The finds of Hedingham ware (both coarse and fine) are not unexpected as this commonly occurs in north Essex and Suffolk, and the production sites, centred in the area of Sible Hedingham, lay c.15km to the south-east.

Pottery dating to the late 15th to late 16th centuries is characterised by the presence of late medieval sandy orange ware utilitarian vessels. They are dated by their association with small quantities of early post-medieval red earthenware, Cistercian ware and Frechen stoneware. Pottery of this date occurs in the bottom part of the kitchen area sequence, up to layer 35 and re-deposited in robber cut 33. It also occurs in surface 3 and moat fill 10 in trenches 1 and 2, and tile surfaces 75/76 in trench 3. Cistercian ware is not common in Essex, occurring mainly in the north of England and the Midlands (Moorhouse 1984, 4), although it does occur in major towns such as Waltham Abbey and Chelmsford. Its presence here may indicate a more Midlands influence in this extreme corner of the county.

Pottery dating to the post-medieval period, i.e. the 17th to 18th centuries, was found in the kitchen area, in surfaces 30/31/32 of the main vertical sequence, layers 14, 20, 27, 28 and redeposited in 19th-century wall foundation 25. Pottery of this date also occurred in tile deposits 59 and 60 in trench 3. Little can be said about the small 17th- to 18th-century assemblage, which would be typical of almost any post-medieval site, and there is nothing to gauge status or function of the site. However, the presence of Staffordshire-type mottled ware may again indicate a midlands sphere of influence.

Pottery dating to the 19th century was found in deposit 5 and ditch 7 in trench 1, cobble surface 13 in the kitchen area, and in cellar backfill 54. The two larger groups of pottery datable to the Victorian period (from contexts 5 and 54), both produced cheap low-status pottery suggesting that the occupants were at the lower end of the social scale during this period.

Miscellaneous finds

by H. Major

There was a small quantity of miscellaneous finds, mostly 18th and 19th century in date. The only metal item of note was an early post-medieval book clasp (Fig. 8, no. 1). The rest of the metalwork included a copper alloy tack, eight dressmaker's pins, a plain 19th-century button, and two lead window cames, both from context 30. The ironwork included a small cast iron pan, which had been used for melting lead, three horseshoe fragments, an 18th century spur buckle, and part of a small knife with traces of the wooden handle.

Six contexts contained clay pipe stems, none closely datable, and there was a small number of sherds of glass, including part of an 18th-century wine bottle. Contexts 8 and 10 (trench 1) produced fragments of boulders which may have been used as coarse building stone, and a fragment of a Rhenish lava quern from context 10 may have been re-used as building material. A second lava quern fragment came from a 16th-century context (75).

Oyster shell was fairly widespread on the site, occurring in eleven post-medieval contexts, though never in any quantity. Two medieval contexts each yielded a single oyster shell, and there was also a single whelk, from a 19th-century or later context.
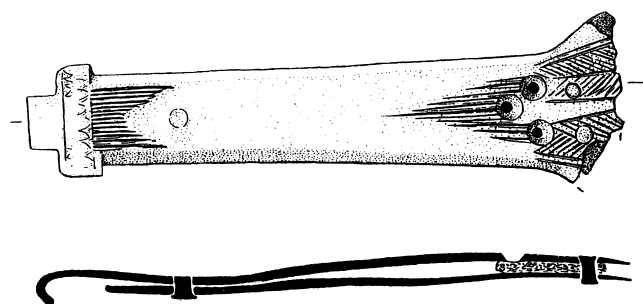
Fig. 8   Helions Farm, copper-alloy book clasp (1:1).

Catalogue (Fig. 8)

1. Copper alloy book clasp, with back plate, the flared end damaged. A small amount of leather survives between the plates. The clasp is decorated with incised lines, and zig-zags across the rectangular terminal. Book clasps with similar decoration are fairly common finds, occurring both in Britain and on the continent (see, for example, Baart 1977, 402 for examples from Amsterdam). Locally, similar clasps have been found at Maldon Friary (Major 1999, 119), Colchester (Crummy 1988, 68) and Chelmsford (Cunningham and Drury 1985, 45). Few are from closely dated contexts, but those that are come predominantly from contexts dated after 1600. The two exceptions known to the writer are the Chelmsford clasp, which could be slightly earlier, and a clasp from Coventry

(Wright 1982, 89), from a context given as 13th century. This dating is, however, very unlikely given the exclusively 15th-century or later dates of all remotely similar clasps. Context 3, SF1, external surface, early post-medieval.

2.   (Not ill.) Rhenish lava quern fragment in very good condition, from a thin upper stone with a grooved grinding surface, considerably polished from use, and a fairly rough top. There is an edge present but it is almost straight, and may not be the original edge, suggesting that the stone had been cut down for re-use. The stone has broken across a non-perforating hole in the top, 13mm in from the edge and c.22mm in diameter. The hole is well finished, with a narrow, smooth band round it. It almost perforates the stone, suggesting that the quern was in use over a long period. This is part of a medieval flat quern, perhaps re-used as coarse building material. Maximum thickness 22mm, weight 134g. Context 10, upper fill of moat, late 15th-16th century.

Animal bone
by P. McMichael
162 pieces of animal bone were examined from 22 contexts weighing a total of 2.8kg. Most of the bone was in a good condition. Much of it showed cut or chop marks indicating butchery for domestic use. Five species were positively identified: *Equus* (horse), *Bos* (cattle), *Cervus* (deer), *Sus* (pig) and *Ovis* (sheep/goat). There were also goose and chicken-sized bird bones. 65 unidentifiable bone fragments were also found.

Discussion
The work at Helions Farm, although small-scale, provided an opportunity to investigate earlier activity within the moated enclosure. An interesting range of archaeological features was revealed around the site dating from the medieval to Victorian periods. The survival of deposits within the kitchen area was surprisingly good, while stratigraphic sequences also survived in areas of the garden to both north and south of the modern farmhouse.

There is now firm archaeological evidence to suggest occupation of the site from at least as early as c.1200. The archaeology cannot however take the site back to Domesday. This may be for two reasons: because the earlier medieval archaeology is located towards the eastern side of the site and so was not encountered during these excavations; or possibly because the manorial site has moved. The deposits and features found date from the time that the manor was under the control of the Helion family. A flint and chalk surface, probably part of a yard or track, and a distinct area of medieval pitting were identified. It is possible that these features predated the construction of the moated enclosure, if the clay deposit sealing surface (58) was up-cast from the excavation of the moat. If this is so, then the moat dates from the 13th century, perhaps from early in

that century. No medieval buildings were identified, but these may lie under the eastern part of the modern farmhouse, or be located elsewhere within the moated enclosure. Disturbed, possibly levelled, natural clay at the base of the kitchen area suggests further medieval activity in the vicinity.

A distinct 16th-century phase, dated by bricks as well as pottery, was identified both in the kitchen area, and to north and south of the modern house. A brick rubble surface (34) and a possible foundation trench (37) dating to the 16th century were excavated in the kitchen area. 16th-century flint, tile and brick rubble surfaces were also recorded in drainage trench 2 to the south of the house (3) and in trench 3 to its north (75 and 76). These all represent rough external yard surfacing. No 16th-century buildings were identified, but the amount of residual brick both in the rubble surfaces, and re-used in later wall construction, suggests the presence of 16th-century brick structures in the area of the modern house. A notable find was an early post-medieval copper alloy book clasp from surface 3 to the south of the house. Late 15th to 16th-century pottery excavated from an upper fill of the south arm of the moat suggests it had largely (although not completely) silted by this date.

The kitchen area continued to be an external area, probably a yard, as the 16th-century rubble surface was sealed by further rubble or cobble surfaces before the construction of the modern house in the mid 19th century. A 17th-century flint cobble surface (31) and its resurfacing or repair (32) appear to have continued to the south of the kitchen into underpinning trench 2. An 18th-century phase of activity was heralded by an ashy brick and tile rubble surface (30) that sealed the earlier surfaces in the kitchen area. The latest in the sequence was a patterned boulder cobble surface (13) that extended over most of the interior of the kitchen, and was cut by the foundation trenches for the present farmhouse. Cobble surface 13 was probably constructed in the later 18th century but continued in use into the early 19th century.

A series of brick walls in the north of the kitchen area probably represent 18th-century outbuildings to the west of the main house. The earliest length of wall (37) was mainly built of late 17th- to 18th-century bricks, but later walls (40, 41, 50) and a hearth (42, 43) were built of 18th- to early 19th-century bricks. The earliest of these, wall 37, may have been contemporary with rubble surface 30, but the latest phase of the outbuildings was clearly contemporary with cobbled surface 13, which represents a well-surfaced yard to their south.

The brick cellar revealed in underpinning trench 1, immediately to the south-east of the kitchen, was also 18th century in date and was probably part of the earlier main house. A substantial 18th-century brick culvert was recorded in trench 3, along with

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further 18th-century walls in trench 3C and underpinning trench 3. The evidence would suggest that extensive construction took place in the 18th century and that at least some of the features recorded archaeologically relate to the 'mansion house' mentioned by Morant in 1768. The bridge across the moat also dates from the later 18th century and presumably replaced an earlier structure. The evidence from the kitchen area suggests that the western end of the 19th-century farmhouse was built over outbuildings and a yard belonging to its 18th-century predecessor.

No evidence was recovered for the fire of c.1825, but the main house at this time was probably located to the east of the present kitchen area. The pottery with 1830s style decoration recovered from the backfilled cellar matches the presumed construction date of the present farmhouse, believed to be c. 1830. Several 19th-century features were recorded, of which the most interesting is the base of a probable vat or copper (56) in the north-east corner of the kitchen; others were related to external garden and drainage activity.

The results of the excavation and monitoring have provided firm archaeological evidence for activity at Helions Farm beginning in the late 12th/early 13th century and continuing throughout the post-medieval period with enhanced levels of activity, involving construction and building work, in the 16th and 18th centuries.

Acknowledgements

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A medieval octagonal chimney stack: evidence from Pleshey and Writtle

by N.P. Wickenden
with contributions by Michael Hughes and Beverley Nenk

Background

Excavations at Pleshey Castle (Christy 1922; Williams 1977; Bassett unpublished) and King John's Hunting Lodge at Writtle (Rahtz 1969) yielded fragments of two main types of chimney bricks, none *in situ* (Fig. 1). Their characteristics are a brown-glazed exterior, a curving interior surface forming an arc of a circular bore, knife-cut triangular recesses on top and bottom surfaces presumably for keying purposes, and a hard, red fabric containing much coarse sand and other inclusions. The two types, one with an angled exterior surface (Type A), the other straight (Type B), formed alternate courses of a polygonal chimney stack with a circular bore, c.0.36m in diameter, the vertical joints in each course being offset by half the length of a brick (Fig. 1).

The bricks were studied and discussed by Drury (1977, 86-88 and fig. 21). He concluded that 'these objects were introduced into Pleshey at some time during the 14th or early 15th centuries' and at Writtle probably in Period III after c.1425, when brick footings and chimney-stacks were first used there. There is an element of doubt, however. The contexts and associations of the bricks will be examined further below. Drury could find no parallels for these bricks, but drew attention to circular chimneys made of brick segments illustrated in the Romance of Alexander produced in Flanders in 1344. The inference was that these high quality bricks were of continental manufacture, or at least manufactured by a continental craftsman.

Fragments from Pleshey from a second type of chimney have also recently been identified and are described here.

New insights

In redisplaying the archaeological galleries of Chelmsford and Essex Museum in 1991, it was decided to reproduce several courses of such a chimney at life size, bonded with a lime mortar. Peter Minter of the Bulmer Brick and Tile Co. Ltd
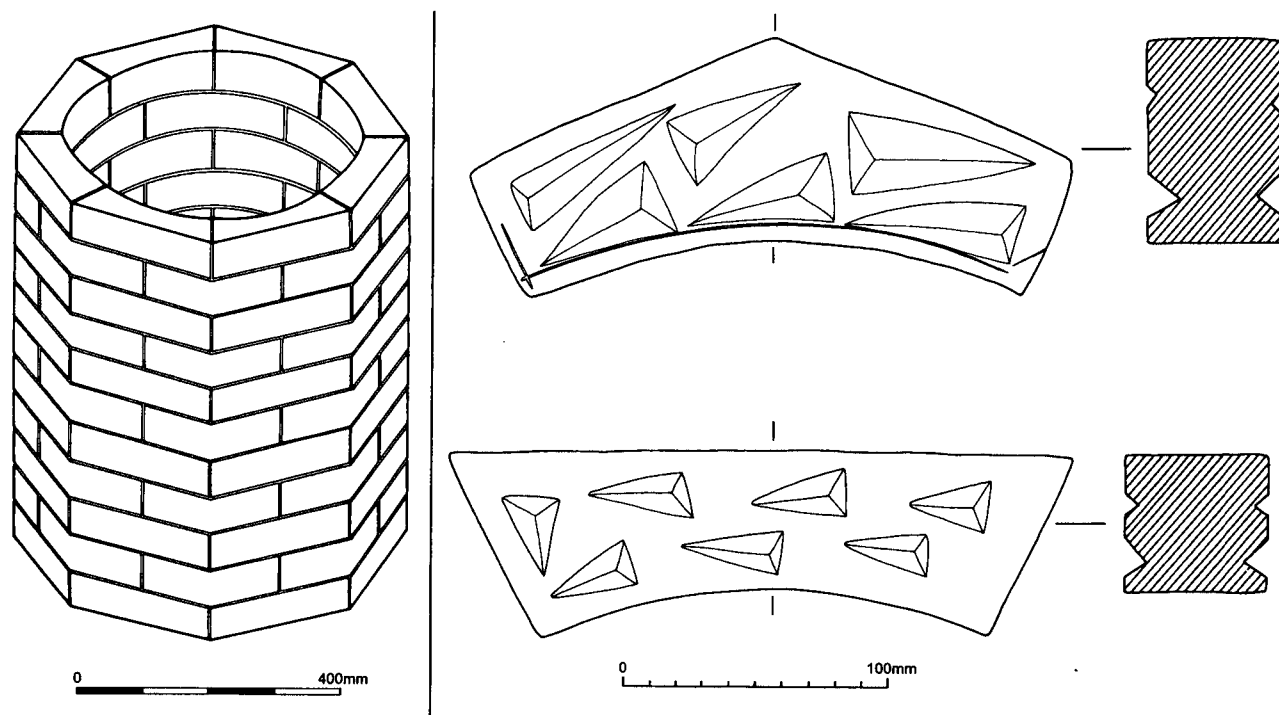

Fig. 1 Brick types A and B, with a reconstruction of the octagonal chimney.

was commissioned to make a number of replica bricks using complete originals of each type as templates. A number of interesting points arose from this exercise.

Firstly, the bricks made up an octagonal chimney stack (*contra* Rahtz 1969, 112, heptagonal, though correctly ascribed as octagonal on p.49, fig. 25; and Drury 1977, 86, hexagonal). Secondly, the bricks appear to have been made in a potting, rather than a brick-making, tradition. The precision of the keying indentations, knife-cut following scribed guidelines, strongly suggests this. The clay chemistry (see below) indicates a local, i.e. London Clay, with added grog and sand, or a brickearth mixed with grog, again prepared as a potter's clay. It seems pedantic that someone would cut the keys on chimney bricks quite so precisely, but Paul Drury has drawn my attention to the same practice in making culinary stamps (for Chelmsford examples, see Cunningham and Drury 1985, 78-80).

Manufacture of the first chimney

All examples were formed in a mould, before the indentations were cut out, on a bed of sand which has stuck to the bottom face. In some instances, spots of accidental glazing have occurred as a result. The opposite face tends to be smooth, and where incised marking-out arcs occur, they are all on the smooth face.

The cut-out triangles tend to follow the same basic pattern on each type, although the exact shape, length and depth of the triangles do vary. Thus Type A has three pairs of triangles on each face, each pair comprising triangles pointing in opposite directions; Type B has six triangles, symmetrically arranged down a central axis. The variant of Type A in the British Museum has five pairs of small, almost equilateral triangles, all pointing in the same direction. The one exception is the complete Type B from Writtle, which has seven smaller triangular shapes - rather like a hybrid between the normal types and those on the Type A variant. The cut-outs of Type A produce the effect of a continuous sunken curve on the inner face, following marking-out arcs where these survive. In all cases, the short side of the triangle is cut vertically, the two long sides cut sloping to form a single ridge in the trough, which rises to the surface at the apex of the triangle.

Archaeological contexts of the brick fragments from the first chimney

Pleshey

The Morant Club's excavations of 1907 (Christy 1922)

The following examples are preserved in the British Museum. All examples bear traces of a white mortar on the two faces and two short sides.

TYPE A (according to Drury 1977, fig. 21)

1. 1 complete (Accession number 1910,12-3,2). The two angled sides measure between 122 and 127mm in length; W 53mm; H 53-54mm. Evidence for the triangular cut lines.

2. 1 fragment (1910, 12-3, 3). One side surviving 126 mm long, W 56mm, H 53mm. Cut-outs deeper than complete example.

3. 1 complete variant with 5 pairs of much smaller cut-outs (1910, 12-3, 4). Length of angled sides 124 and 126mm, W 54-56mm, H 56mm. Small thumb impression has squeezed the clay on one edge.

4. 1 complete variant (1910, 12-3, 5), cut-outs as above. Length of angled sides 125 and 128mm, W 54-56mm, H 56mm. The brown glaze has slightly dribbled over onto one of the faces with cut-outs. A faint incised line is visible bisecting the face, and used as a marking line for cutting out one of the pairs of triangles.

TYPE B

5. 1 complete (1910, 12-3, 6). Length 245mm, W 79mm, H 53mm. Clear inscribed marking-out arc along inner curve. Brown glaze is partial and poor.

6. 1 fragment (1910, 12-3, 7). W 79mm, H 52mm. No marking-out arc, triangular cut-outs longer than complete example above.

One of these examples was found built into the inner face of the large projection (a possible inserted cellar) on the western wall of the masonry building excavated on top of the motte (Christy 1922, 203)– probably the 15th-century Great Hall (Rahtz 1960/61, 6), though see Ryan 1996, 38-9.

Rahtz's excavations, 1959-63 (Williams 1977)

This archive is preserved in the Chelmsford and Essex Museum (Accession number 1978.96).

TYPE A

7. 1 complete example, mortared on the glazed face, found in loose association with the south wall of the chapel 045 (period IIIA, construction in mid 13th/early 14th centuries). ?Secondary or intrusive. Length of angled sides 125 and 129mm, W 56-7mm, H 53mm.

8-9. 2 unstratified fragments, one sooted internally; white sandy mortar in indentations; traces of brown glaze in edge of one indentation, presumably accidental.

TYPE B

10. 1 fragment from metalling 07 (Period IIID, post 1380s-15th century). PC1959, 9C (illustrated in Drury 1977, fig. 21), a little white sandy mortar and traces of brown glaze surviving in indentations, W 77mm.
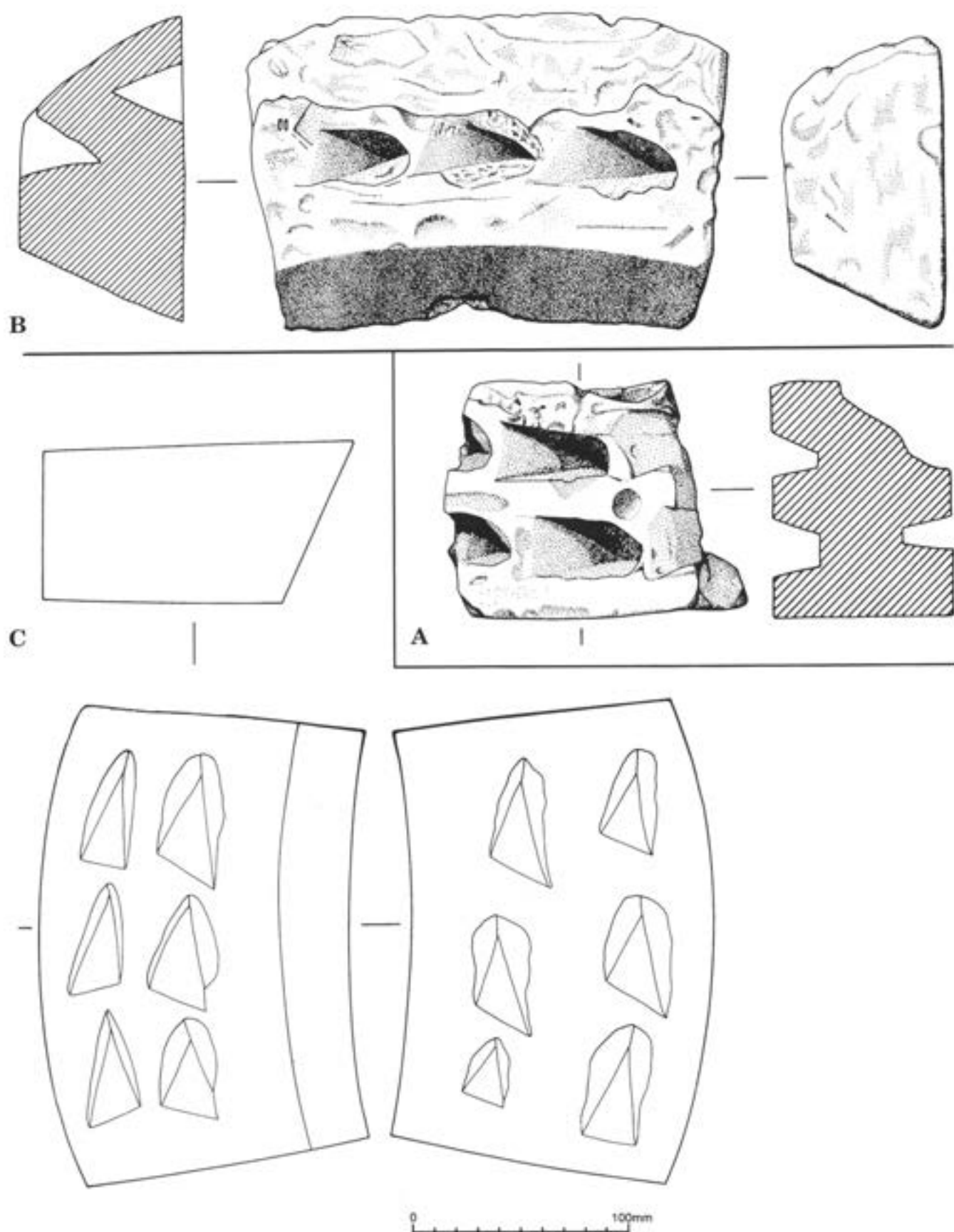
Fig. 2   Bricks found at Pleshey from a circular chimney stack. **A**. the chimney brick fragment from the Gardens, Pleshey; **B**. the fragment from the Morant Club excavation, BM 1910.12-3.1 **C**. reconstruction of this brick type.

*Bassett's excavations of 1973-1981
(unpublished, interims in Medieval
Archaeology)*

TYPE B

11. 1 fragment 1972, L4/2, white sandy mortar in indentations. W 76mm, clear inscribed marking out arc.

Writtle

*Rahtz's excavations, 1955-57 (Rahtz 1969).
Archive in the Chelmsford & Essex Museum,
accession number 1978:120.*

TYPE A

12. 1 fragment (Rahtz 1969, fig. 60.137), south bridges 1246, Period III, first half 15th century-1521.

TYPE B

13. 1 complete example (Rahtz 1969, fig. 60.136), gatehouse and east bridge 367D, Periods II-III, 1306-1521. L 235mm, W 75mm, H 53-54mm. Very small cut-outs, different to standard pattern, but largely obscured by thick, sandy, off-white mortar on both faces and short edges.

14. 1 complete example (Rahtz 1969, 47-9, and fig. 25), oven 766, Period IIIB, *c.*1425-1521 (not preserved in archive).

15. 1 fragment, as above, oven 766 (not preserved in archive).

Rahtz is cautious in interpreting the use of these bricks in the oven, as either part of the oven's chimney flue, or in forming a semi-circular arch between flue and chimney (Rahtz 1969, fig. 25, 49-50). However they were utilised, it seems likely that this was a secondary use for them. Drury, however, draws a comparison with the use of plain segmental tiles used as kiln furniture in the late 13th- to early 14th-century tile kiln at Danbury, Essex (Drury 1977, 88; Drury and Pratt 1975, fig. 54. T8; fig. 61, p.146).

A second chimney stack from Pleshey
(Fig. 2)

In the same collection of material from the excavations of the Morant Club at Pleshey, preserved in the British Museum, is a fragment of a totally different type of chimney brick (1910, 12-3, 1; Miller Christy 1922, 203). This is larger, of a different, less sandy, slightly micaceous clay, and unglazed. The brick is curving, but of a larger diameter, approximately 0.67m externally, and splay-angled, so that it is 190mm long at its inner face, and 225mm long at its external face. It is 73mm high, with a sloping (inner) face, 80mm long, and a broken off outer face. One small patch of original surface survives on one edge of this face, however, in a slight depression, and this bears a 4mm x 4mm

spot of cream slip (see below). The surviving 'base' is 143mm wide, the surviving 'top' 80mm wide.

Two rows of three triangular indentations survive on the base. These are unlike those on the octagonal chimney bricks, being made by sliding a trowel-like tool, possibly one arm of a pair of shears, at an angle into the wet brick, and flicking out a wedge of clay, producing an uneven triangular shape on the surface. The greatest width of the blade used is 28mm, and 50mm in length, inserted to a depth of 40mm. One side of the blade is distinctly curving.

Christy's report indicates that two such 'bevel-edged plinth-bricks' were found, though only one was eventually donated by Col. Tufnell to the British Museum. However, recent excavations in the grounds of 'The Gardens' in Pleshey, prior to the construction of a conservatory, uncovered a third fragment in the fill of a late medieval pit or ditch filled in the late 15th or 16th century. This discovery was tantalisingly close to the flank of a 15th-century cross-wing where there might have been a chimney stack (Godbold 1997, 289). This fragment is less complete, but is made of the same clay, and bears identical trowel-cut indentations. Again two rows of three are evident on one face, and a scar in the broken edge suggests two rows on the opposite face. The brick is 83mm high, with a surviving length of 120mm, and a surviving width of 110mm. The outer face is original, coated overall with a smooth creamy pink slip, and sooted through use. It is also curving, the diameter being identical to the example in the British Museum.

Using the two examples, a complete profile can be reconstructed. The only major difference appears to be in the height of the two bricks (73 and 83 mm). The brick is shaped with angled sides, *c.*145mm wide reducing to *c.*110mm wide on the narrower face. The external wall is near-vertical and coated with a cream slip, made from a clay with extremely fine, silt-like inclusions and specks of mica; the inner wall is sloping. Both horizontal faces bear two rows of three triangular indentations, made with a sharp instrument with a curving-edged blade.

The neutron activation analyses
Michael Hughes

A number of questions regarding the origin of the bricks arose from the examination of the fabric under the binocular microscope. Where were the brick variants of Type A and B produced? Were they locally made? Were the examples from Pleshey and Writtle of the same origin? Such questions can be considered using petrological analysis, but as the British Museum has recently undertaken a neutron activation analysis project on post-medieval redware pottery from London and Essex, it was appropriate to use this method of elemental analysis (described in detail by Hughes *et al* 1991). The pattern of the

concentrations of the major and trace elements in a ceramic contributes a type of 'chemical fingerprint' of the original clay from which the ceramics were made. By matching the chemical composition of ceramics of uncertain origin against a database of ceramics (preferably kiln wasters) of known origin, it is possible to indicate the likely source of the clay.

The project on redware pottery has characterised pottery from kilns in Surrey, London and Essex: the latter include Harlow, Ingatestone, Stock, Rayleigh, South Woodham Ferrers, Colchester and Great Horkesley (Fig. 3). The results on this database have shown that the products of these kilns can be distinguished chemically from those of London and Surrey (Nenk and Hughes forthcoming; Nenk 1992a, b; Hughes 2000). Samples were taken of fifteen of the bricks (Table 1) by drilling into a broken edge with a 2mm tungsten carbide drill. The powder was collected and analysed using the normal technique for neutron activation used at the British Museum (Hughes et al. 1991). Twenty-two elements were measured in each sample and the results are given in Table 1. Initial inspection of the data indicates quite similar chemical characteristics for all the bricks, which agrees with the visual study in suggesting the same clay source. The data was tested against the redwares database using discriminant analysis. This multivariate statistical technique searched for the main chemical differences between the data for each kiln included, and the 'test' items (in this case, the bricks) were then classified to the kiln which their composition matches most closely. An initial test against the full database of redwares indicated that the bricks were most similar to the Essex kiln samples but unlike those of London and Surrey. The discriminant analysis was repeated with only the Essex kilns, a single kiln at Woodside, Herts, and the bricks. Ten of the bricks (two from Writtle, eight from Pleshey) were assigned as most similar to the pottery produced at Great Horkesley, near Colchester, while a further two from Pleshey were similar to the Colchester kiln (Table 1 lists the assignments from discriminant analysis). This group contains bricks of Type A and B, so there is no chemical evidence of separate production centres for the two types. Of the other Pleshey bricks, two were closest to the South Woodham Ferrers kiln and one to Rayleigh. A comparison of the analysis on the bricks with earlier data from a project on floor tiles from the Midlands (Hughes et al. 1982) showed significant differences in trace element patterns. The close similarity in composition between the bricks and ceramics from Essex kilns indicates conclusively that all the bricks were locally produced in Essex.
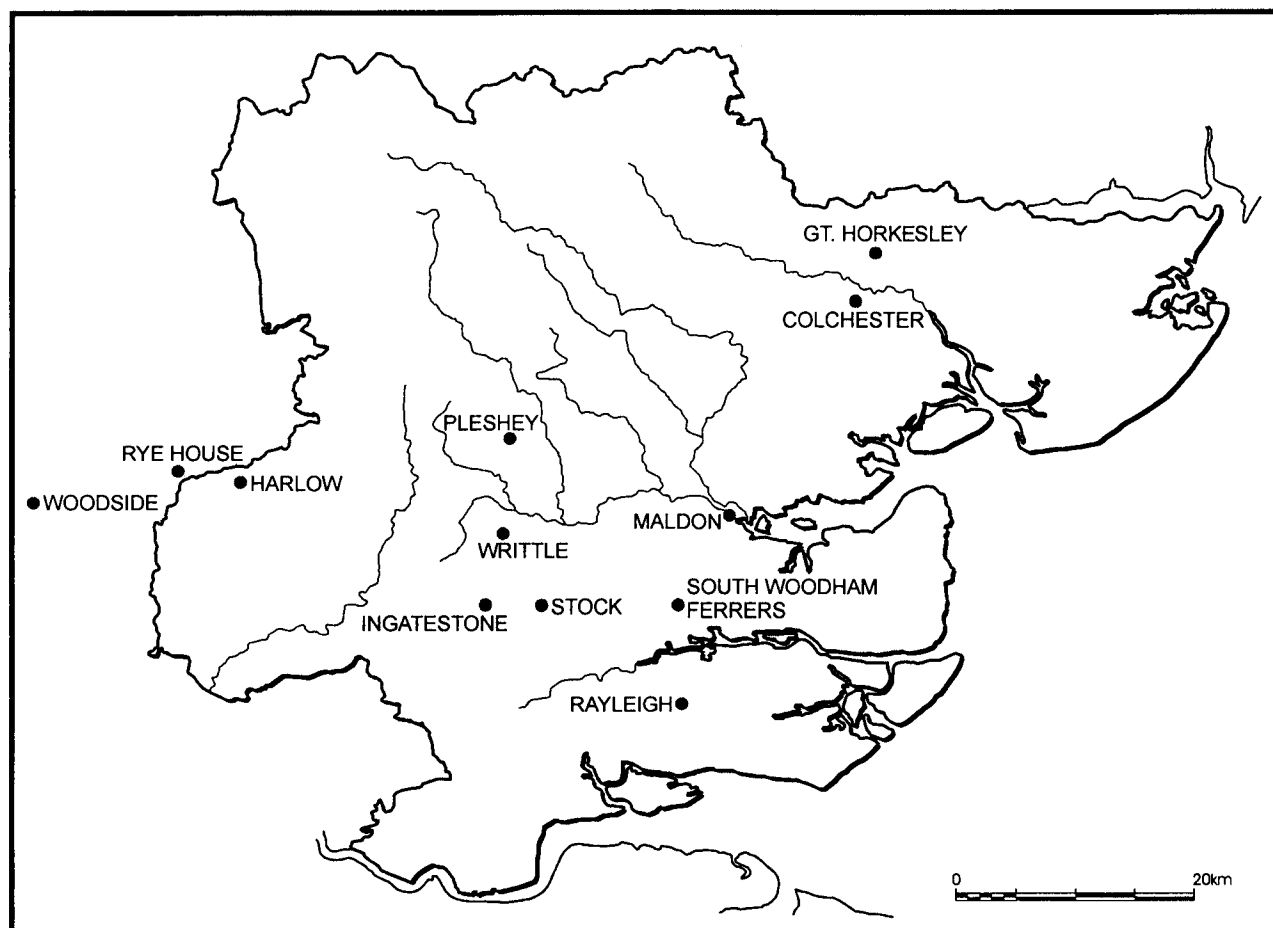

Fig. 3   Pottery kilns and sites mentioned in the text.

Bassett's excavations of 1973-1981
(unpublished, interims in Medieval
Archaeology)

TYPE B

11. 1 fragment 1972, L4/2, white sandy mortar in indentations. W 76mm, clear inscribed marking out arc.

Writtle

Rahtz's excavations, 1955-57 (Rahtz 1969).
Archive in the Chelmsford & Essex Museum,
accession number 1978:120.

TYPE A

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Table 1. Neutron activation analyses of polygonal bricks found in Essex, and comparison with kiln products from the Colchester area

BMRL	Cat	Context	Type	Na	K	Rb	Cs	Sc	Fe	Cr	Co	La	Ce	Eu	Sm	Yb	Lu	Th	Hf	U	Ta	Tb	Zn	Ba	As	Sb	Assignment
Writtle																											
52343V	12	WRI1246(137)	A	0.22	1.84	107	6.59	14.6	4.33	109	18	30.1	66.8	1.34	5.95	2.16	0.37	9.3	4.7	1.68	0.83	0.84	70.3	213	9	1.0	Gt.Horkesley
52344T	13	WRI367D(136)	B	0.24	2.08	114	6.95	16.1	4.50	112	18	31.6	69.9	1.46	6.42	2.37	0.44	9.9	5.3	1.74	0.82	0.98	80.5	347	11	1.6	Gt.Horkesley
Pleshey																											
52338P	10	PC59 9C 96	B	0.22	1.9	109	6.20	14.4	3.90	102	19	31.4	72.4	1.40	6.24	2.27	0.38	10.0	4.6	1.84	0.84	0.88	79.3	229	11	0.9	Gt.Horkesley
52339Y	11	PA72(4)/Z	B	0.23	2.11	122	7.39	16.7	4.50	116	18	32.5	73.5	1.47	6.62	2.26	0.41	10.7	5.0	1.74	0.85	0.90	92.9	270	9	0.8	Gt.Horkesley
52340Q	7	PC62 96(A) FC	A	0.21	1.90	114	6.67	15.2	4.09	105	16	31.9	67.9	1.37	6.31	2.25	0.38	10.3	4.2	1.87	0.75	0.86	69.3	254	9	0.8	Gt.Horkesley
52342X	8	PC60 PLI B	A	0.25	2.26	126	7.75	18.2	4.89	127	22	36.0	82.7	1.63	7.16	2.49	0.49	11.4	4.9	1.99	1.02	0.97	107.0	270	9	0.8	Gt.Horkesley
52354P	?	no number	?	0.27	2.14	101	5.61	15.0	4.42	111	20	32.6	68.9	1.60	6.81	2.40	0.43	10.1	4.7	1.89	0.99	0.95	119.0	298	16	0.9	Gt.Horkesley
52332Q	2	ML1910.12-3.3	A	0.22	1.92	105	7.13	14.5	4.12	104	17	29.6	66.3	1.32	5.91	2.04	0.38	8.9	4.7	1.41	0.72	0.78	86.8	227	8	0.7	Gt.Horkesley
52334X	4	ML1910.12-3.5	A	0.22	1.92	110	6.35	15.4	4.19	109	19	31.7	72.7	1.40	6.12	2.16	0.37	9.9	4.6	1.73	0.83	0.91	74.7	442	8	0.8	Gt.Horkesley
52336T	6	ML1910.12-3.7	B	0.22	2.00	112	7.07	15.7	4.31	111	20	33.3	71.3	1.43	6.50	2.33	0.42	10.1	4.7	1.58	0.83	0.76	81.9	313	10	0.8	Gt.Horkesley
52331S	1	ML1910.12-3.2	A	0.24	2.17	129	7.71	17.3	4.71	118	19	33.5	76.9	1.53	6.50	2.72	0.41	10.7	4.6	1.75	0.89	0.95	93.3	352	10	1.2	Colchester
52333Z	3	ML1910.12-3.4	A	0.24	2.12	122	7.49	17.4	4.87	120	19	33.8	72.0	1.46	6.65	2.49	0.42	10.3	4.9	1.59	0.87	0.95	102.0	260	11	1.1	Colchester
52341Z	9	PL5PC 1978:96	A	0.22	1.94	111	6.56	14.9	4.11	107	18	33.8	73.1	1.41	6.34	2.08	0.38	10.4	4.6	1.55	0.89	0.83	79.3	260	10	0.9	S.W. Ferrers
52335V	5	ML1910.12-3.6	B	0.22	1.95	111	6.65	15.2	4.05	103	19	30.3	67.5	1.35	6.21	2.36	0.44	11.5	4.7	2.09	0.77	0.86	80.8	248	8	0.8	Rayleigh
2nd stack																											
52330U		ML1910.12-3.1	N/A	0.41	2.13	95	5.62	16.2	5.50	130	21	35.6	72.5	1.72	7.33	2.69	0.46	10.3	5.3	1.46	0.80	1.00	88.0	365	19	1.2	S.W. Ferrers
Gt. Horkesley kiln: mean				0.24	1.92	106	6.97	17.8	5.08	125	26	31.8	67.5	1.36	6.19	2.39	0.40	10.8	5.9	2.09	1.15	0.77	95.0	332	17	1.3	
sd				0.02	0.31	12	0.56	1.7	0.50	15	17	6.1	15.0	0.45	1.83	0.57	0.07	0.8	0.3	0.35	0.23	0.20	22.0	96	3	0.3	
Colchester kiln: mean				0.30	2.30	129	8.07	21.2	5.91	139	56	41.4	82.9	2.02	8.74	3.29	0.50	11.5	6.3	2.22	1.68	1.12	106.0	499	24	2.5	
sd				0.01	0.15	5	0.43	0.9	0.70	2	7	2.3	5.0	0.19	0.90	0.26	0.04	0.2	0.4	0.31	0.49	0.08	10.0	121	8	3.3	

All results are in parts per million, except Na, K, and Fe which are in percent; s.d. - one standard deviation.

fifteen bricks analysed show chemical compositions characteristic of production from local Essex clays.

* Specifically, two-thirds of the bricks are linked chemically with pottery produced in the Colchester region of north-east Essex.

* The examples from Writtle and Pleshey are of the same origin.

The brick from the second chimney stack at Pleshey (British Museum Accn. No. 1910, 12-3, 1) has a slightly different composition from the rest of the bricks : it appears at the top left of Fig. 4, and discriminant analysis indicated South Woodham Ferrers as its nearest kiln group. It is not clear whether this should be interpreted with some caution, though the analytical differences from the rest of the bricks are significant. This second type of chimney is probably 15th-century in date, and is probably of a local (i.e. Essex) manufacture, so far found only at Pleshey.

Chimneys and the brick industry

Beverley Nenk

The early development of the polygonal brick chimney-shaft is unclear, and no parallels to the Pleshey Castle and Writtle examples are known. Early cylindrical chimney-shafts of stone, probably with either an open top, or with pierced side-vents and a conical capping, are known from the mid 12th century; polygonal stone shafts with a capped top were in use from the late 13th century, and are found throughout the 14th and 15th centuries. During the 15th century, long octagonal stone shafts are known, without side-vents and probably open at the top. (For a discussion of stone chimney-shafts of these forms, see Wood 1965, 281-8; and Drury 1977, 88). Chimneys were constructed of brick from the 14th century in England: brick as a building material was available by the 14th century in southern and eastern England, and the resistance of brick to fire was appreciated in the construction of chimneys and in hearth linings, in both timber-framed and stone or rubble buildings, during the second half of the 14th century (Moore 1991, 211-12). The illustrations in the Romance of Alexander, produced in Flanders in 1344, show regular coursed and jointed lines, which may have been intended to represent shaped bricks (Dunning 1977, 129-135, pl. XVII).

The neutron activation analysis of the Pleshey and Writtle bricks suggests manufacture in north-east Essex (Hughes above), and certainly brickmakers were working in Essex at this period; in 1427, for example, a brick kiln was operating at Writtle, probably supplying the building works at the hunting lodge (Smith 1985, 31, 87). Moreover, it is known that a small but significant group, or atelier, of brickmakers (the 'Rye House Group'), probably of continental origin, was active in Essex

and Hertfordshire during the early 15th century. Faulkbourne Hall, to the north-east of Chelmsford, is linked with other buildings thought to be the work of the group, including, in Essex, the Moot Hall at Maldon and Nether Hall, Roydon (Smith 1985, 18, 37, fig.10).

It is unknown who was responsible for making the unusual chimney bricks found at Pleshey and Writtle, but a number of different shaped, purpose-made bricks was made for the construction of various architectural features by brickmakers in the region at this period, including the `Rye House Group' (Smith 1985, 36-7, 46). The higher standard of brick-making achieved during the early 15th century is thought to be due in part to continental influence; the presence in England of brickmakers and bricklayers from the Low Countries and Germany is well-attested in the documentary record, and certain brick buildings of the period display continental aspects of form and detail (Moore 1991, 212-4; Smith 1985, 4-22). Two letters, found amongst the manorial records of Havering-atte-Bower and written *c*.1446, refer to the search for a bricklayer and demonstrate a preference for continental craftsmen:

... a mason that ys a ducher or a flemyng that canne make a dowbell Chemeney of Brykke for they canne [?] best fare ther with and I wold have seche one as cowde maket wele to voyde smoke and al so to hewe the mantell of the same Brykke for the fre stone [illegible] ther to... (Ryan 1986).

The brick industry at this period was characterised by widely dispersed, semi-itinerant brickmakers. Bricks are thought usually to have been manufactured *in situ*, close to the source of the clay and near to the buildings for which they were intended, rather than being transported over long distances (Smith 1985, 83, 86-7). During the 14th and 15th centuries, brick was not a cheap commodity; it was a fashionable and prestigious building material, largely employed by wealthy patrons amongst whom royalty and aristocracy were prominent, and often as the principal material for large-scale building programmes (Moore 1991, 214; Smith 1985, 4. 6. 85). The manufacture of the chimney-bricks locally in Essex, and their occurrence at Writtle and Pleshey Castle, sites associated with royalty and aristocracy (see also Ryan 1996, 39-40), would appear to fit into this general pattern.

Conclusions

Michael Hughes' important neutron activation analysis strongly indicates that both the Pleshey and Writtle chimneys were made from the same clay; and in the Colchester/Great Horkesley area, whence they were transported some 25-30 miles to the sites in central Essex. An Essex origin for the second

chimney is also likely. Whilst continental craftsmen are clearly at work in the 15th century (Nenk above), it is impossible to ascertain the ethnic origins of the maker of these bricks; nevertheless, someone skilled in pottery manufacture is suggested.

The contexts of the fragments found in the excavations at Pleshey and Writtle, though only amounting to a total of six Type A bricks (plus two variants), and seven Type B bricks, would seem to indicate a date in the first half of the 15th century. This was a time when Humphrey de Bohun, created Duke of Buckingham in 1445, was rebuilding Writtle in brick (Rahtz 1969, 9), and when Pleshey Castle was included in the dowry of the queens of Henry V and Henry VI. Katherine de Valois, daughter of Queen Isabelle of France, married Henry V in 1420, whilst Margaret of Anjou married Henry VI in 1445. It is known that the castle was being extensively repaired from 1440 onwards (Williams 1977, 13; Rahtz 1960/61, 5).

However, Ryan argues for an earlier date in the final decades of the 14th century (Ryan 1996, 38-40). Stone and brick rubble walls are recorded at both sites before the general rebuilding in brick, and were capable of supporting brick chimney shafts. Both sites were in the tenure of the de Bohun family, Pleshey from 1227 until 1420, and Writtle from 1306 to 1521. The de Bohun family was at the height of its wealth when the Bohun heiress, Eleanor, married Thomas of Woodstock, the seventh son of Edward III, in 1380 (Ryan 1996, 39).

Acknowledgements

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Fieldwalking at Crondon Park, Stock

by M. Germany,
with contributions by
K. Horsley, H. Major, S. Tyler, P. Ryan and H. Walker

Finds and sites from all periods have been found by fieldwalking at Crondon Park, Stock. Some of the finds are related to an adjacent moated site and the use of the survey area as a deer park in the medieval period. Significant finds include early examples of medieval brick. Sherds and wasters from the manufacture of post-medieval red earthenware at Stock have also been found.

Introduction

In 1992, a fieldwalking survey was carried out by the Field Archaeology Unit of Essex County Council at Crondon Park, Stock, prior to the construction of an eighteen-hole golf course. Crondon Park is situated to the south of Margaretting and to the north of Stock, *c.*7km south-west of Chelmsford (TL 691 005) (Fig. 1). The survey area (*c.*56ha) is divided into two halves by a tributary of the river Wid, which runs north-south across the site. From the tops of the valley sides clear views of the surrounding countryside can be seen.

The survey area was once part of an extensive deer park which ran from Stock to Galleywood. It was created by the bishop of London, who in 1204 obtained a licence from King John. It was part of his manor of Orsett, and later became regarded as a manor in its own right. The park was often visited by the bishop, being close to the main London-Colchester road. The manorial establishment was sizeable: the documented buildings included a chapel with glazed windows, stables, a bakehouse and a gatehouse (Jarvis 1991; EHCR 5450). The park was also exploited for its timber, supplying other manors belonging to the bishop. A moat and raised platform on the south edge of the survey area is identifiable as the site of the medieval manor and hunting lodge. Sir William Petre acquired the manor in 1546 and began the process of disparkment. The house at Crondon Park Farm, in the centre of the survey area, was constructed in the 1830s on an older site.

No follow-up work such as trial trenching was carried out (contrary to normal practice), due to the insolvency of Golf Leisure Ltd, although the golf course was eventually constructed by a take-over company. The fate of the archaeological sites is unknown. The finds and archive are stored at Chelmsford and Essex Museum (site code CP 92, accession number 1992.28). Diagnostic pieces of flint and pottery and medieval brick were retained after analysis. All other finds were discarded after recording.

Method

The survey area was investigated with the Essex County Council Field Archaeology Unit fieldwalking system, which is based on the sub-division of the National Grid into 20m squares (Medlycott and Germany 1994). A *c.*10% sample of surface finds is recovered by fieldwalking a 2m wide transect along the west side of each square in turn. These finds are then washed and processed before being plotted out onto distribution plans according to weight, date and type and their standard deviation from the mean (Figs. 2-7).

The interpretation of fieldwalking data by the Field Archaeology Unit is facilitated by the use of a statistical database, which combines the results of fieldwalking projects from all over Essex (Medlycott and Germany 1994). Prehistoric and Saxon sites are usually marked by small numbers of sherds, whilst Roman, medieval or post-medieval sites are, in contrast, represented by dense concentrations of finds. The most probable explanation for this is that the first two periods were ceramically less rich than the other three periods. It is also known that the pottery from the first two periods is, in general, relatively fragile, and therefore more easily destroyed by ploughing and weathering. For more reliable results, the interpretation of fieldwalking data is best combined with information from other techniques, such as aerial photography or (as in this case) historical records.

Results

The fieldwalking survey covered 56ha. 14ha of grassland and woodland were left unwalked. The fieldwalking conditions were good. The field surfaces were ploughed and harrowed, and free from crops or weeds.
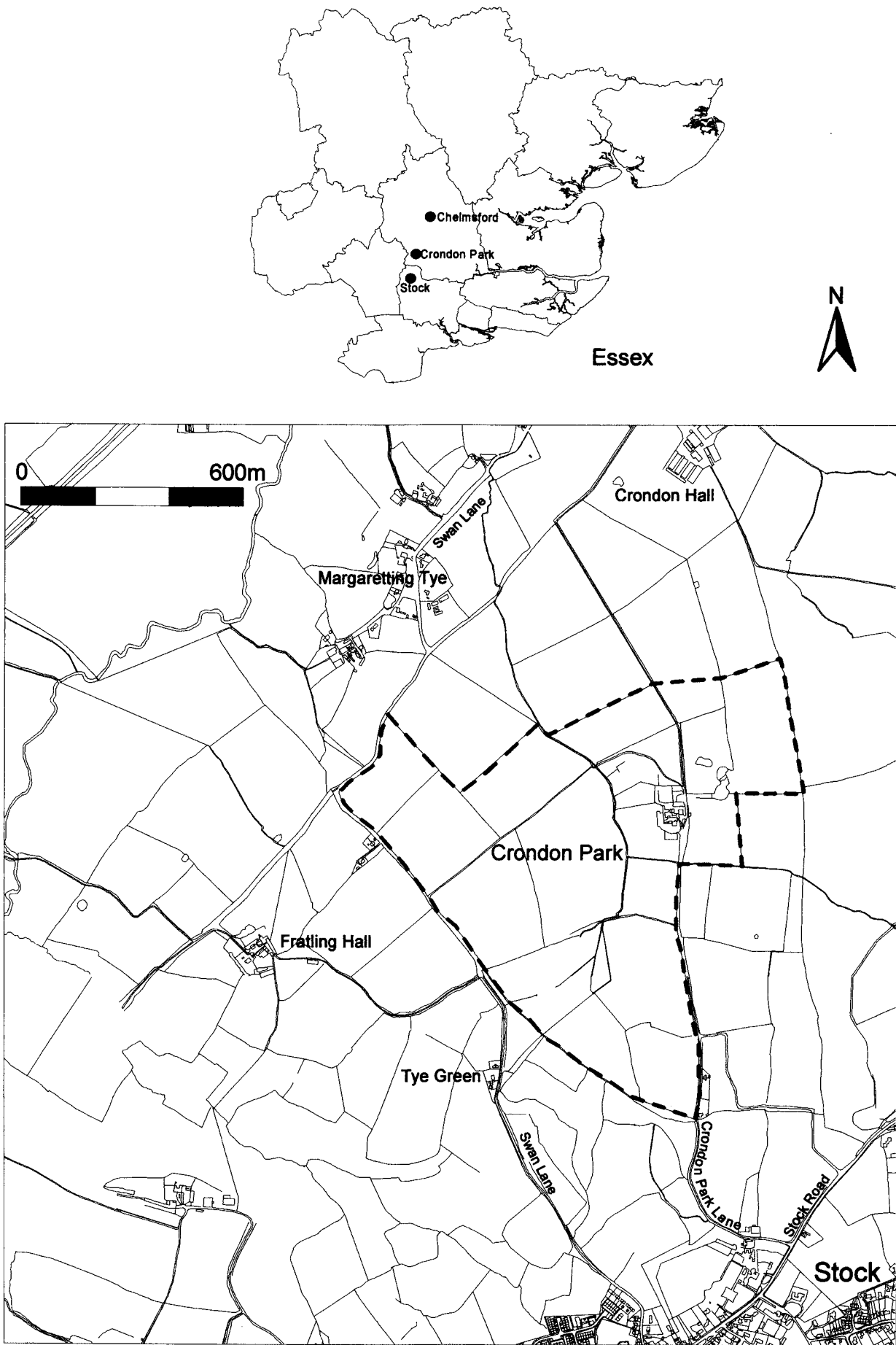
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Fig. 1   Crondon Park, location plan. (© Crown copyright Ordnance Survey. All rights reserved MC100014800)
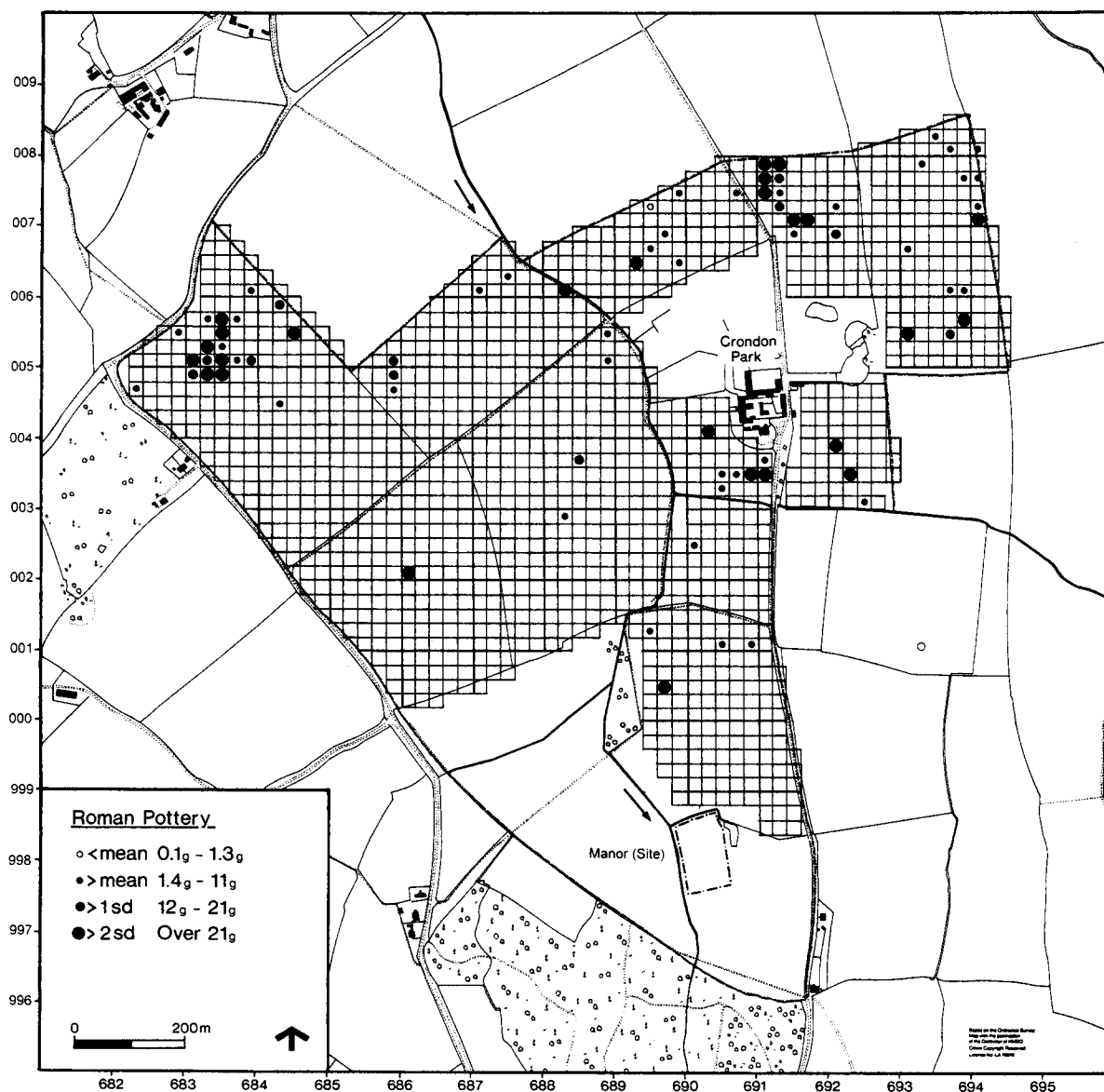
Fig. 2   Crondon Park, Roman pottery.

Prehistoric

The survey area was covered by a thin scatter of flint flakes, tools and cores (not illustrated). No sherds of prehistoric pottery were discovered.

Roman

Two small concentrations of Roman pottery were discovered on the tops of the valley slopes, to either side of the tributary of the Wid (Fig. 2). Most of the sherds were not closely datable, although some were 3rd/4th century and a few 1st to 3rd century. Both sites were largely represented by abraded or slightly abraded sherds; no slightly abraded sherds were found to the south of northing 004. Abraded and very abraded sherds, in contrast, were found in all areas.

Small concentrations of Roman brick and tile were found in the same areas as the two clusters of Roman pottery (Fig. 3). A dense spread of Roman

brick and tile was also present to the north of the medieval manor site. Thin scatters of Roman brick and tile were seen in all other areas. A fragment of Roman quernstone was found on the south-west edge of the west concentration.

Saxon

Three sherds of Early Saxon pottery were found in the same area as the east concentration of Roman finds (Fig. 4). One of the sherds was derived from a fairly large vessel, such as a cooking pot. No other Saxon finds were discovered.

Medieval

Very few sherds of medieval pottery were discovered (Fig. 4). Eight pieces were found to the north of the moated site, and two to the east of the modern farm. Pieces of medieval brick were found close to the

Roman Brick and Tile

o	< mean	1g - 7g
•	> mean	8g - 48g
●	> 1 sd	49g - 89g
●	> 2 sd	Over 89g
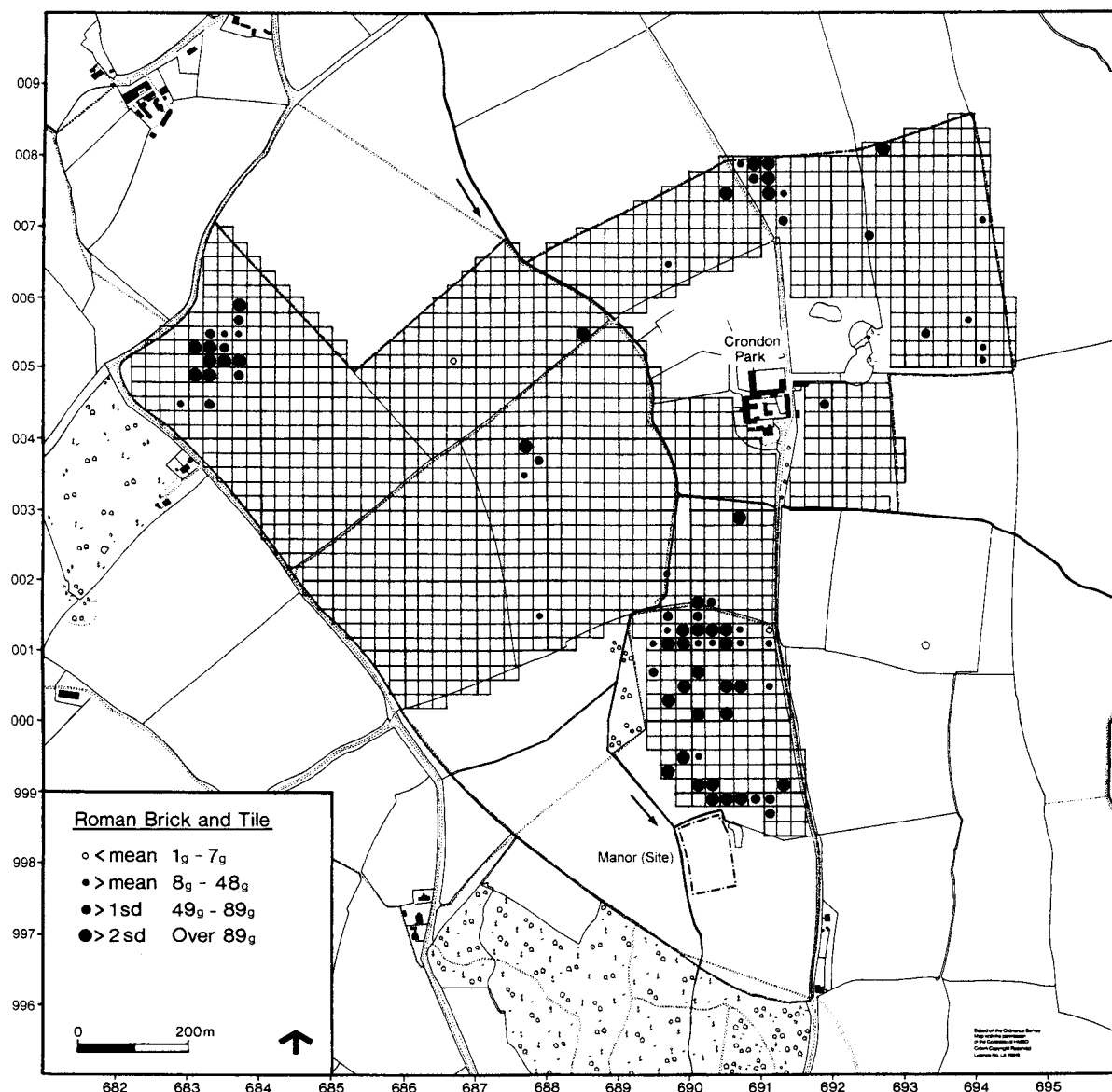
Fig. 3   Crondon Park, Roman brick and tile.

moated site (not illustrated). No other finds from this period were discovered.

Post-Medieval

Dense clusters of post-medieval pottery and medieval and post-medieval tile were found in all areas (Figs. 5 and 6). Most of the material was found to the north of the medieval manor site and to the east and north-east of the present-day farm. A large concentration of post-medieval pottery and a small concentration of medieval and post-medieval tile were found to the west of the tributary, on the east-facing slope.

Undatable

One large and two small clusters of burnt/fire-cracked flint were found on the east slope of the tributary of the Wid (Fig. 7). A thin scatter of

burnt/fire-cracked flint was also found to the west of the stream. A small cluster of slag was found in the north-west corner, in the same location as the west concentration of Roman pottery (not illustrated). Small amounts of slag were also seen in other areas.

Roman pottery

Katherine Horsley

As usual for fieldwalked assemblages, most of the material is too fragmentary and abraded to be closely dated. From the material which is datable, there are a few sherds of Late Iron Age and early Roman grog-tempered ware. Some 3rd-century jar rims and sherds of Rettendon ware, plus sherds of Hadham oxidised red ware, which indicate a 4th-century date, are also present. Several long-lived jar forms have also been identified.

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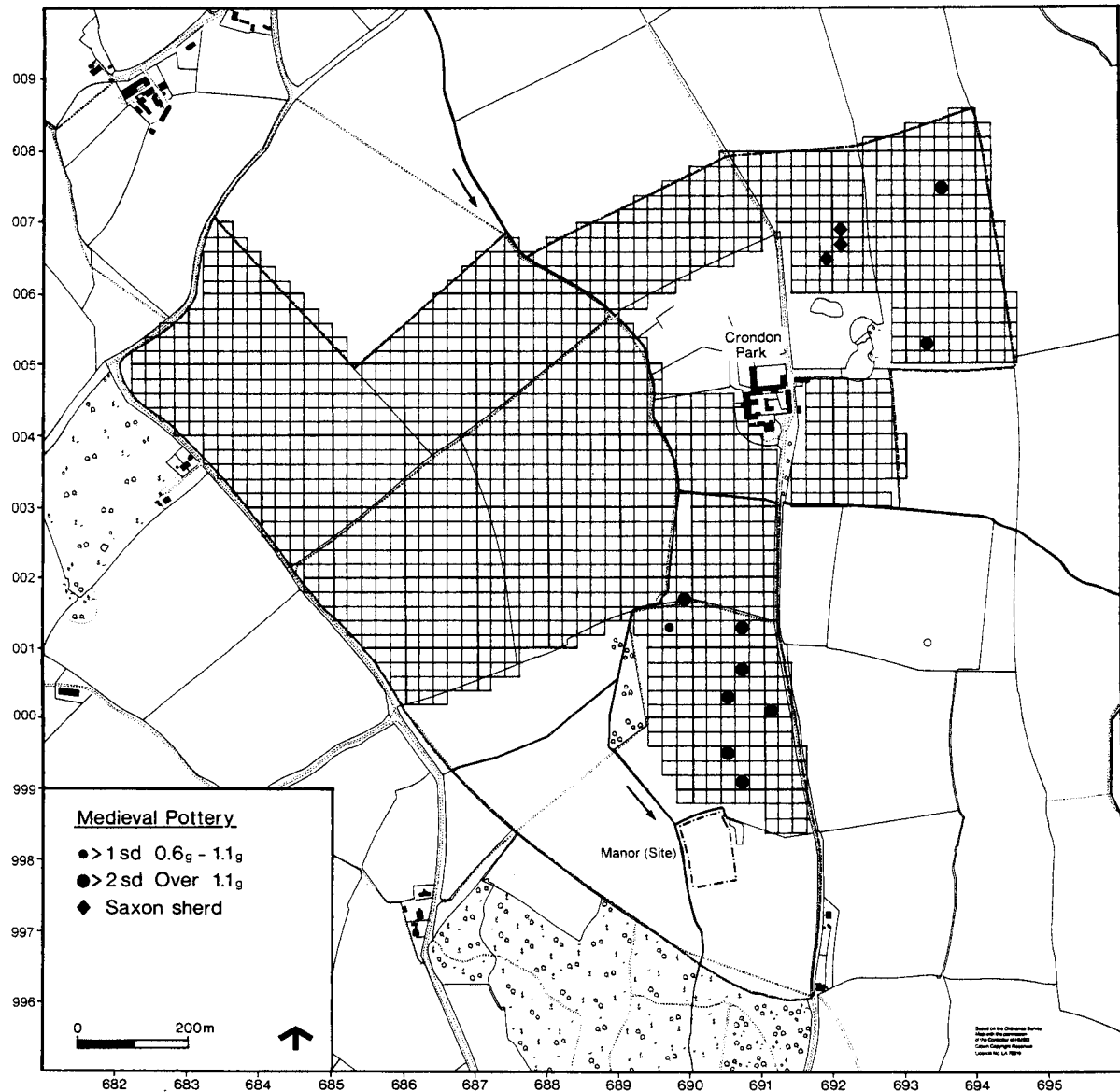
Fig. 4   Crondon Park, Saxon and medieval pottery.

Saxon pottery

Sue Tyler

Three sherds of Early Saxon pottery belonging to the 5th to 7th centuries were located by the survey.

1. TL 6920 0066. Body sherd from a fairly large vessel; probably a cooking pot. Hard fabric with abundant small to medium quartz-sand, giving a 'glittery' surface appearance. Outer surface dark brown. Inner surface and core dark grey. 21g.

2. TL 6918 0064. Base sherd. Abraded. Soft fabric with common vegetable temper; abundant small quartz-sand. Sparse iron oxide inclusions. Outer surface dark brown. Inner surface and core dark grey. 15g.

3. TL 6920 0068. Base sherd. Hard fabric with abundant small quartz-sand giving a 'glittery' appearance to surfaces. Outer surface dark reddish-brown. Core and inner surface dark grey. 19g.

Medieval and post-medieval pottery

Helen Walker

There is very little evidence of medieval activity. The earliest pottery comprises two sherds of Early Medieval ware from TL 69 00, with a date range from the 11th century to c.1200. Four sherds of Mill Green ware dating from the later 13th to the mid 14th century were also found, which is not surprising as the kiln site lies only 5km to the west of Crondon Park. The industry is noted for its finely potted jugs and one sherd found has a cream slip-coating under a mottled green glaze which is a typical method of Mill Green surface treatment. Other 13th to 14th century pottery consists of three sherds of medieval coarse ware including a fragment of flanged cooking pot rim datable to the late 13th to early 14th century, and a single sherd of sandy orange ware.

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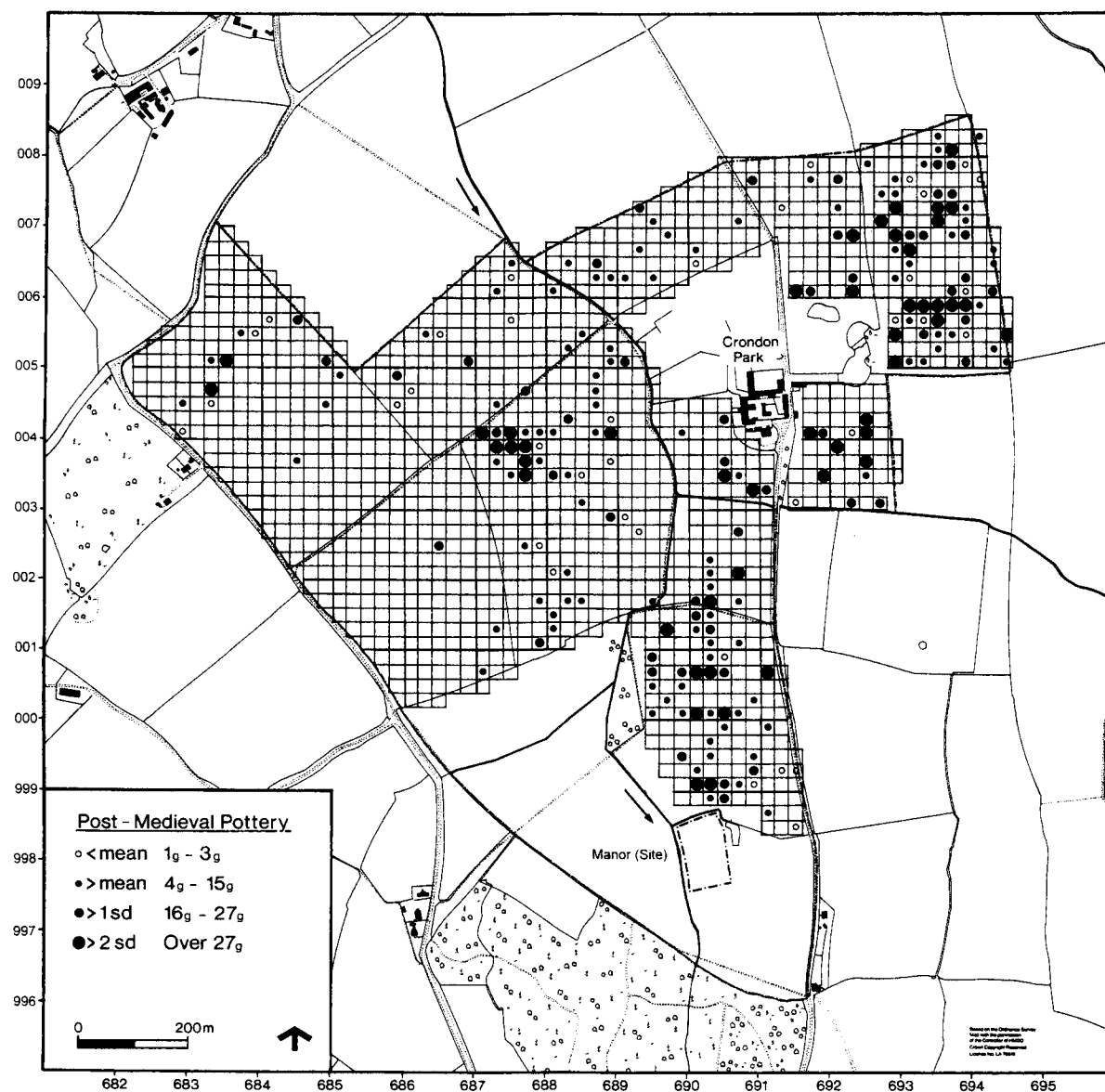
Fig. 5   Crondon Park, post-medieval pottery.

The most frequent find is post-medieval red earthenware (PMRE). This is ubiquitous on many sites but here it is present in huge quantities, and at least some must be derived from kilns at Stock which was a major production centre of PMRE from the beginning of the 16th century until the mid 18th century. The actual kiln site has never been located but sherds from a waster dump were found at Common Lane, Stock and Mill Road, Stock. The fabric of the fieldwalked sherds seems to match that of the kiln dump material, but pottery from post-medieval kilns at Harlow is also similar. Further evidence comes from the fact that rim sherds picked up are of the same form as those from the kiln dump and there is at least one incidence of a jar with an external bead some distance below the rim, which is a diagnostic Stock product. Four sherds appear to be wasters, i.e. pottery that has misfired in the kiln, and, in addition, some reduced sherds from very

large vessels may be from containers used in the kiln called saggars in which delicate vessels were fired. PMRE is difficult to date but sherds found that are unglazed and slip-painted are probably 15th/16th century in date, while sherds recovered with an internal overall glaze probably date from the late 16th/17th century, and black glazing is most common in the 17th century.

Very small amounts of other post-medieval wares were found, the earliest being two sherds of Raeren stoneware from Germany, imported during the late 15th to mid 16th century. Also from Germany, but of slightly later date, are examples of Frechen stoneware belonging to the mid 16th to later 17th century. The most unusual find is a fragment of earthenware with an internal green tin-glaze. It may have Islamic origins and a possible source is Seville in Spain, where white and green tin-glazed vessels

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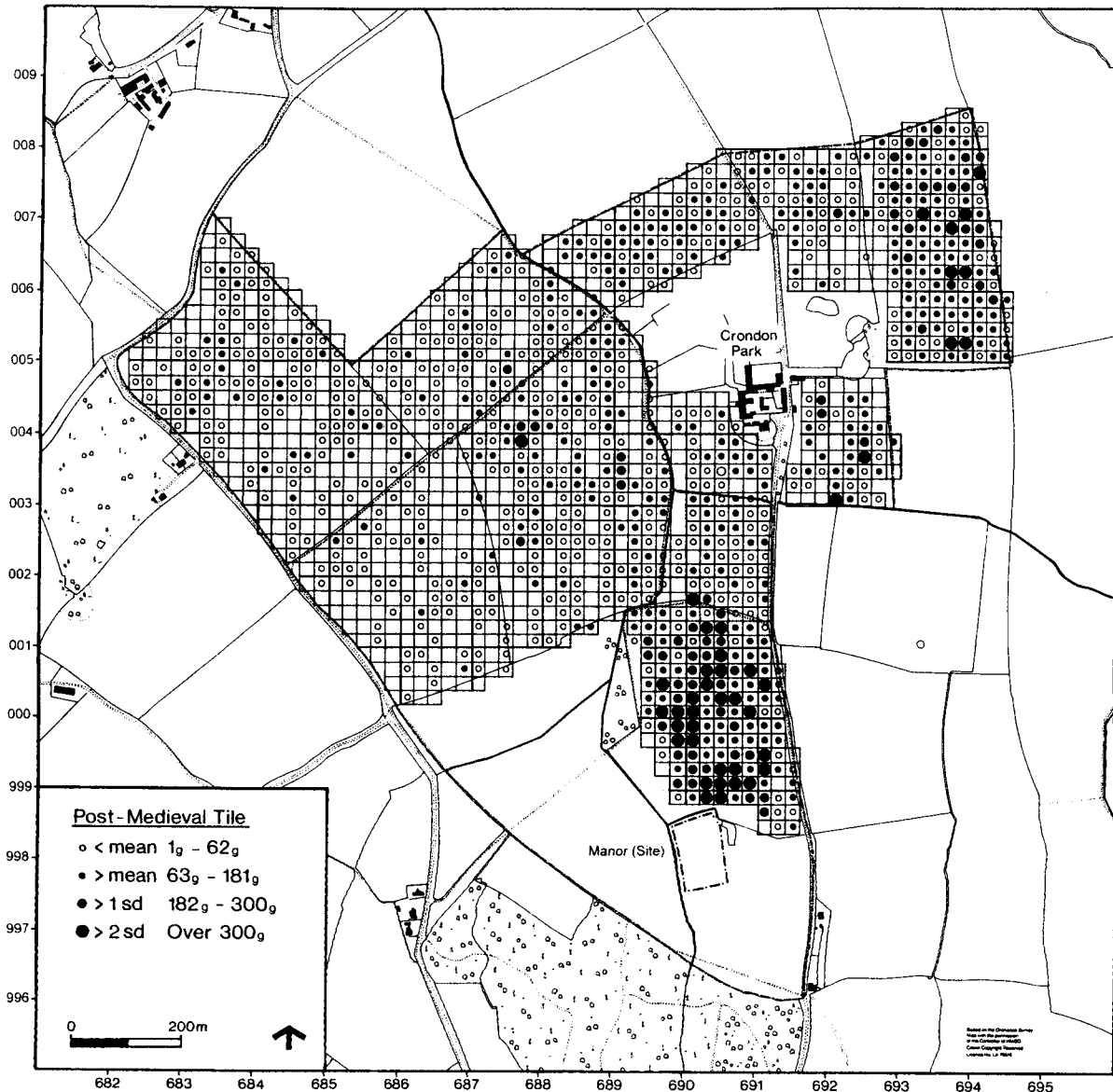
Fig. 6   Crondon Park, medieval and post-medieval peg tile.

were manufactured throughout the 16th century. Such an import is very rare on inland sites.

Dating from the later 17th and 18th centuries are two sherds of manganese-glazed Westerwald, another type of German stoneware. The sherds of English salt-glazed stoneware found are probably of a similar date and include rim sherds from an 18th-century tankard. Other 18th-century pottery includes two sherds of white salt-glazed stoneware dating from the 1720s to 1770s, and single sherds of Jackfield ware and Agate ware which are fine, lathe turned earthenwares made in Staffordshire and Shropshire from the mid 18th century. Jackfield ware has a lustrous black-glaze, while Agate ware is made from intermixed different coloured clays giving a marbled effect. In addition, there is one sherd of Creamware belonging to the second half of the 18th century. Modern 19th/20th-century pottery comprised mainly sherds of ironstone, flower-pots, kitchen earthenware and stoneware.

Medieval and post-medieval brick and tile

Pat Ryan

Three types of bricks can be identified:

Type A

Whilst there are no complete examples of type A, the available dimensions indicate that these 'great bricks' were tile-like in form (>110 x >85 x 37-40mm). They were made in a mould which was wetted rather than sanded, and knife trimmed where necessary. They have oxidised margins 2-7mm in width and reduced cores. The fabric consists of a fine clay into which a coarse quartzite sand has been thoroughly mixed. Some of the Coggeshall Abbey brickmakers' techniques were used in the making of these bricks, i.e., the incorporation of coarse sand with fine clay and firing conditions which resulted in a reduced core and oxidised margins. These great

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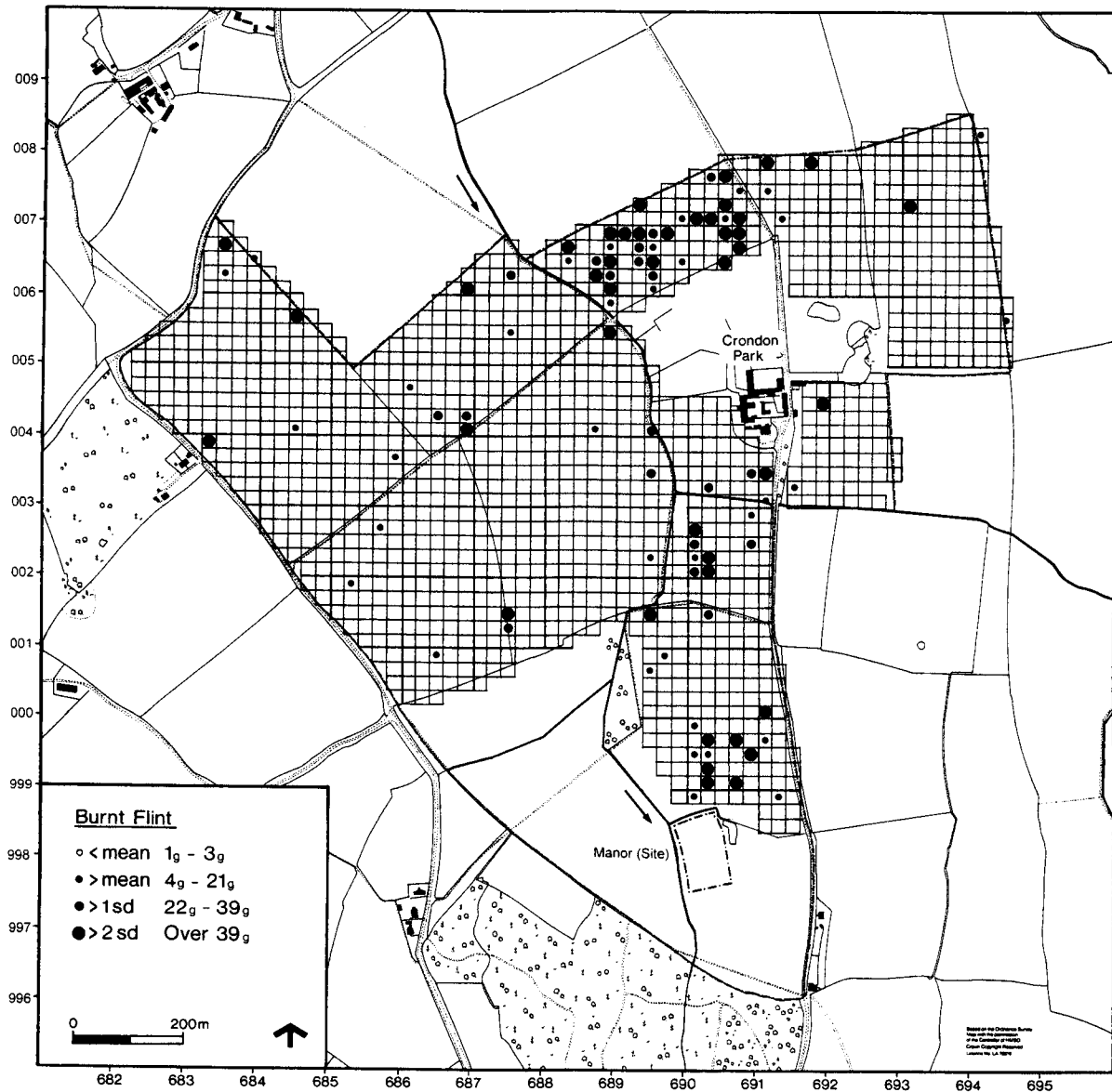
Fig. 7   Crondon Park, burnt/fire-cracked flint.

bricks were probably made prior to the introduction of the Flemish or standard shaped brick in the late 13th and early 14th century. They may be as early as the Coggeshall bricks which date to the late 12th/early 13th century. Most of the bricks were found in close proximity to the site of the medieval moated manor.

Type B

These fragments are all relatively small and very abraded with few diagnostic features surviving. Their fabric, consisting of fine clay with very little if any sand, is characteristic of either medieval floor tiles or of the Roman tiles found in Essex.

Type C

The dimensions of the single very abraded example of cream/yellow coloured brick suggest it is probably from a standard shaped brick. In Essex, bricks with this type of cream to yellow fabric may

be medieval, as found in a number of late 13th- and early 14th-century churches and excavations of that date, or else 18th- or 19th-century, when malmed bricks became fashionable.

Roof tile

The fragments of roof tile were all too small to obtain any dimensions other than thickness, which varied between 12 and 15mm. Several examples included whole or parts of circular pegholes. The glaze and scarring on some tiles suggests they were used to support pots in a kiln. The very dark glaze on some examples is similar to that found on the black glazed ware of the 17th century.

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Miscellaneous finds
Hilary Major

Gabbro
Pieces of possible gabbro (identified by K. Horsley) came from three locations (TL 6880 0056, TL 6880 0058, TL 6900 0066). The stone cannot be more firmly identified without thin sectioning. Whatever it is, it is certainly not local. Two pieces may have polished surfaces, and it may have been used as a decorative stone in a building. It is most likely to be post-medieval.

Quernstone
TL 6824 0048. Medium grain sandstone, possibly Greensand series. The edge of a flat rotary quern, diameter 430mm, maximum thickness at edge 38mm. The stone has been reused; what was probably the original grinding surface has been worn smooth, but is by no means flat, and has probably been used as a hone. There are a number of shallow grooves, probably the remains of the original harp dressing, although some of them may be later cuts. Part of the edge has also been smoothed after breakage. The underside is fairly rough.

This is part of a Roman sandstone quern. It is an unusual stone for Essex, where virtually all Roman querns are of Rhenish lava or Millstone grit. However, there are a few rotary querns in Greensand or other non-Millstone Grit sandstones. The Greensand would have derived either from Lincolnshire or Sussex/Kent. Without petrological analysis, it is not possible to give a source for this stone.

Conclusions
The exploitation of the survey area from the prehistoric period onwards is evidenced by finds from all periods. Prehistoric sites are possibly indicated by the three concentrations of burnt/firecracked flint. Elsewhere in Essex, the excavation of burnt/fire-cracked flint concentrations has led to the discovery of prehistoric sites. Notable examples of this are the Early Iron Age settlement at Fox Hall, Southend (Ecclestone 1995) and the Late Bronze Age shrine at the A12 Boreham Interchange (Lavender 1999). The hypothesis that burnt/fire-cracked flints were used as pot-boilers, to heat water for cooking or bathing, is supported by the proximity of the nearby stream.

Two small Roman sites, possibly farmsteads, may be indicated by the concentrations of Roman finds on the tops of the valley slopes; it is possible that the intervening tributary was used as a property boundary. The presence of subsoil features is supported by the condition of the pottery, which is largely unabraded. The corresponding concentrations of brick and tile suggest structures, such as houses or corn driers. Two examples of where Roman structures have been marked by large concentrations of Roman tile are the late 3rd/mid 4th-century principia at Bulls Lodge Dairy and the Late Roman villa at Great Holts Farm, Boreham (Lavender 1993; Germany forthcoming). Further detail is provided by the fragment of quernstone and the pieces of slag, which possibly indicate that the west site was engaged in the grinding of corn and the smithing of iron. The Roman finds in the other areas are likely to be related to the use of the surrounding area as arable, to the spreading of farmyard middens during manuring. This is supported by the higher proportion of abraded and very abraded sherds in those areas, the condition of which is probably due to frequent disturbance.

The continuation of the eastern Roman site into the Saxon period is suggested by the three Saxon sherds. Saxon pottery is rarely found in Essex, as the period is ceramically less rich, and the sherds, which are relatively fragile, more easily destroyed by ploughing and weathering.

The formation of the deer park, and the reversion of the survey area to woodland or scrub, is reflected in the dearth of medieval pottery. The quantity of medieval sherds is very low for a fieldwalking project in Essex, less than 3% of the expected norm. This may be because the moated site, identifiable with the bishop's manor of Crondon, lay outside the survey area. A somewhat inaccurate estate map of c.1575 (ERO D/DP P2) shows the surviving park and a disparked area to the east of it (Plate 1). A lane running north-south divides the surviving park into two. In the western half are two large fishponds fed by a stream at 45 degrees to the lane. South of the fishponds is a rectangular feature labelled 'Here sometime stood a lodge called Stock Lodge'. Its location on the map implies it is the moated site. An adjacent field called 'Chapel Piece' on a later survey (ERO D/DP P109) doubtless took its name from the bishop's chapel. However, the history of the park and the houses attached to it is complex. That the manor could become known as Stock Lodge relatively soon after its demise (assuming this occurred when it was acquired by the Petre family) was a consequence of it being one of several buildings in the park. There was at least one other lodge, as the c.1575 map marks the site of a former 'Lodge called Orsett Lodge' in a field in the disparked area. Within the surviving park, the same map also shows 'The Keepers house' and the 'Dairy house'. A substantial complex of buildings in the disparked area is labelled 'Crondon Hall'. From its size, this looks like the successor to the manor, and this conclusion about its status is confirmed by surveys of 1556 and 1566 in the Petre archives (ERO D/DP M803 & M1325). Presumably Sir William Petre had, in the process of partial disparking, abandoned the traditional manorial site and established a new centre in the disparked area. Crondon Hall and the scatter of small farms shown around it were all
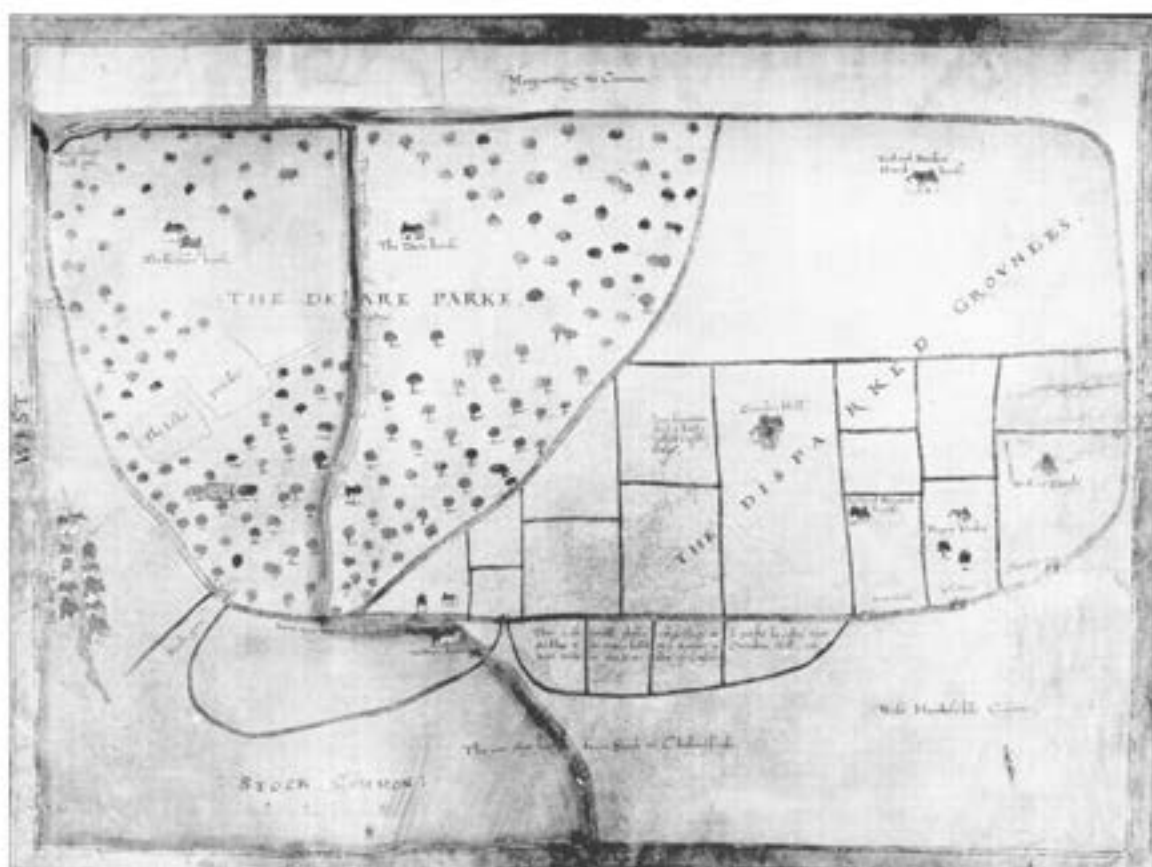
Plate 1   Map of Crondon Park dating from c.1575 (reproduced by courtesy of the Essex Record Office).

leased. Curiously, this new centre at Crondon Hall seems to have been short-lived. A 17th-century estate map, perhaps of 1674 (D/DP P13), shows Crondon Park farm in much the same position as it is today. This site, which is also shown on the Chapman and André map of 1777, may have been a successor to the 'Dairy house' on the 1575 map, being like that building on the east side of the stream.

The concentration of medieval pottery and brick, and also of roof tile, at the south end of the survey area is probably material discarded from the manorial site. The Coggeshall-type bricks are consistent with the date of the creation of the park. They must have come from a stone building, probably the chapel or perhaps a chamber. If not related to a third Roman site, the large spread of Roman brick and tile to the north of the manor house may well represent material reused in medieval stone buildings. The imported tin-glazed sherd is also an indication of a high status site.

Since the moat was abandoned by c.1575, the large amount of post-medieval pottery in the same area is less easy to explain, though some of the pottery included in this material would have been in use before c.1575 and therefore could have derived from the moated manor before it was deserted. The scatter of post-medieval pottery west of the stream probably coincides with 'The Keepers house' on the c.1575 map. This site is not marked on the ?1674 map and so had probably been abandoned by then. A concentration of pottery just to the south-east of Crondon Park is probably associated with an isolated house shown on the Chapman and André survey and on a map of 1817 (ERO D/DP P109). The post-medieval pottery at the north-east of the survey area cannot be readily explained unless it derived from Crondon Park, or from a farm known as Old Barn on modern maps which is probably the same as a farm shown in the disparked area on the c.1575 map.

Acknowledgements

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The demesne lands and parks of Sir Henry Maynard in 1594

by J.M. Hunter

The rediscovery of the 1594 map of Little Easton, Tilty and Broxted sheds invaluable light on the evolution of settlement and field patterns on the Essex Till from the 13th to 16th century; first, in confirming the ubiquity of former strip-farming in small common-fields based on hamlets, which were fast disappearing when the first estate maps were being made. Secondly, the concentration of demesne arable into large, often very large fields, which were sub-divided into smaller units from the 14th century onwards. The paper looks in detail at the demesne and two parks of Little Easton.

Introduction

The former mansion of Easton Lodge, set in its huge park, is remembered as the seat of 'Daisy' Countess of Warwick, and as a fitting scene for the entertainment of the future Edward VII and the Marlborough House set. A bird's-eye view engraving of 1756 shows the earlier house of 1597 and park in some detail (Plate 1), and from that date its history is reasonably well known with many prints and, latterly, photographs surviving. The First Edition OS six inch map (surveyed in 1875-6), with the remarkable standard of cartography we now envy, shows every free-standing tree in the extensive areas of wood-pasture and the phantom lines of the formal rides and avenues that were depicted as already mature in the engraving of 1756.
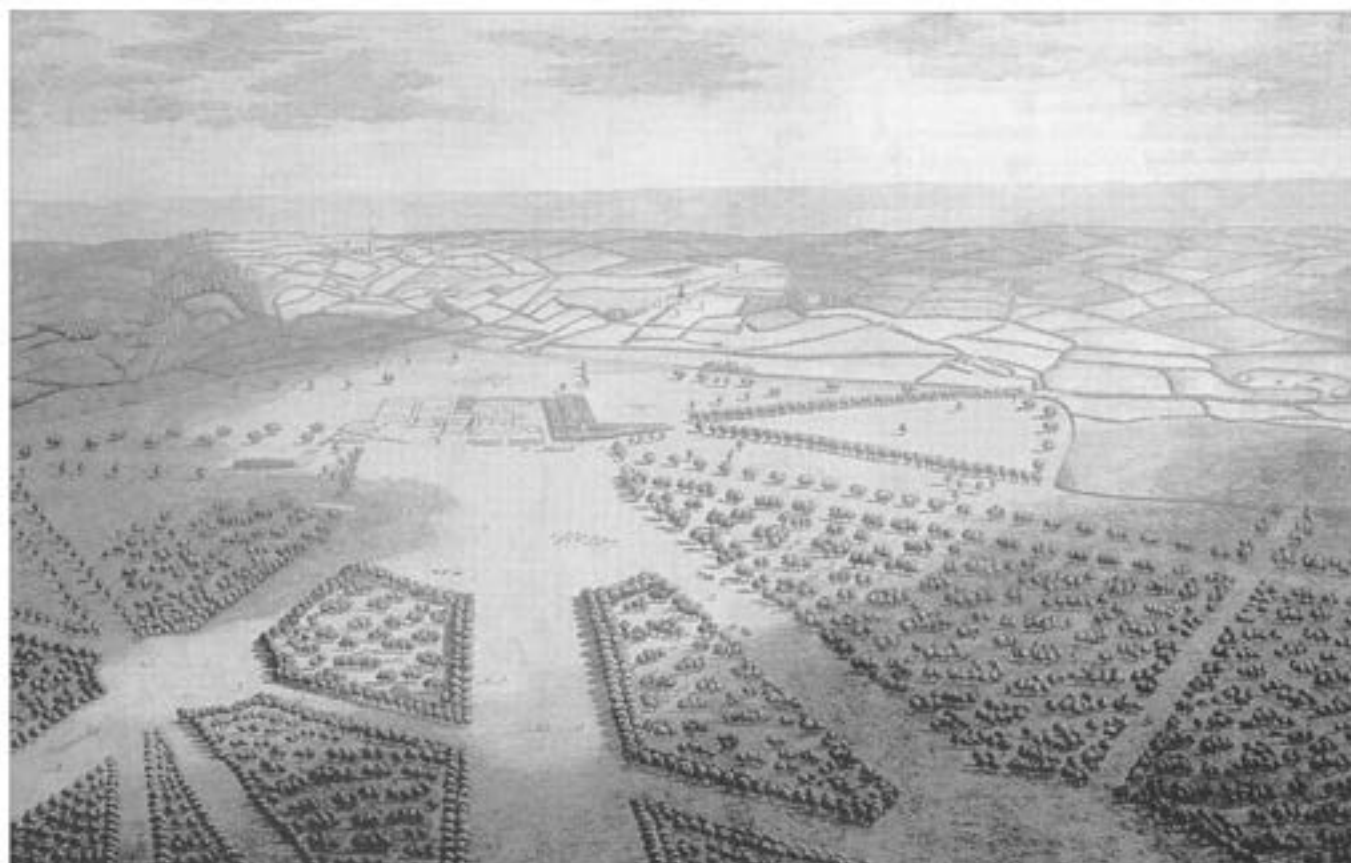

Plate 1   Easton Lodge, a Seat of The Right Hon'ble Charles Lord Maynard in Essex.
(J. Skynner del. 1756. P.C. Canot sculpt. ERO D/DMg Z1).

The founder of the great estate on which Lady Warwick's fortunes rested was her ancestor Sir Henry Maynard, secretary to Lord Burleigh.[1] In 1588 he received a Crown grant of the manor of Tilty, the demesne lands and abbey complex of the former Cistercian house.[2] To this was added by grant the manor of Little Easton and 'a farm called Ravens', Broxted Hall and Brokehall (Little Broxted Hall).[3] These contiguous estates (Fig. 2), which were coterminous with the parishes of Tilty, Little Easton and Broxted (excepting the manor of Chaureth, or Cherry Hall which covered the northern part of Broxted), were depicted on Ralph Agas' map of 1594 which has provided the information on which this paper is based.[4]

Subsequently in 1597, Maynard purchased the manor of Great Easton from one Oliver Cromwell of Hinchingbroke in Huntingdonshire, and at the time of his death in 1610 he also owned the manor of Little Canfield Hall – the date of acquisition is unknown, but Easton Park extended onto land within this manor, so an arrangement had clearly been agreed and the boundary defined long before Maynard's time.[5] His son William was made baron in 1620 and Morant reports that he acquired Great Canfield Park (150 acres, paled, and Canfield Lodge), and in 1749 a descendant owned Yardleys, a small manor in the parish of Thaxted.[6]

Early estate maps

The massive changes in land ownership which followed the Dissolution, much of it in royal grants or at knock-down prices as monastic land came on the market, amounted to perhaps a third of the kingdom. A benefit for posterity in this Age of Plunder, as W.G. Hoskins termed it, was the development of map-making as many of the new, upwardly mobile, landowners such as Henry Maynard commissioned mapped surveys of their estates. The art of cartography had arrived, and in the hands of masters such as the Walkers of Hanningfield and Ralph Agas achieved a high level of accuracy. Moreover, the pictorial convention of the time, which showed features in elevation, gives an insight into the working landscape of the late 16th century that escaped the mapping of later times. Examples are details such as chimney stacks on buildings and the spacing of trees in hedgerows.

I have suggested elsewhere that the landscapes depicted on the estate maps of this time had seen relatively little change since the early 14th century, which marked the end of the period of medieval high farming.[7] In the course of that calamitous century crop failures, famine and murrains were followed by the Black Death which, with subsequent recurrences, resulted in a halving of the population in Essex by 1400. Population levels were very slow to recover and probably did not reach their former

levels until the early 18th century.[8] However, despite this massive loss the landscapes of these maps appear busy and prosperous, slowly changing and adapting to new circumstances in a considered manner suggesting agreement rather than coercion. These changes reflected a degree of redistribution following population decline, the engrossment of customary lands (arable strips), the demolition of cottages – especially around greens – and the merger of tenures.

The 14th century also saw the decline of villeinage and by the second decade of the 15th century labour services in Essex had faded away. This is likely to have encouraged peasant proprietorship and the consolidation by agreement of strips in the common fields into discrete closes - a process largely complete by the late 16th century, except in the north-west corner of the county.[9] The small size of the fields compared with those of Midland England, and their relationship to a settlement pattern based on hamlets, gave flexibility and an ability to change with a minimum of fuss if parties were agreed.

On the demesne lands of the Essex Boulder Clays, direct farming gave way to leasing over the course of the 14th century. Landlord interest in progressive farming would not revive until Georgian times. The estate maps show the subdivision of the arable fields, often huge, into smaller units for ease of leasing and rotations with livestock, the straightness of the new hedgerows contrasting with the sinuousness of the older. There is also the new fashion on demesne land for the narrow woods termed springs or shaws - an indication that amenity, or an appreciation of landscape quality was now a factor in estate management, as well as meeting a growing demand for faggots and charcoal. These features, fashionable in the 15th and 16th centuries, did not occur on the Maynard estate in the late 16th century, but there was no shortage of woodland then, situated in the parks and beside the site of Tilty Abbey.

To summarise, between the early 14th century and the late 16th century, considerable changes had taken place in tenurial practice with the ending of villeinage, consolidation of strips in the common fields, and the sub-division of demesne arable into smaller units for letting. There was some increase in woodland, often on the margins of closes. Nevertheless, these changes were relatively minor looked at in the overall pattern of the landscape, where boundaries defining land-use, ownership and administration were in the main those established before 1300, in many cases a long time before.

The map of 1594

This fine map, the work of Ralph Agas of Stoke-by-Nayland, was believed to have perished in the fire which ravaged Easton Lodge in 1918, but by a stroke of extraordinary good fortune it safely re-emerged in
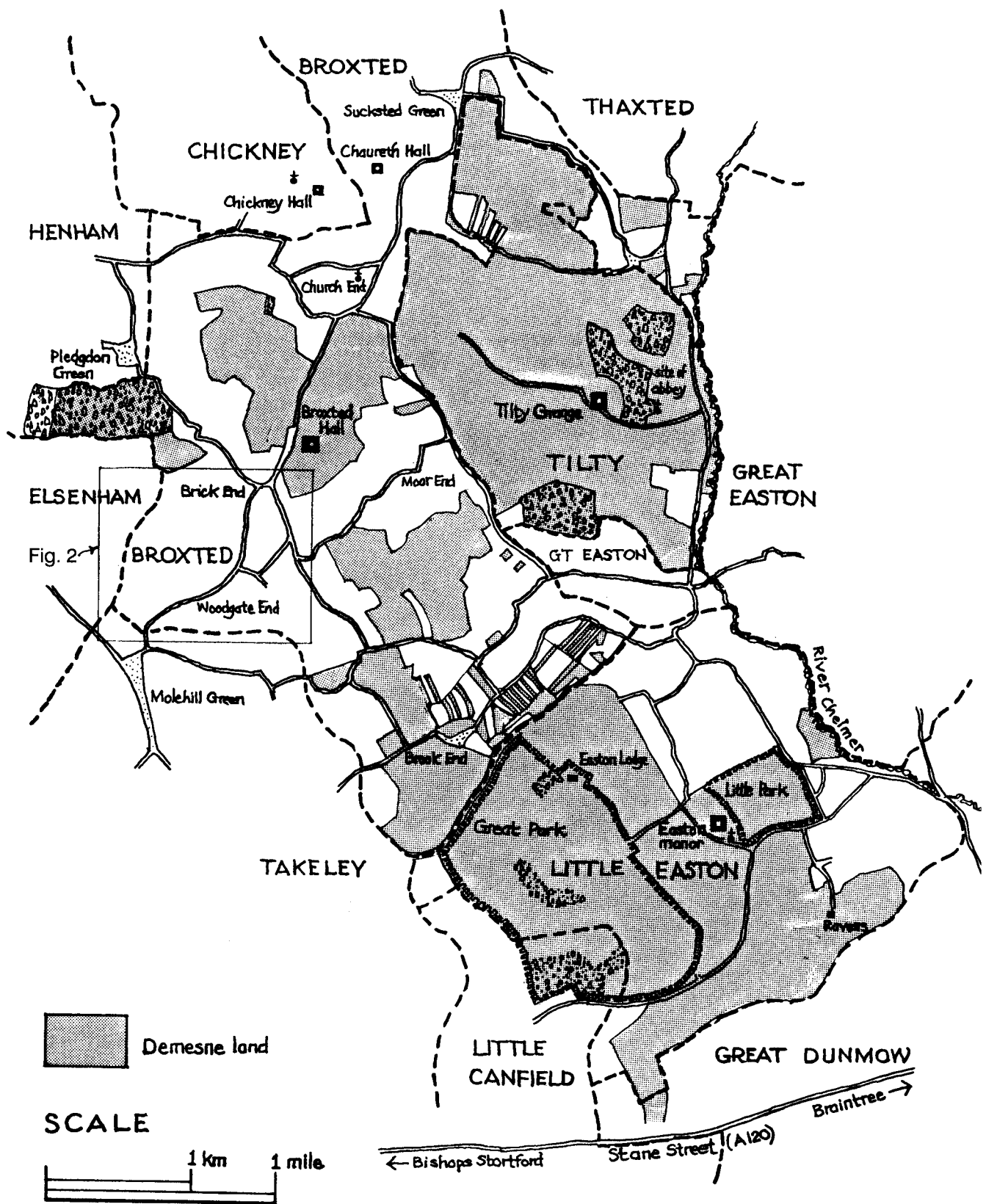
Fig. 1   Little Easton, Tilty and Broxted in 1594. The demesne land depicted on the 1594 map is shown shaded.

1997 from an Essex barn once owned by the Maynard estate. Except for some damage from damp over a small area covering the south-east corner of Little Easton, the condition is good. The red ink used for notations on the demesne land has survived very clearly; less clear but still legible, is the blue ink used for the lands held by the freeholders of the manor, but unfortunately the remaining notations, presumably for the copyholders' land, has mostly faded to illegibility.[10] Buildings are evident from the russet colouring of their roofs, but the small scale of the map precludes the detail we find on the Walker maps, and the blurring of the principal complexes is tantalising - points where inevitably index fingers would have rested when the map was in use.

The demesne lands of the three manors (Fig. 1) are shown with their fields now divided into smaller units and leased out as described above, but comparison with the demesnes of Cressing Temple and Walthambury suggest that their boundaries were substantially those of 1300.[11] The demesne covered nearly three-quarters of the parish of Little Easton which will be considered in detail below. That of Broxted Hall was smaller, covering slightly less than half of the manor and consisting of three compact blocks: the first, compact and focussed on the hall but lying mainly to the north towards Church End; the second, also compact, lying to the south of Moor End. The third block lay mostly in common fields to the south beside the sub-manor of Brookhall, in the hamlet of Brookhall Green or Little Broxted (now Brookend), and adjacent to the northern boundary of Little Easton. This suggests that Broxted Hall and its block is the late Saxon manor with the second block an early clearance of waste, while the Brookhall fields were a part of the final expansion to the boundaries, propelled as elsewhere by the rising population of the 13th and 14th centuries, a joint enterprise with the tenants who held tofts around the green and strips in the fields. Confirmation comes from Domesday Book which lists two Broxted manors worth £8 and £4 respectively. Morant considered the larger to have been Chaureth and the smaller Broxted Hall,[12] and it follows that Brookhall was a post-Conquest sub-manor, established as clearance proceeded southward.

At Broxted an accommodation between landlord and tenantry is evident in the settlement pattern and an 'organic', evolved character is apparent in its boundaries and field patterns. Tilty is very different: there are no hamlets and the demesne covered almost the whole of the manor with only a very small relic common-field on its northern boundary and a copyhold farm beside the main valley road. Otherwise, in the 13th century it appears to have been a centralized, planned estate, focussed on the abbey and grange curia and with its inhabitants directly employed and housed. It was an efficient

Fig. 2   Field pattern in 1594 at Brick End and Woodgate End, Broxted.

agribusiness, as one would expect of a Cistercian house. Agas' map shows the huge arable expanse lying in the southern half of the manor sub-divided with straight hedges, planted when the decision was taken by the monks to lease out, and also a complex of woods on the higher land beside and above the abbey and behind the grange – the landscape setting of the abbey mattered to the monks.

Turning back to Broxted, the dwellings of the tenantry are shown loosely grouped in five hamlets of which only Brookhall Green is named on the map; the others are roughly those later named Church, Brick, Woodgate and Moor Ends. Two further greens are shown in the parish of Broxted: Broxted Green beside the hall and Sucksted Green in the manor of Chaureth Hall. The small number of greens is significant, reflecting the low density of population. In manors where population pressure was high in the 12th and 13th centuries, the establishment of greens preserved areas for common grazing as the remaining waste was converted to arable.[13] In addition to the hamlets there are scattered crofts.

The map shows the process of enclosure of strips in the common-fields in many areas, notably beside Brookhall (i.e. Brook End) where it has barely begun (Fig. 1), and at Woodgate End where the process has been completed with all strips now consolidated into hedged closes (Fig. 2). There is no demesne land shown in this area of the manor, so the earlier clearance of woodland into common-fields and its

subsequent enclosure by the holders of the strips was probably undertaken with minimum interference from the manor provided that rents and customary taxes were paid. All hedges on the map are shown well stocked with trees, probably mostly pollards at this time as the underwood supplied the tenants' fuel. Timber trees were grown in the woodlands which the landlord retained in hand.

The relatively low population pressure in the 13th century, evident in the lack of common grazing areas, may relate to the position of Broxted and Little Easton on the margin of an area that was heavily wooded in the late 11th century according to the record of Domesday Book. The bizarre method in the Essex Domesday of measuring woodland in terms of grazing for pigs suggests that the three manors in the adjacent parish of Takeley could together graze 2,200 - one of the highest assessments in Essex. For Little Easton the figure is 800 - very high for its size - and Broxted 350, which must relate to the southern part of the parish. In Broxted the theoretical pigs were to give way to crofts and common-fields, in Little Easton to a deer park.

Little Easton in 1594

Fig. 3 is a conjectural plan of the parish in 1300 with the manor house and church sited on a spring line near the centre, and shown on the map of 1594 as still comprising a substantial complex of buildings. The tenants holdings lay on the well draining land between the demesne and the river, with their dwellings mostly scattered along the main road, then as now, in a loose type of ribbon development. The topography (Fig. 4) is dissected plateau, typical of the Essex Till, where early settlement favoured the lighter, free draining soils of the main valley and its rills, the flatter land of the higher contours being much less attractive for farming and in 1086 providing the woodland that could graze notional pigs. The subsequent development of the demesne farmland, establishment of the two parks and
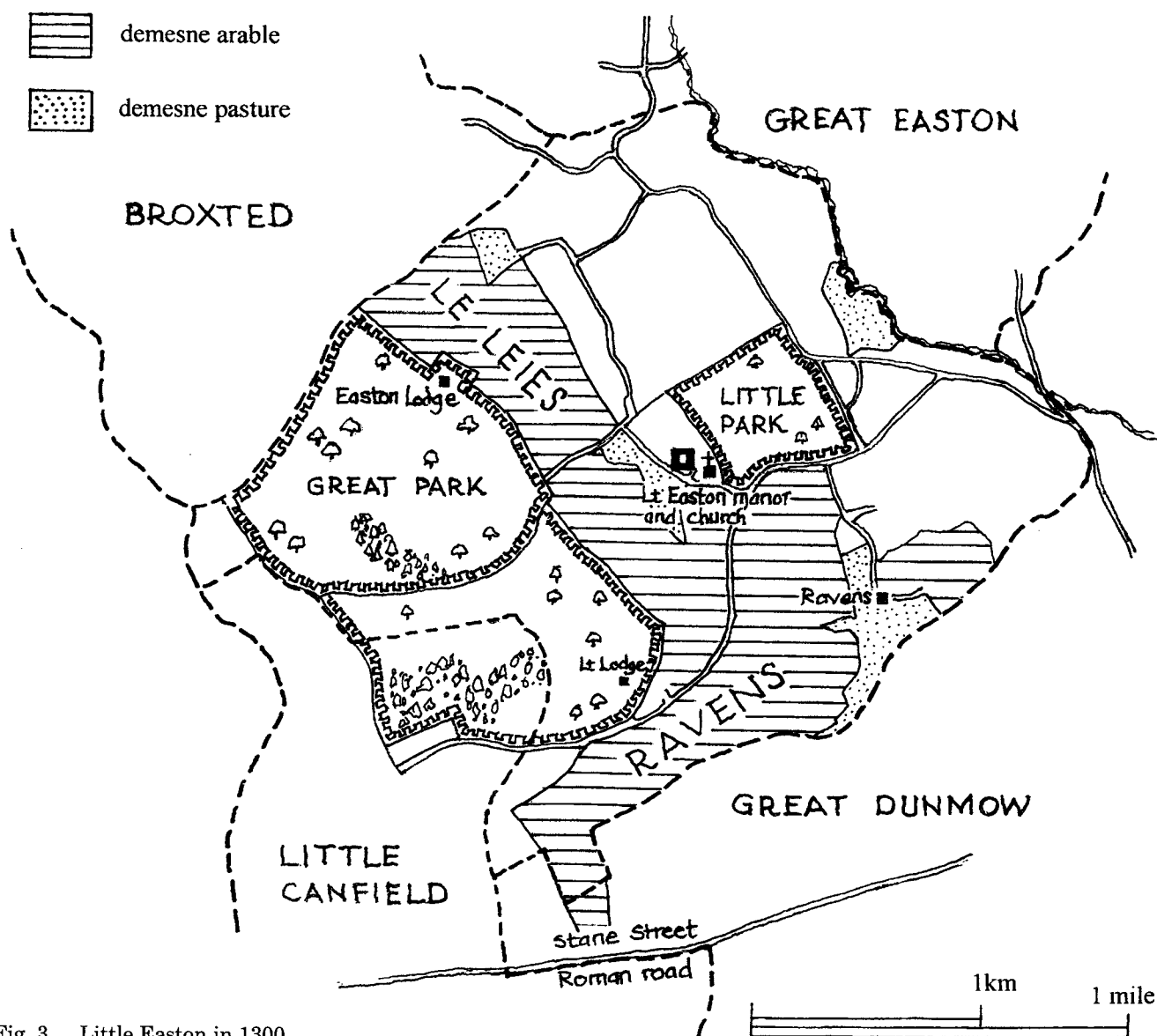

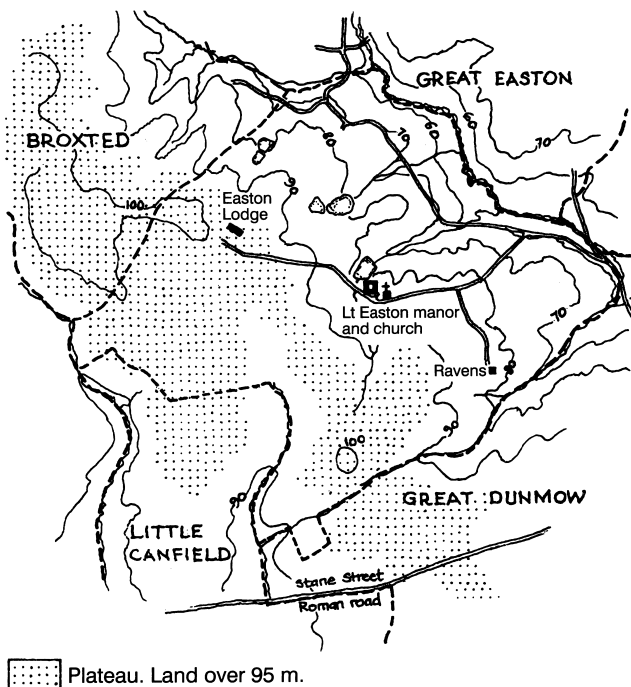Fig. 3   Little Easton in 1300.

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Fig. 4   Little Easton: topography.

expansion to the boundaries of the manor, are considered below.

Fig. 5 is a transcription of the map showing the field and parcel names in the demesne. On the original these are simplified as shown in this typical example which reads'Dominical pastura percel Parci vocat Herns quarter cont. 58-1-34 1/4 in firma.......', which translates as 'parcel of demesne pasture in the park called Herns quarter, comprising 58 acres, 1 rod and 34 perches and let to......'. It is shown on the transcription as just 'Herns quarter'.

We have noted earlier that the period of seigneurial high farming gave way to leasing in the course of the 14th century and the former fields were often divided up into much smaller units. A good example is Le Leies, formerly one field of 107 acres, now in 1594 divided into eight closes. Le Leies, together with all the demesne land lying north of the trackway running south-west to Little Canfield, would have been farmed from Little Easton Hall. This included the fields between the church and the park whose relatively large size - three over 20 acres - and distinctive names, such as Ladieallyfelde, Parkefelde, and Bushiefelde, suggest that no sub-division had taken place.

Ravens appears to have been the centre from which the rest of the demesne was farmed, much of it land that is still farmed from Ravens today. Unfortunately, the area of the farmstead on the map is faint and the writing illegible. Nearby lie three fields: Greate, Upper and Nether Ravens - clearly once one field of 63 acres. All the other fields, which include three Brickhills, three Stroudes and two Thistlies, are each described (after the field name) as

'percella Ravens'. So it seems likely that the Ravens sector of the manor consisted of a number of fields before the 14th century, which were mostly much larger than those shown in 1594, the largest being Le Leies. For convenience of management and variety of cropping, these were subsequently broken down into smaller areas. Some individual field names of 1593 are still in use: Holly oak, Safron and Bushfield. A large mead of 14 acres, Fulmedoe, lay beside the River Chelmer.

The Parks

In 1302 Matthew de Loveyn acquired a licence for two parks in Little Easton which, given its relatively late date, was almost certainly retrospective.[14] The waste and woodland which covered perhaps half of Essex at the time of Domesday Book had yielded to pressure from a fast growing population and was now farmland (as at Broxted), enclosed wood-pasture under the direct control of the manor (parkland), or intensively managed woodland, which would normally lie within the park on those manors which possessed one. Parks were prestigious, and to own two suggests high status for both the owner and the manor.

The Great Park appears to have been established in two phases. The first, comprised 245 acres, with its lodge - the site of the future mansion Easton Lodge - on a high point near the 100 metre contour. South of the lodge lay Le Launde, an open grassy area familiar in medieval parks. On the map it is shown sub-divided with half, beside the lodge, retained in hand, but with two smaller closes let out - Middle and Nether Launde. Three areas, all let, are described as 'quarters' - a term we encounter elsewhere in parks and royal forests from the early 14th century.[15]

At some stage the Park was extended southwards, enclosing a further 224 acres which included land in Little Canfield, and with the Little Lodge sited on the highest ground near the southern boundary. Three areas of woodland are shown retained in hand, but all other land is let.

As far as one can discern, for the map is faint at this point, Easton Lodge in 1594 was a house and much more substantial than the grandest park lodge, as for example, Queen Elizabeth's Hunting Lodge (actually Henry VIII's) in Epping Forest. The house appears to be a long building with two towers, fronted by a large court with corner buildings. Formal gardens lie behind, and to the north is what appears to be a large free-standing tower, perhaps not unlike the present water-tower as a landmark, although hardly approaching it in height. The later approach road to the mansion from Easton Manor had not then been built; a road (long gone) led directly into Le Launde and then passed, following no defined route, over the grass.

Fig. 5 Little Easton in 1594. The demesne is shown with shaded outline.
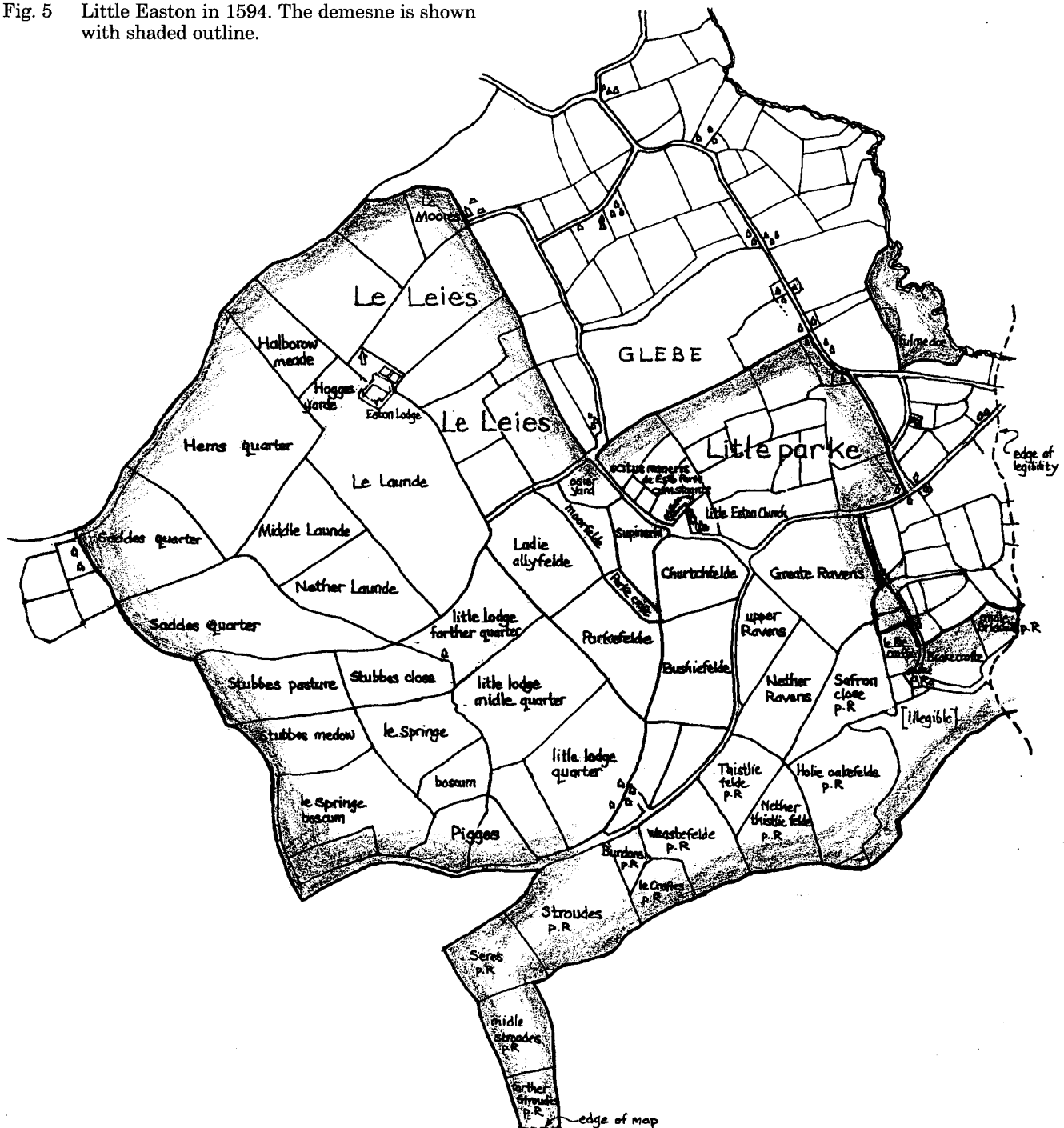
Henry Maynard built his fine mansion on the site in 1597, which lasted until a disastrous fire in 1847, and there seems a parallel here with Copped Hall, Epping, a park which had belonged to the abbots of Waltham, licensed in 1293. Sir Thomas Heneage built a new mansion between 1564 and 1567 on the site of a former house where Princess Mary had been held under house arrest, itself replacing the earlier lodge or standing.[16] Similarly, the map of 1594 clearly shows an earlier mansion at Easton Lodge, which probably dated to the early Tudor period and was itself predated by a great lodge.[17]

The Little Park (74 acres) lay directly below the manorial complex and its purpose, on prime land, must have been amenity - a pleasing setting on a rill leading down to the river Chelmer with pollard oaks, semi-tame fallow deer, and doubtless somewhere a pavilion or gloriette; I have argued that the Little Park at Thaxted fulfilled a similar role,[18] and so too the Little Parks of St. Osyth and Pleshey - the latter encircling the castle and town. An appreciation of landscape is evident in planned 'ornamental landscapes' surrounding palaces and seats such as Kenilworth and Bodiam,[19] and it would seem that

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ideas as well as fallow deer came from contacts with sophisticated eastern traditions in Sicily and Spain.

By 1594 the Little Park had been disparked and divided up into eight closes, mostly small, which are each referred to as parcels of the Little Park and not yet with the names which appear on the Tithe Map of 1839 when the former park had been forgotten. Without the map of 1594, the existence of the Little Park would have remained unknown.

Although evidence for its former existence might have survived in field names, the history of the Great Park could have been similar. Its survival and later extension and enhancement was due to its position as the setting for Easton Lodge, the seat of the Maynards and the centre of their estates. In the 16th century traditional parkland was seen as enhancing the status of a new mansion - examples in Essex being Leez Priory, Henham and Copped Hall - but in the case of Easton Lodge, although the park provided the ambience it was no longer empaled and its many quarters were let out with only the Launde and woodlands kept in hand, and the deer now presumably free range. Since the park was in abeyance it was not shown on John Norden's map of Essex in 1594, nor Henry Overton's of 1713, but it does appear on John Warburton's of 1726 and all maps thereafter.

Later history

So, at some point between 1713 and 1726, the former Easton Great Park became a functioning deer park once more, although the emphasis would now have tended more toward amenity and prestige than production. Avenues were in fashion and those shown in the engraving of 1756 must have been planted when the park was restored. As the century progressed the informal wood-pasture of medieval and Tudor parks, such as survived at Easton, became a dominating element of parkland landscapes as fashion swung away from the formal and geometrical.

Chapman and André's Map of Essex 1777 (Fig. 6) shows the park now enlarged, extending over Le Leies and the cluster of fields lying between Easton Manor and the former park pale. High Wood had been planted to the south, between the park and Stane Street (A120), and Sadds Wood adjoining the north-west corner. This is substantially the park surveyed a century later for the First Edition OS six inch map which shows it in great detail. The avenues have been thinned to disguise their formality, but the open vistas remain. The boundaries of the quarters have now gone and the woods are no longer enclosed, and overall the landscape is now one of wood-pasture, sometimes quite dense. Outside the

Plate 2   The site of the Little Park in January 2001. The pollard oak is likely to be a relic of the parkland wood-pasture.
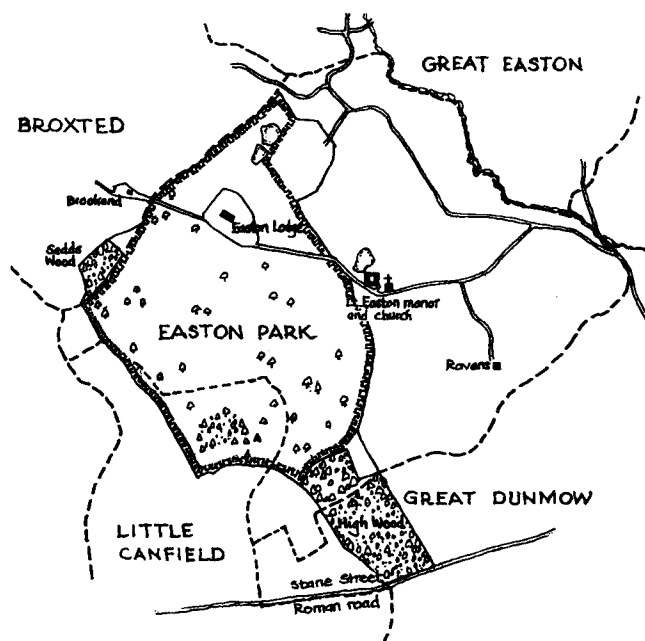
Fig. 6   Little Easton in 1777. From Chapman and André's Map of Essex.

park, the landscape farmed from Ravens has become considerably more open - the large fields with their boundaries much as they are today. The road which formerly linked the south of the park with Easton Manor has gone, its line preserved as a field boundary.

In Broxted, the OS map shows the hamlets with a similar scatter of buildings as in 1594, although not necessarily on the same sites, and purprestures of a later date have been established on highway land. Brookhall is now Brookend, and Moor End a farmstead. A lane and small hamlet south-west of Moor End had vanished.

Postscript

The Elizabethan mansion was rebuilt following a fire in 1847. Now only the west wing, Warwick House, remains, itself rebuilt after a fire in 1918. The rest of the mansion was demolished in 1950, like so many at that time unwanted and too costly to maintain. However, in 1993 restoration began of the extensive gardens designed for Lady Warwick by Harold Peto and laid out in 1902-3. In 2000 so much progress had been made that they were placed on the Register of Historic Parks and Gardens, and the work continues.

The destruction of most of Easton Park to make an airfield, while no doubt important for the war effort, must nevertheless be seen as the saddest loss to the historic environment of Essex during that conflict, indeed probably the worst loss since the grubbing of Hainault Forest in the mid 19th century. On the credit side, the area of the Little Park (Plate 2), crossed by several footpaths, remains an area of high amenity, and as already noted, the landscape of Ravens survives much as it was in 1875, with many

ancient field boundaries as well as the verdant character of the valley of the small brook which marks the southern boundary of the parish.

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Notes

1. In addition to the estates described or noted in this paper, later Maynards acquired Broadoaks (Wimbish), Yardley Hall (Thaxted) and the considerable Ashdon Estate, amounting in all to some 12,000 acres in Essex in Lady Warwick's time. She also had extensive holdings in other counties.

2. The magnificent deed of grant is preserved in the Essex Record Office (ERO) D/DMg T45.

3. P. Morant, 1768, *The History and Antiquities of the County of Essex*, vol II, 431 and 448. Morant's *Brokehall* is spelt *Brookehaule* by Agas. Brookhall is used in this paper for the medieval and Tudor periods. It is Brookend today.

4. ERO Acc. A9980, D/DMg P25.

5. Morant, 434 and 463.

6. Ibid. 462.

7. J.M. Hunter, 1999, *The Essex Landscape: a Study of its Form and History*, Chelmsford: Essex Record Office, 91 and 137.

8. Ibid. 130 and 150.

9. Here large common-fields remained the rule on the better land until late enclosure by act of parliament. Hunter 1999, 162.

10. Freeholders were required to attend the court and were subject to certain manorial perquisites such as payments at a death. Copyholders were the successors of the villeins and other categories of tenant, formerly unfree.

11. Hunter 1999, 116.

12. Morant, 448.

13. Hunter 1999, 99 and 104.

14. Calendar of Inquisitions post Mortem, IV, 62.

15. O. Rackham, 1989, *The Last Forest*, London: Dent, 12 and 92. It is suggested that the quarters in Hatfield Forest may have been defined during the tenancy of the De Bohuns who had divided their park at Walden into 17 quarters.

16. Hunter 1999, 145.

17. The earlier mansion, pulled down by Sir Henry Maynard, would have been built by the Bourchiers who held Little Easton (together with Broxted and other Essex manors) from 1365 until the death of William Bourchier in 1540. See F. Spurrier, 1999, *Estaines Parva - A history of Little Easton*, Five Parishes Publication.

18. Hunter 1999, 113.

19. C. Taylor, 2000, Medieval Ornamental Landscapes, *Landscapes*, **1.**

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The precinct and buildings of Tilty Abbey[1]

by Jackie Hall and David Strachan

Not famous for a chronicle, for beautiful and extensive remains, or for wealth and power, Tilty Abbey remains one of the lesser known Cistercian houses in England. The rediscovery of a sixteenth century estate map by Ralph Agas, however, and recent high quality aerial photographic work (ERO 1997 and Strachan 1997), suggest that a reconsideration of the abbey buildings, of its precinct and of the modest excavations of 1901 and 1942 are timely (Galpin 1926 and Steer 1949; Fig. 1). In particular, the map reveals much about the layout of the precinct along with information regarding the disposition and scale of some of the buildings within it, notably the gatehouses and the guesthouse. Complementary to this, the parchmarks visible on the aerial photograph are of the claustral nucleus and related buildings and add significantly to our knowledge of the infirmary, the guesthouse and the north and west ranges of the cloister.

Brief history

The documentary history of Tilty Abbey has been told elsewhere, principally by Morant, in the Victoria County History, by Galpin, and summarised by Fergusson and by Robinson (Fergusson 1984, 151; Galpin 1926; Morant 1768; Robinson 1998, 185-6). Later documents, including leases and suppression inventories, have been looked at by Waller and Fowler (Fowler 1906, 1909; Waller 1902-1903). It is only necessary here to recapitulate that history as far as it concerns the abbey's buildings and precinct. Much of it can no longer be verified, following the destruction of many documents in a fire in 1918 (Steer 1949, 169).

Founded in 1153, as a daughter of Warden, Tilty was the third and last Cistercian house to be established in Essex (after Stratford Langthorne and Coggeshall). Although work on the abbey is not recorded until thirty-five years after its foundation, this must refer to the replacement of temporary buildings, since the early statutes of the order specify the erection of certain essential buildings prior to the arrival of any monks (an oratory, a refectory, a dormitory, a guest-house and a gatekeeper's cell - Coldstream 1998, 38; Norton

1986, 318). The earliest buildings may have been in wood, and may not have resembled a conventional church and cloister (witness Meaux abbey - see Halsey 1986 and Fergusson 1984, 24-5). The date of rebuilding is confirmed by Ralph of Coggeshall, who credited Abbot Simon (c.1188-1214) with building the whole monastery, transforming what had been little more than a grange into a beautiful and prosperous abbey 'in which religious zeal and secular prudence rivalled one another'. It was also Ralph who reported the despoiling of the church in 1215 by part of King John's army (Stevenson 1875, 169, 177). The church was not consecrated for another five years, when the event was marked by a number of gifts. It is possible that by 1214 only the eastern half of the church was complete, or that since that time some other addition was made, such as the galilee or a crossing tower, which made a new dedication desirable.

From this point there are no records concerning the buildings of Tilty until the leasing of the guest house in 1529 for 13 years to Thomas Grey, Marquis of Dorset (a favourite of Henry VIII and grandfather to Lady Jane; DNB vol. 8, 645-7). In a subsequent agreement it was described as 'the house over against the church called the Guest Hall, with Green's house, Byard's chamber, with the new lodging made by the same marquis, and the buttery, pantry, cellars, parlours and kitchen, the garden, orchard and cook's garden' (for this and the following see Waller 1903). The Marquess and Marchioness of Dorset clearly lived at Tilty prior to 1529, since the lease included 'all the other houses which they were accustomed to use'. Their earliest connection with the abbey is not recorded but Lady Margaret, now widow of Thomas Grey, continued to lease the house after the dissolution and in a 1538 confirmation of that lease it is described as 'the house standing against the west end of the church of the said monastery, of old time called the Founder's house, otherwise called the Gests hall, and all others, as well those newly builded as the old, and all other rooms within the said Gestes hall, the gardens' etc.

Two dissolution inventories survive, one complete and one incomplete (dated March and June 1536 respectively, see Fowler 1904-1906). They are
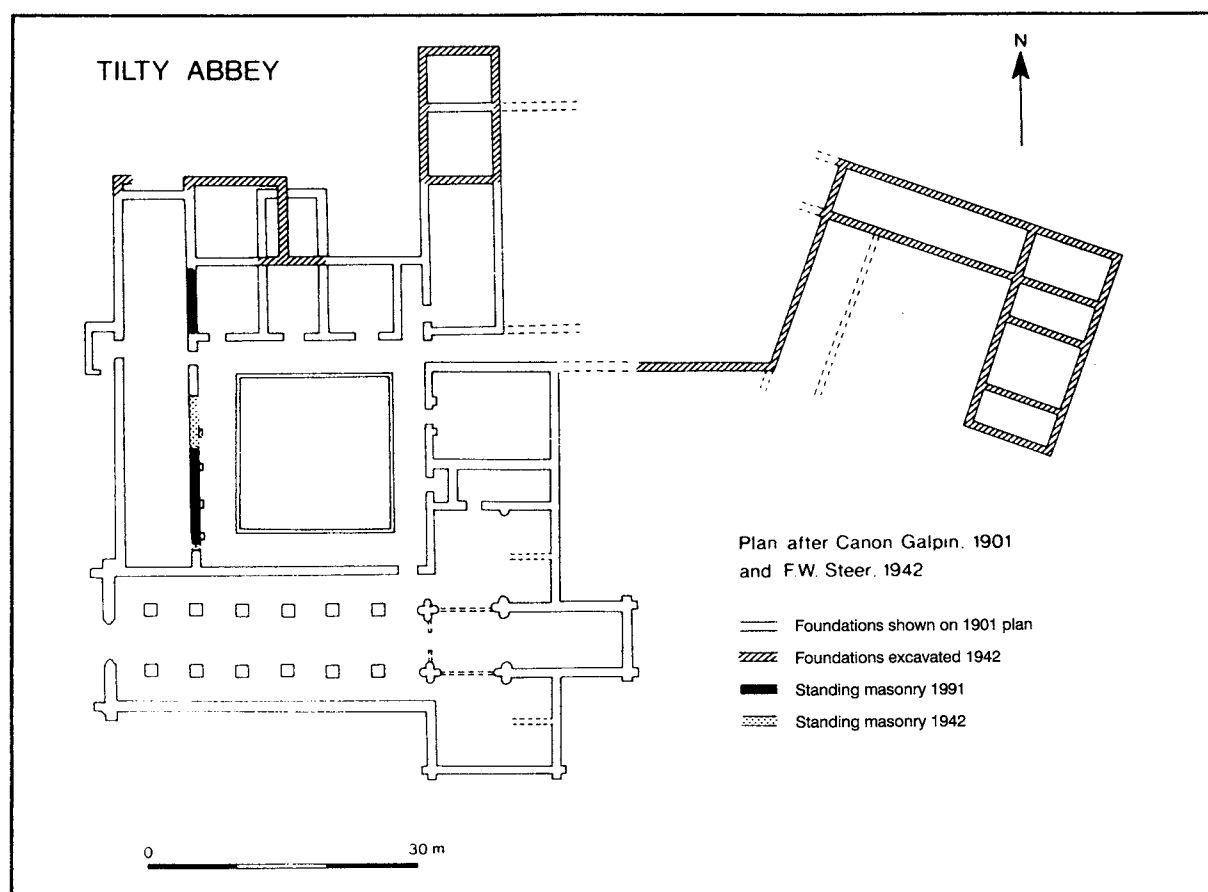
Fig. 1   Tilty Abbey, Steer's excavation plan.

concerned primarily with moveable objects but these are listed by the room or building in which they are housed. The earlier inventory mentions the vestry, the parlour, the buttery, the cellar, the kitchen, the abbot's dining chamber, the abbot's bedchamber, the guest chamber, the servant's chamber, the brewhouse, the church and the larder. The later inventory lists objects in the kitchen, the abbot's dining chamber, the guest chamber, the servant's chamber, the brewhouse, the church, the larder and the cellar. Although is easy to read too much into the inventories, it is nevertheless tempting to assume that the order of rooms follows some sort of topographical pattern and that the abbot's lodging, with its dining chamber, bedchamber, and probably its guest chamber and servant's chamber was close to the kitchen and cellar (the undercroft of the west range) on the one hand, and the brewhouse on the other. This points to a location west of the cloister, and it was perhaps associated with the guest house since, in the 1529 lease, there is a clause that the marquis should be responsible for the repairs, except when the abbot used the house. Many important rooms and buildings are not mentioned, for instance the chapter house, refectory and infirmary, either due to oversight or a lack of saleable objects within them. If the latter, then this may suggest a degree of disuse of these parts prior to the dissolution, because of the small numbers of monks (seven at the dissolution) or a breakdown in communal life. Morant (1768, 436) suggests that a belfry was included in this grant, although it is not clear whether it belonged to the church or the chapel. In the 1542 grant of the abbey possessions to Sir Thomas Audeley, the mansion is again called 'Le Founders Lodging and the Gest Hall', and the grant also included the rectory and chapel of Tilty (VCH, 136; L. & P. Henry VIII, vol. 17, 164).

After the dissolution, there are very few references to the buildings and lands of Tilty, although the guest-house may have been standing as late as the eighteenth century. The most important document is the estate map made in 1594 by Ralph Agas.

The estate map

Ralph Agas is the author of the first known English scaled estate map in 1575, of West Lexham, Norfolk (Harvey 1993, 80-1). The map of Tilty (ERO A9980; Plate 1) thus belongs to the first generation of accurate map-making. It was made for Henry Maynard a few years after he took possession of the manor of Tilty (Morant 1768, 436).

The map covers a wide area, of Tilty and lands to the south and west of Tilty, and was more than three feet square. Typical of maps of the time, it had

pictures superimposed upon it, so that it is possible to make out some detail concerning the buildings. They were, however, painted at a small scale - ten inches to the mile or 1:6336 (contra Galpin 1926, 92n, who thought it was 1:25344 or 32 chains to an inch). Similar estate maps in the Essex Record Office are most commonly at 20 inches to the mile (Emmison 1947), while Agas' similar map of Toddington, Bedfordshire, made in 1581, is at an astonishing 40 inches to the mile (Harvey 1993, 89). Like the latter though, on the Tilty estate map Agas wrote on each piece of land its name, to whom it was rented and the area contained in acres, roods and perches. The text is in a typical mixture of English and Latin. Around the outside, this and other information is contained in tables, so that the map could completely replace the survey or terrier as a record of land holdings.

The focus of this paper, however, is not patterns of Tudor land-management in Essex but Tilty Abbey itself. Although Agas drew a picture of it nearly sixty years after the dissolution, the map contains considerable information regarding the monastic layout of the precinct and, to a lesser extent, the claustral nucleus. This is something that Galpin realised in his 1926 article, and he drew on the map fairly freely. At this point it was preserved in the Warwick estate office (Galpin, 1926, 92n), the Greville Earls of Warwick having acquired the Maynard estates by marriage, but by 1949 it had disappeared leading Steer (1949, 169) to believe it had been destroyed in the 1918 fire at Easton Lodge. It was rediscovered in 1997 in an Essex barn once owned by a branch of the Greville family with one edge seriously damaged by damp (ERO 1997) and it is now deposited in the Essex Record Office (ERO D/DMg P25). This allows for a reinterpretation of the evidence, and also an examination of the whole precinct, rather than concentrating on the area around the church. The Tilty suppression documents and estate map cannot compete with the detailed picture of a Cistercian abbey and precinct at the dissolution available for Rievaulx (Coppack 1986; Fergusson and Harrison 1999, 177-86). However, given what is known about Tilty, the map is an invaluable record of a little known site.

Interpretation of the map: precinct and buildings[2]

The area of the precinct (Plate 1) occupies only a tiny portion of the map (c.60cm²), yet it is still shown in some detail. The outer gatehouse can be located c.180m south of the main abbey buildings. The boundary of the precinct is marked with a series of different conventions by Agas. East of the gatehouse the perimeter is shown almost solid but with many vertical lines, representing either a wall or substantial fence. This is clearly visible along the Broxted road as far as the Thaxted road, which the

wall can be seen skirting for c.130m northwards, where it follows the line of a stream. A stone wall might be unusual in stone-poor Essex, but it is nevertheless possible that portions of the pale, especially close to important gateways, were in stone. Northwards, adjacent to the fishponds (the five parallel north-south channels, linked on their north side, and partially on their south side), the boundary appears as a series of spaced vertical posts joined by a thin line. This convention probably represents a paling or possibly a line of pollarded trees and the boundary continues in this fashion as far north as the gate in the road. This is further north than Steer believed, as he had the precinct stopping at the stream, which now runs south of the fishponds. From the gate in the road, the boundary, now represented in the same more solid way as the southern fence or wall, turns west for the space of two fields, at the junction of which it is interrupted by a second gate into the precinct. West of the gate, the boundary is represented differently again - still in a fairly solid manner, but without the vertical lines. From the north-west corner of this field, it dives south until it reaches the banks of the Mill Stream at what appears to be a small tower with a gate to the north of it. On this stretch, close to the stream it is labelled *walle*, and it may be this feature, interpreted as 'well', that was responsible for the belief of both Galpin and Steer, that there was a well in the woods west of the abbey, from which the monks drew their water supply (Galpin 1926, 93; Steer 1949, 175). Although the monks are likely to have drawn their drinking water from a well, as opposed to the stream that washed their drains, there is no evidence for this on the map.

The western boundary of the precinct cannot be traced south of the stream, although it must have rejoined the Broxted road to the south, where it appears to be marked by spaced green bushes, no doubt a hedge, leading back to the outer gatehouse. The boundary remains cannot now be traced, although much of its suggested route, especially on the east and north sides, is marked by ditches or streams. Ditches were commonly used as abbey boundaries, alongside or instead of walls, particularly in low-lying areas, for instance at Kirkstead Abbey and Stratford Langthorne Abbey. Although not clearly shown by Agas, this may also have been the case at Tilty.

If this interpretation of the map is correct then the precinct at Tilty covered an area of roughly 60 acres. Alternatively, the precinct might have occupied only the eastern half of this area, with the boundary running more directly from the north gate to the outer gate in the south, but skirting the chapel and orchard to the west. There are clearly enclosures here but this would be the case even within a larger precinct. Given the clear boundary to the north-west, it is even possible that the initial

intention was to enclose a large area but that this was later reduced to a much smaller area (cf. Croxden Abbey, founded in 1179, not walled in stone until 1268 and then only half was done; it was completed in 1274-1284; see Lynam 1911, appendix).

If the precinct was the larger area, Tilty would not be unusual amongst Cistercian houses: Jervaulx's precinct was c.68.5 acres; Waverley's 60 acres; Bordesley's 89 acres. Small precincts are almost as common: Stanley had 28 acres; Sawley 40 acres and Boxley only 17 acres (Robinson 1998, passim). Precinct size, however, is absolutely not an equivalent of wealth. The modest Croxden abbey in Staffordshire, with a revenue of only £90 in 1535, had a precinct of 70 acres, while Kirkstead, in Lincolnshire (£286 in 1535) had a precinct of only 21 acres (Knowles and Hadcock 1971, 112-113; Lynam 1911, 2; RCHME 1994, 1). Apart from the Cistercian insistence on seclusion in rural areas, leading to large precincts, size was dependent upon the original endowment and the topographical conditions. The contents and spatial arrangements of precincts were not fixed. Pastures, orchards and ponds might be within one precinct but ouside another. Aside from the church and other conventual buildings, other facilities were also typically found within. Guest-

houses and associated kitchens and latrines were always found inside, in the inner or great court, while the outer court usually contained a number of industrial or semi-industrial complexes, including a bakehouse and brewhouse, a woolhouse, tannery and even mills and forges (Astill 1993; Coppack 1993, 89-97). Cistercian precincts also typically contained a high proportion of agricultural land.

It is to the layout and structures of the precinct at Tilty that we now turn. Unusually at Tilty, the main entrance lay south of the claustral complex. The preferred entrance to a Cistercian abbey lay west of the church, unless there were serious topographical or other reasons why this should not be the case, as for instance at Furness. What these reasons may have been at Tilty is not clear. The outer gatehouse on Agas' map is shown as a building of three parts. The central part is of two stories with the upper in the roof in the gable above the broad arch through which carts and other traffic would have passed. This block appears to have a chimney on its eastern side, and east of this a smaller and lower roofed block. On the west side another small adjoining block is shown, either flat-roofed or already beginning to suffer after the dissolution. This gatehouse may have looked like the one still
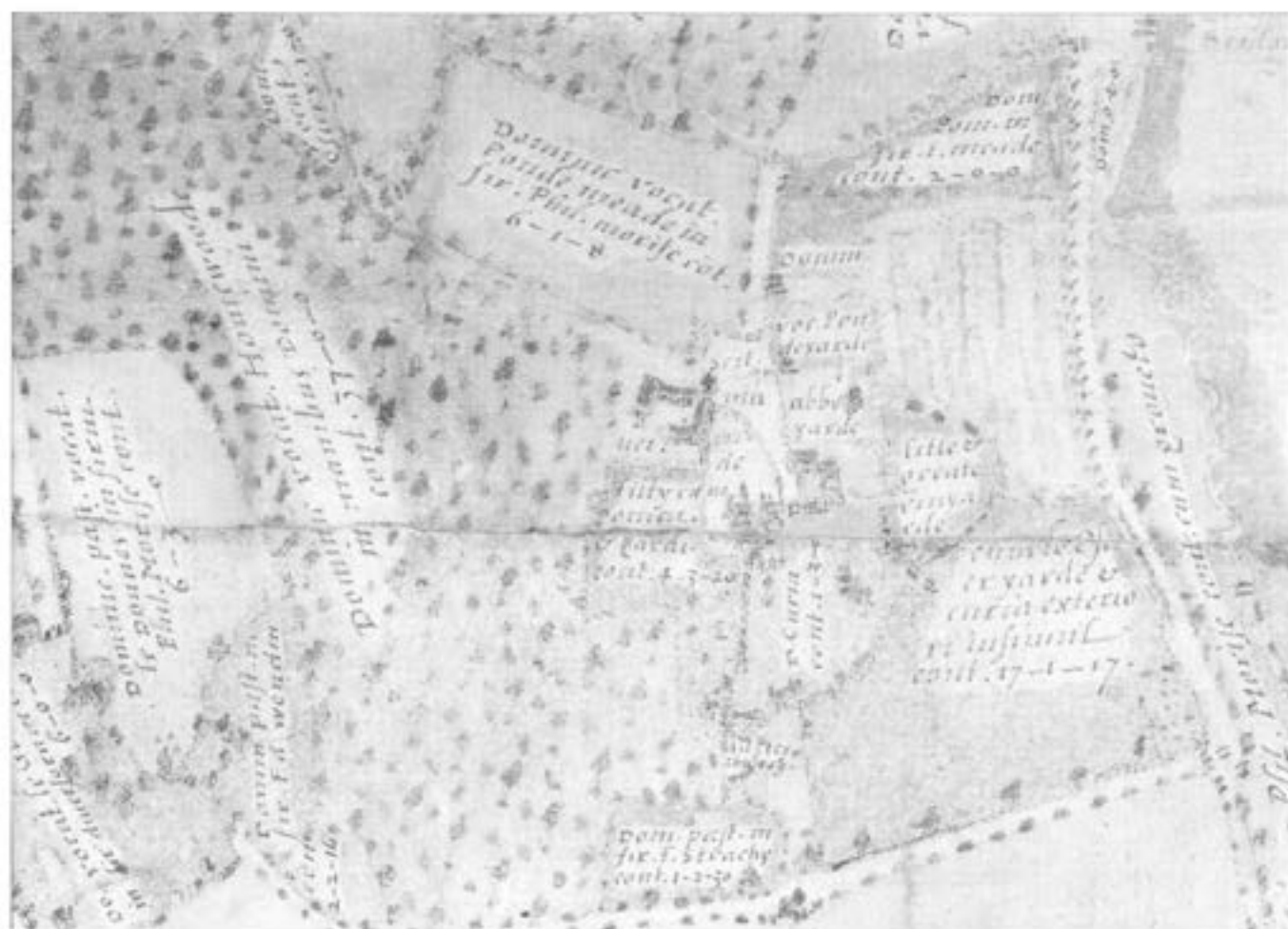

Plate 1. Detail of Tilty Abbey precinct from the Agas map of 1594 (reproduced by courtesy of Essex Record Office).

surviving at Beaulieu, Hampshire, or the gatehouse of Premonstratensian Tupholm abbey, Lincolnshire, illustrated by Stukeley (Hope and Brakspear 1906, plate II; Stukeley 1776 (1969), plate 28). Although this building could easily have housed a porter and adequately controlled access to the outer court and great gates, it was still relatively low-key when compared with the great gatehouse.

Once inside the outer gatehouse, a visitor to Tilty arrived in a small yard leading directly to the inner or great gatehouse. On the right, fenced off, was the outer court, in 1594 still labelled as the *curia exteriori,* along with the osier yard (the previous word is obscured by the join of two pieces of parchment). With the exception of some buildings on the north-west edge of the court, by 1594 it appears to have been entirely given over to pasture, whatever uses it may have had earlier. Although early inner gatehouses controlled access to both the inner and outer courts (Fergusson 1990), judging from Agas' map this does not seem to have been the case at Tilty. Access to the outer court was probably controlled by the outer gatehouse and access to the inner court was certainly controlled by the great gatehouse. It is, unfortunately, impossible to guess the dates of either gatehouse.

In the yard between the two gatehouses, just to the south-west of the inner gate, the gatehouse chapel stood, as indeed it still stands, since it has served as the parish church since the dissolution. Architecturally it dates from *c.*1220, at which point it was a single-celled building, until the magnificent chancel was added in the early fourteenth century (RCHME 1916, 320-1). Oddly, Agas shows the chapel with a western tower and spire, which it manifestly does not have. This may, however, have been representative of a fairly substantial bell-cote, such as exists today, perhaps with a small wooden spire on top. The chapel itself was probably used by the servants of the abbey, and also by skilled workers brought in for particular projects, such as the masons and carpenters needed for building campaigns subsequent to the church. It may also have been used for chantries and pilgrimage as at other gatehouse chapels (perhaps prompting the building of the chancel, see Hall 2001).

The inner gatehouse is shown by Agas to be three stories high, including the roof space, with several chimneys, and a large arch on the west side. The second gable on the east side suggests some fairly spacious and permanent accommodation for the porter, perhaps a sign that it was built after the move away from communal living and towards individual apartments for the monks and their servants.

Within the great gates the field is labelled D.[*omini*] *curia,* the Lord's court, a name which suggests some continuity of function from the monastic period to the post-dissolution period, since

this must have been the inner court of the abbey. Except for a pond, which still exists, it is shown as empty in 1594, but with several buildings on its outer edges. These may have provided stables or housing for servants or corrodians if the buildings are pre-dissolution. At the north-west corner of the court, a massive building complex lies, with a yard at its south and numerous roofs, chimneys and even a tower. This can be interpreted as the guest house 'over against the church' leased out in 1529, newly built and perhaps added to subsequently by the Marquis of Dorset or his widow, and for which some parchmarks remain (see below).

North-east of this complex lies a small yard surrounded on three sides by walls or buildings. The scale and location of this yard suggest that it is the remains of the monastic cloister (Galpin believed it to be the yard west of the west range - although both interpretations are possible, only one is set out here; see Fig. 2). On the south side only a wall remained, with a door in it, and this must be the remains of the north wall of the church. The door may be the west door into the cloister or a new door to fit with the post-dissolution arrangements. The east range in 1594 appeared to be complete from the vestry to the junction with the north range, and the central part of the north range also survived (the refectory, which also shows very well on aerial photographs - see below). On the west side, part of a wall remains, and this may mark the east wall of the west range, which is still extant (Andrews and Gilman 1992). Veering north-west of this a fence is shown heading off to another yard surrounded by buildings. These are likely to be either agricultural, or the stables of the manor since at the time of the first lease, the marquis was to have stabling for 20 horses (Galpin 1926, 93). The northern projection, at least, of this building complex north-west of the cloister is likely to have been the mill since it straddles the stream and is labelled *mell*. The mill race is still raised on a substantial dyke, clearly kept in recent repair, and it leads to an almost intact mill building complete with nineteenth century machinery.

Agas labelled the whole of the central area, together with an enclosed garden to the west, as 'Site of the manor of Tilty with orchard and gardens' (*Scit. maner. de Tilty cum pomar. & garde.*). He further described it in the marginal text with the words 'The scite of Tiltey is well built adjoininge to the place where sometime stood the abbie and near unto the church impropriate to the same maner' (Galpin 1926, 92n). The western side of the garden is marked today with a massive earthwork, substantial enough indeed to mark a precinct wall. Alternatively, if the precinct was the larger area suggested, an inner boundary, such as this, would have separated the inner precinct, sanctuary of the monks, from the outer court, sphere of lay-brothers, secular servants and tenants and from agricultural or, as in this case,
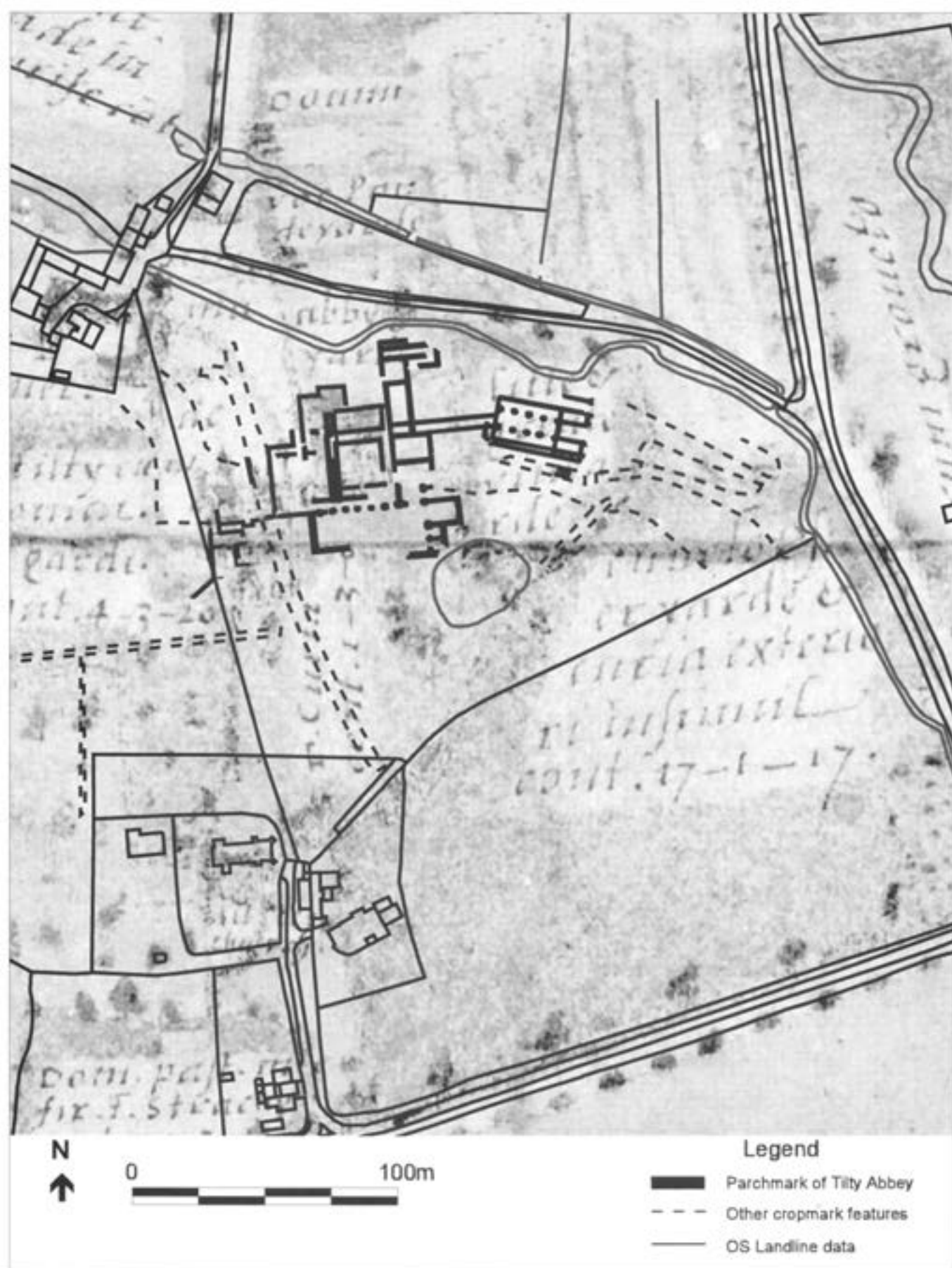
Fig. 2   Tilty Abbey, plan of claustral area drawn from 1996 aerial photograph and overlain on the 1594 Agas map. A perfect match with the estate map is now impossible on account of the warping of the parchment. The modern OS data is also shown. (© Crown copyright Ordnance Survey. All rights reserved MC1000148001)

wooded areas. The gardens on the west may have once been part of the inner court discussed above. The *abby yarde* also formed part of the inner precinct, while the *little and great vinyarde* east of the cloister appears to be outside the central area and is an interesting example of wine-growing in this region. The infirmary is not shown on Agas' map and, since it is also notably absent from the inventories, was probably not in use at the dissolution - a fact further suggested by its location within the later vineyard, as suggested by Fig. 2.

North-east of the vineyard, in the outer precinct, lie the five-pronged fishponds running *c.*185m north-south. They occupy approximately 4.8 acres and are similar in form and size to those of Kirkstead, which lay outside its small precinct. It is clear by comparing the ponds marked on the Agas map with the surviving earthworks, that only a small part of the overall complex survives.

Immediately north of the ponds a small orchard (*pom.[arium]*) lay in the north-east corner of the precinct. The western half of the proposed larger precinct is wooded, with the exception of a six acre meadow in the north and small pasture next to the outer gatehouse in the south. Woods frequently formed an important part of monastic resources.

The timber could be sold or used for building, but more frequently it was coppiced and burnt for charcoal - the Croxden chronicle contains several references to wood being burnt, along with the sum gained from this activity (Lynam 1911, i-xiii).

Ralph Agas' estate map is a remarkable document, witness to both continuity and discontinuity in the 50 years or so following the dissolution. Although arguably more accurate maps have been made, there are no others showing more detail of Tilty abbey and the surrounding area. Only the excavations, parchmarks and earthworks around the claustral nucleus reveal more physical information about the abbey. The excavations by Galpin and subsequently by Steer revealed the basic layout of the cloister, and in the latter case an outline of the infirmary probably based on parchmarks. A particularly fine aerial photograph, taken in 1996, however, as well as enormous advances in Cistercian studies since 1949, allow for a new interpretation of these features, and it is to this that we now turn.

Aerial Photographs

The monastic complex at Tilty is situated in a meadow of rough pasture, and in warm, dry

Fig. 3   Tilty Abbey, plan drawn from parchmarks seen on the computer rectified 1996 aerial photograph.

Plate 2   Tilty Abbey as revealed in the 1996 aerial photograph (photo D. Strachan. © Essex County Council).

summers, the plan of the site is often revealed, to varying degrees, by parching. Parching was unintentionally first recorded by the RAF National Survey in 1946 and again in 1948, with around half of the known plan of the site being visible on the former series of photographs. The first intentional aerial photographic recording of the site was carried out by Cambridge University in June 1949 (CQ 92-5), when only the outline of the cloister garth was visible. While a fuller plan of this area was recorded in the following month (EP 102-8), it was not until June 1956 that CUCAP recorded more of the complex, including the outline of the abbey church (SR 29-33). Continued interest in the site was rewarded in July 1959, when the infirmary buildings were first recorded (AAM 96-9), and again in August 1975 when very good conditions resulted in much increased detail, such as buttress features and internal divisions. The site was recorded using both oblique (BVU 55-61) and vertical photography (K17-AK-241-242) at this time. The site was once more recorded, this time by Essex County Council in 1990, with the resulting photography being used to produce a computer-rectified plan of the site (Andrews and Gilman 1992). However, much of the site was covered by vegetation at this time, masking much of the detail. Further reconnaissance in 1996 (Strachan 1997, Plate 2) produced low level, high-

resolution images of the site in ideal conditions for parching.

The 1996 images were computer-rectified and imported into GIS for study along with various other data-sets, including the Chapman and André map and the recently rediscovered Agas map. The resulting plan (Fig. 3) accurately shows much of the complex in detail, and is discussed below with reference to excavation plans produced by Galpin (1926) and Steer (1949), while Fig. 2 suggests how the plan may relate to the Agas map.

Interpretation of the parchmarks: the buildings

The church

The parchmarks confirm Galpin's and Steer's plans of the church, with a seven-bay aisled nave, an unaisled square-ended choir and transepts each with two identical square-ended chapels. This is the 'Bernardine plan', associated with the early (1130s onwards) architecture of the Cistercians since the 1950s. However, it has become clear that this plan continued to be used in Cistercian churches in the late twelfth century and into the thirteenth century, as must have been the case at Tilty. This is both because it met Cistercian needs and perhaps because

of a deliberate emulation of earlier ideas, rather than a sign of conservatism (Coldstream 1998, 50; Morris forthcoming; Robinson 1998, gazetteer; Stalley 1987, chap. 3). The galilee found by excavation is not visible in the parchmarks, but crossing piers are, implying the presence of a low crossing tower, a typical feature of thirteenth century Cistercian churches.

The east range
The central feature of the east range is the chapter house, which shows particularly clearly on the aerial photograph and appears as on Galpin's and Steer's plans, although the pier bases can barely be discerned. South of the chapter house no clear structures are visible until the division between the north transept chapels. North of the chapter house the parlour and dormitory undercroft are clearly visible with the dormitory undercroft divided at around two-thirds of its length. North of the undercroft the latrine block can be seen, aligned east-west, with the drain on its north side. The sub-division in the dormitory undercroft could equally suggest an extension to the east range at a time of expansion, in which case the southern section might represent one of the earliest abbey buildings, prior to the rebuilding of c.1188-1214, or a contraction or division of the building, perhaps into separate residences late in the life of the abbey.

The north range
The parchmarks strongly suggest that, with the exception of the day-stairs next to the dormitory, the north range was a single undivided space, lying parallel to the cloister (as also suggested on the 1594 map). This is contrary to the interpretation of both Galpin and Steer who both show a north-south refectory flanked by a kitchen on one side and a warming house on the other. Steer's plan, however, seems to suggest that he could not locate the northern half of the refectory nor its western wall which would result in a two-part division of the north range into a refectory, parallel to the cloister, and a warming house. Galpin's and Steer's interpretation of the refectory with a north-south axis is clearly based on conventional Cistercian plans, which from the 1160s onwards favoured north-south axial refectories. Prior to this, refectories were contained within the south range (or north range when the cloister lay north of the church, as at Tilty), with the kitchen and sometimes the warming house outside the cloister. The change may have been specifically to bring these structures within the cloister and allow for a closer following of the rule whereby monks did not leave the cloister (Fergusson 1986). Given the supposed date of building Tilty Abbey (1188-1214), it should have a north-south refectory, but a number of later refectories were built in the old way, as may have

been the case at Tilty (Fergusson 1986, 168). The walls that show faintly north of the range (and which also appear on Steer's plan) may represent part of the kitchen.

The west range and lay brother's cloister
As well as the extant section of the east wall of the west range, the aerial photograph shows a substantial range stretching northwards, well beyond the line of the north range. In a Cistercian cloister west ranges were primarily for the accommodation of lay-brothers with the dormitory on first floor and refectory (and cellarage) on the ground floor. The generous size of the west range at Tilty suggests that there was no shortage of lay vocations in Essex at the time of its building. By the later twelfth century the separation of lay brothers and choir monks became more marked (for a useful discussion see Fergusson and Harrison 1999, 56-57) and this found expression in their architecture with some houses (for instance Byland and Kirkstall) building a second west cloister alley, completely blocked off from the main cloister and with access to the church. A more common solution was to build a separate yard or cloister for the lay-brothers on the west side of the west range and this is what the parchmarks indicate at Tilty (although Galpin (1926, 91) considered the south wall to be a late feature). This yard came as far south as the north arcade of the church, showing that the lay-brothers had direct access from the west range to the church through the north aisle door.

The infirmary
The infirmary buildings to the east of the main complex appear in great detail on the parchmark plot, and much additional information about the lay-out of the building has been added to the plan given by Steer. The building is now shown clearly as a double-aisled hall divided into four bays by two sets of posts or piers. At the east end are two projecting chambers. The southern chamber at least shows signs of external buttressing (clearly visible against the south wall and faint against the north wall). This suggests that this chamber was vaulted and almost certainly served as the infirmary chapel. North of the north chamber, which may have been for the infirmarer or the seriously ill, there are signs of another structure which, given its closeness to the stream, is likely to have been the infirmary latrines. Other parchmarks show that the infirmary was connected by a covered way to the east range (a standard monastic feature) and a pentice may have been provided against the south and west walls of the infirmary for the convalescent to walk beneath.

Unlike early (1150-1200) Cistercian infirmaries in England, which are single-aisled (e.g. Waverley, Rievaulx and Kirkstall) and modestly proportioned, the infirmary hall at Tilty had two aisles and was

very spacious – more than one and a half times the size of the abbey's dormitory. It appears to belong to the thirteenth century spate of rebuilding Cistercian infirmaries on a grander scale, as for instance, at Tintern, also double-aisled, Fountains (with aisles round four sides) and Furness (for the practical, medical and spiritual reasons for this see Bell 1998).

The guest-house
To the west of the church there are numerous ill-defined marks in the area marked as the site of the guest-house on both Galpin's and Steer's plans. The parchmarks are complex and difficult to interpret, which accords well both with Agas' picture of the guest-house and with the description of it in the lease (see above). While little can be said about the details of this building complex, it is clear that it was laid out on the same orientation as the church and cloister. The guest-house site is situated to the west of a road, or path, which runs north-west to south-east, to the west of the main building complex. This feature can be traced as a low-lying earthwork on the ground, and also appears as a parchmark on the 1996 air photograph, which indicates that the surface was metalled.

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Notes

1.   We are grateful to Dr. Christopher Norton for many useful comments on this paper.
2.   We are grateful to Dr. William Shiels for assistance with the interpretation of the text on Ralph Agas' map.

Aerial Photographs

CUCAP Cambridge University Committee for Aerial Photography.
CUCAP 1949 CQ 92-5
CUCAP 1949 EP 102-8
CUCAP 1956 SR 29-33
CUCAP 1959 AAM 96-9
CUCAP 1975 BVU 55-61
CUCAP 1975   K17-AK-241-242
Essex County Council 1990 319/1-5
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Unnecessary persons?
Maimed soldiers and war widows in Essex, 1642-1662

by D. J. Appleby

Recent debate over the English (or latterly, British) Civil Wars has tended to concentrate on the causes and management of the conflict rather than on its aftermath.[1] Previous studies of the relief of maimed soldiers and war widows reflect this: Underdown analysed West Country petitions to inform his hypothesis of cultural allegiance, whilst similar material from Cheshire has been used to illustrate women's experience during the period.[2] Far more is known about what happened when the men marched away to war than what transpired when they limped back home. This article seeks to redress that imbalance, through the vehicle of war relief in Essex. During the wars and the military occupations of Scotland and Ireland, the county supplied large numbers of men to various parliamentarian armies. The second civil war of 1648 witnessed fighting in Essex itself and, uniquely, substantial recruitment for the royalist cause. These vicissitudes produced a variety of candidates for relief, many of whom appeared as petitioners before the Bench of Quarter Sessions.

As far as is known, no petitions were written by the applicants themselves. Whilst illiteracy should not be equated with impotence there are risks in accepting at face value texts written on behalf of others.[3] In the petitions analysed here, however, claims to truth were invoked by the petitioners themselves, whether that 'truth' was any less contrived than the 'will to power' exercised by their social superiors. Far from seeking to avoid scrutiny, maimed soldiers and war widows fought for attention, and repeatedly exploited the context of domination for their own ends.

In 1642, the main instruments of local political and social control remained the Justices of the Peace. Nevertheless, disorder plagued magistrates who forgot that they relied heavily on the acquiescence of the general population.[4] The Parliamentary County Committee was set up in 1642 to co-ordinate the war effort in Essex, but tensions remained between local interests and the Eastern Association the committee was intended to serve. The creation of the New Model Army in 1645 exacerbated the situation; within months, Essex's tax burden amounted to £9350 per month, of which only £770 funded local defence.[5] The military success of the New Model, independent of local control and harbinger of dangerous extremists, caused anxiety among conservative parliamentarians, and in large measure revived royalist sympathies which led to the rising of 1648.

Many of the traditional county elite continued to function as Justices; a survival of traditional values which blunted the radicalism of each succeeding revolutionary regime and eased the transition to monarchical government in 1660. Despite their differences, the gentry's attitude toward social inferiors was habitually derisive, particularly the poor.[6] This section of the community was seen as synonymous with increasing unemployment, crime and disorder, and military employment was often viewed as an ideal method for culling the pauper host.[7] Relations with the middling sort were more complex.[8] Whereas the poorer sort could only hope for the gentry to reciprocate their unwritten obligations, the yeomen and traders who paid taxes and underpinned the life and economy of the local communities were often able to insist.

By the summer of 1643, the escalation of the conflict demanded many more recruits, forcing the county committees to introduce conscription.[9] Parish constables initially impressed the poor and unemployed, with bachelors preferred to married men.[10] However, as demand grew, many families were left on parish charity as breadwinners were herded away.[11] With unrest growing, the Essex Trained Bands were mustered to prevent public disorder.[12] Eventually, there were claims that 'some hundreds have scarce so many men in them'.[13] From the volunteers in 1642, to the last conscripts of the 1650s, perhaps as many as 12,000 Essex men took some part in the fighting.[14] Eventually these included the Essex Trained Bands themselves. These part-time militia were normally used within their native county to curb civil disorder and deter foreign invasion, but Essex units were sent to the Midlands in 1643, fought on both sides in 1648 and took part in the Battle of Worcester in 1651.[15] The authorities were usually sensitive in their employment, as the middling sort formed the majority of their numbers.[16]

Soldiers faced death not only from combat but from disease, malnutrition and exposure.[17] Essex conscripts were certainly neglected: William Harlackenden, an Essex gentleman serving with the Eastern Association army complained that 'the poor soldiers long for [coats] and the time of year calls for them', whilst Nathaniel Rich reported that more men had been lost through exposure than combat.[18] The total number of combat deaths during the civil wars has recently been estimated at over 84,000, with perhaps another 100,000 related civilian deaths in England alone.[19] If so, the effects on local communities must have been immense. In March 1649, Commonwealth forces stood at 44,373, with several thousand already disbanded.[20] In 1659 Lord Fairfax presented a petition on behalf of 2,500 maimed soldiers and 4,000 widows.[21] By this kind of ratio, Essex may have been called upon to cope with over one thousand maimed soldiers and widows. West Ham churchwardens supported two maimed veterans and three soldiers' wives, whilst Waltham parish records name two lamed veterans and several widows whose husbands had been killed in the conflict.[22] If even these modest numbers were typical of Essex as a whole, the figure of 1,000 would appear a conservative estimate. The support of local communities upon which the regime in London depended must have been tested by such strain.

War relief for maimed soldiers was not a new concept. An Act of 1601 (43 Eliz. c.3) required a disabled serviceman's parish to sustain him.[23] On 24 October 1642, following the Battle of Edgehill, Parliament undertook to maintain the dependants of those disabled or slain in its service.[24] Morality combined with the expectation that such sentiments would encourage further sacrifice. It was soon obvious, however, that voluntary contributions alone would not honour this pledge. An Ordinance of March 1643 required parish officials to levy a discretionary rate on inhabitants and to distribute money to those in need.[25] Parish officials, already unpopular because of their part in collecting extra taxes and impressment, proved uncooperative.

In October 1643, Parliament imposed a rate of £4,000 per month on the counties under its control. High Constables were now to send revenue directly to Cordwainers' Hall in London, where appointed treasurers would distribute war relief. Relief was only given to those maimed soldiers and widows that were 'not able of themselves to subsist'.[26] The rate allowed by the Ordinance lapsed in August 1644, at which time the treasurers' stock was maintained by excise income and periodic sums of money voted by Parliament. Out of this, the treasurers ran two military hospitals in London and, by 1650, supported some 6,000 pensioners.[27] Individual parishes responded to the scheme by passing on their financial burdens,[28] whilst county authorities resented Parliament's interference in their

jurisdiction.[29] A Parliamentary review in 1647 blamed the failure of the scheme directly on the Justice of the Peace.[30]

The New Model's petition of March 1647, demonstrated that war relief was crucial to the peace of the nation.[31] Much as Parliament had denounced the New Model's petition, it recognised the soldiers' concerns for their maimed comrades and widows - and passed responsibility back to the much-criticised Justices. A new Ordinance for the relief of maimed soldiers, mariners, widows and orphans was passed in May 1647.[32] Maimed soldiers and widows were required to obtain a valid certificate from the relevant regimental commanders and, returning to their parish of settlement, present it to two Justices. The Justices were then to order relief until the next Sessions at which a proper pension would be arranged. Magistrates had the discretion to withhold payment if they considered that any recipients were able to maintain themselves, although the Ordinance instructed that widows were to be allowed further occasional relief 'over and besides such relief as they shall gain by their work and labour'.[33] A further Act in 1651, covering casualties in Scotland and Ireland, tightened certification procedures still further, and instructed Assize Judges to monitor the performance of the Justices.[34]

War relief had become a political football between Parliament and the localities, leaving claimants in constant peril of falling between the two. To date, 223 maimed soldiers and war widows have been identified in the various Essex sources; possibly one-fifth of the county's estimated casualties.[35] Some people survived on their own resources, or by the charity of their family or friends. When such support failed, individuals like Martha Emming (previously kept by her son), or Ann Fookes (subsidised by her Halstead neighbours) came to the notice of the authorities.[36] After so many policy changes, provision for maimed soldiers and war widows in Essex was confused, with some pensioners maintained by their parish, some by the county and others by the state.[37] Claimants had to calculate which of a bewildering range of official bodies offered the best chance of success. Applications for war relief became a significant portion of the business conducted at the Essex Quarter Sessions.[38] Outside the independent jurisdictions of Colchester,[39] Harwich, Maldon and Havering, two 'Treasurers for Maimed Soldiers and Charitable Uses' co-ordinated collection and distribution of war relief in the East and West Divisions of Essex.[40] The 1651 account of the Treasurer for the West Division,[41] shows only twenty-five pensioners, most, if not all, veterans and war widows.[42] The relatively generous pensions[43] enjoyed by these individuals, compared with the paltry awards then being handed

out at the Quarter Sessions,[44] suggests how far charity had declined during the three civil wars.

Casual payments to maimed soldiers returning to their homes reveal attitudes to war relief at the level of the parish. Waltham and West Ham, lying on main thoroughfares, gave money to a total of 103 maimed soldiers between 1642 and 1660. More distant Hornchurch entertained fourteen and Great Bromley, in north-east Essex, only seven during the same period. Waltham and West Ham were more generous than Bromley; awarding average gratuities of 4s.5d and 4s.9d respectively, compared with Bromley's average of 2s.8d. A survey of the four parishes shows that the flow of maimed soldiers peaked around 1645.[45] Average gratuities declined drastically in proportion to the frequency of passing soldiers, and churchwardens scrutinised certificates and passes more closely as time went on.[46] Parish officers appear to have retained a clear distinction between maimed and able-bodied soldiers. Misbehaving soldiers billeted in West Ham in 1648 engendered considerable grievance, but the parish continued to contribute to the county stock for war relief and to make payments to their maimed soldiers and widows.[47] The distinction between the recipients of war relief and the indigent poor was less clear; churchwardens defined transactions involving maimed soldiers and war widows as 'Payments for Use of the Poor'.[48]

Parliament had instructed communities to hold their war widows in special regard. In fact, many Essex parishes already subsidised wives whose husbands were away fighting, either voluntarily, or because the Essex Committee ordered it.[49] Women constituted 34 per cent of the petitioners to the Bench, but received 38 per cent of the pensions.[50] Although most widows had families to maintain, two-thirds of maimed soldiers also had families and childless women sometimes obtained higher awards than men.[51] The prospect of favourable treatment may have encouraged one Colchester woman to petition for relief on behalf of her family, even though her husband had returned home.[52]

Victory always awakened charitable impulses. After Parliament's victory at Worcester widows of parliamentarian soldiers were voted compensation ranging from £200 for a captain's wife, to £20 for that of a common soldier.[53] The Worcester grants demonstrated a predictable scale of wergeld. It is noticeable, however, that only one parliamentarian officer, Thomas Highaune, appears in the Quarter Sessions bundles and only one, John Arnett, in the Essex Committee papers.[54] Both pleaded poverty, although Highaune had also lost his legs. Given that many officers must have been killed or wounded, their absence from Commonwealth records was, as we will see, in stark contrast to royalist claimants after the Restoration.

Inadequate as the provision for maimed soldiers and war widows was, both local and national government appear to have demonstrated a greater degree of responsibility for the maimed and bereaved than for serving soldiers. There were some common motivations behind medical treatment and long-term financial care. A genuine sense of *noblesse oblige* could variously be interpreted as an acceptance of social reciprocity or simple moral guilt; General Deane demanded maintenance for his wounded by arguing that 'victory is purchased with the blood of those who were precious in the eies of the Lord'.[55] The concern of the New Model soldiery for invalids and their families confirmed the belief of many in authority that war relief provision encouraged soldiers to fight. The question as to whether it encouraged the localities to continue to support the war is another matter. War relief in the communities helped to preserve order and confirmed 'neighbourliness', both of which influenced the treatment of soldiers' wives. Many parishes, however, would plead that charity was not to be measured in terms of private suffering, but with regard to the problems of the wider community. The extent to which maimed soldiers and war widows were aware of such issues, and formulated their personal strategy accordingly, is a question largely answered by the language and content of their petitions.

Petitioning in early modern England was an industry in which most communities boasted skilful exponents. Petitions were rarely, if ever, created by the petitioner alone. Sympathetic officials and fellow claimants circulated information, whilst local scribes such as ministers and schoolmasters gave help and advice.[56] If the individual's claim was adopted by the parish the petition became more a communal than a personal application. In 1646, Oliver Bonden's petition was written up and signed by his local minister and twenty-nine Springfield parishioners; Bonden attested to his community's previous generosity and their inability to contribute further. Richard Ellsing's petition, read at the same sessions and signed by twenty neighbours, declared that his allowance was under threat because 'the parish in regards of the smallness thereof and the many other poore thearin, besides the extra ordinary charges imposed upon them, is very unable to maintaine'.[57] Claimants were not always pawns. William Pileston's petition of Michaelmas 1647 attacked Marks Tey Overseers for withholding his maintenance, whilst another maimed soldier, John Morrell of Bocking, petitioned against a magistrate who had refused to renew his pension.[58]

As knowledge of entitlement to war relief is believed to have been widespread, it is surprising that the total number of claimants identified in Essex remains a comparatively small proportion of the projected casualties. William Yorke of Coggeshall

declared that he had not previously known of any general relief to be had,[59] and it would be interesting to discover how many shared his ignorance. Social stigma may explain many missing claimants, despite evidence that war relief was considered a right.[60] It is possible to *believe* in one's right to income support, and yet still feel stigmatised by *claiming* it; stigma, by its nature, is often invisible. Most relief took place in the parish, where maimed soldiers and war widows were lumped together with the indigent poor. Martha Emming feared to 'come to the charge of the parish', while Ann Fookes relied on the help of her friends, rather than formal parish charity.[61] Sarah Bott, George Clarke, Mary Bromfield and John Busbie struggled on for years without claiming.[62] Hudson's analysis of Cheshire war widows has uncovered similar tales of subsistence, including those who sold their belongings to survive.[63] The culture of 'neighbourliness' meant that those who became a burden to their community risked being exiled to its margins. War relief was socially preferable to parish charity,[64] not least, one would assume, for the fact that it had less impact on the neighbourhood. Stern community values may also account for the low levels of fraud; English society did not lack for neighbourhood informers, whether competitors for a pension, or disgruntled taxpayers.[65]

The overwhelming majority of war relief candidates identified in Essex records came from Hinckford and Lexden Hundreds. The fact that these two areas were then both the poorest and most populous in the county is significant:[66] if, as seems likely, they supplied the greatest number of recruits, the greatest burden of casualties therefore fell upon Essex' poorest parishes. Further research might explain why southern Essex seemed better able to support recipients within informal networks, and whether public charity carried greater stigma there as a consequence.

Apart from these interstices in statistical evidence, reservations remain as to whether a document transcribed by a social superior can be considered the 'authentic' voice of an illiterate petitioner. Caution is called for, although two tiny discrepancies in Martha Emming's petition of 1653 give encouragement:

> ...*it pleased god to take away the life of* my *said husband and soone after hime one of* my *sonnes in Ireland to the great grief and also to the hinderance of your poore petitioner she being very aged and past her labour...*[67]

Clearly, the scribe taking dictation became so engrossed in Martha's story that he inadvertently lapsed into the first person. His slip provides evidence that these documents can display a brand of truth other than the values of the elite. Petitioners were capable of deciding how to sell

themselves, and on which stage they were to perform.

Some claimants calculated that their best route of appeal was to the Essex Committee. These included an impoverished officer as well as humbler folk such as an Earl's Colne woman whose son had been slain.[68] However, most Essex petitioners looked to the county's Quarter Sessions for relief. Here they competed not only with other petitioners, but routine administrative affairs. The busy Justices were obviously the primary targets of a petition, and their limited attention span an important consideration in its literary construction. However, there was a wider audience to be wooed: the public paid to view proceedings from the gallery,[69] whilst further afield the petitioner's community awaited the verdict. Justices, acutely aware of this public gaze, were therefore as much on show as the petitioners, and social prestige, political or religious beliefs and *noblesse oblige* all played their part.

Supplicants usually had to appear before the Bench in person for their petitions to be considered.[70] Those who could afford to attend could therefore create considerable visual impact, especially widows with their orphaned children.[71] In addition, some were able to redress omissions in the written testimony. Although Margaret Walker of Coggeshall had not mentioned a family in her petition, two children were specified in the Order Book. This additional information, which undoubtedly affected the award, must have been given at her hearing.[72] We cannot know which supplicants were tongue-tied and which eloquently persuasive. Widows seem often to have appeared in organised groups. The evidence of the Essex Order Book shows at least seven such groups, either consisting of a mixture of soldiers and widows, or women alone.[73] As natives of a predominantly oral culture, many may have proved engaging storytellers. 'Communal' petitioners, moreover, would have rehearsed their story before their neighbourhood supporters. The impact these heart-rending stories made on the Justices can be measured to a certain extent by comparing the details recorded in the Order Book against those emphasised in the petitions. In those cases where the fate of surviving petitions are recorded, such comparison can be used to indicate how successful a petitioner was in getting their message across.

Promoting oneself as a fit object for war relief called for a delicate balance of social deference and emotional blackmail. It was not injury, or loyalty, that brought recompense, but the economic hardship that resulted from it. Justices were not legally obliged to grant pensions;[74] furthermore, they could, and did, strip recipients of their awards if it was decided that they could maintain themselves.[75] Maimed soldiers and war widows were well advised to humour the prejudices of the Bench.

Deferential formulae, characterised by phrases such as "the Right Honourable and Worshipful His Majestie's Justices" and "humbly sheweth", may appear hollow to us, but would have been a catastrophic breach of etiquette if omitted. Some skills and experiences were better unused. After the army mutinies of 1647, nothing would have irritated a provincial Presbyterian Justice more than an assertive, articulate New Model veteran. As commissioned officers, Thomas Highaune and John Arnet, and the drummer Thomas Hewes, were probably literate, but still chose to have their petitions written by others.[76]

The most effective petitions featured detailed information on the petitioner's circumstances - family, health, poverty and sobriety. Widows, as a group, appear to have been more accomplished than soldiers at presenting themselves as victims of war. In contrast to Natalie Davis' findings that 16th century Frenchwomen's testimony was 'shorter and flatter in emotion',[77] Essex war widows usually employed more demonstrative language than their male counterparts. The maimed soldiers, even amputees, tended to repress their emotions, presenting horrid experiences in a matter-of-fact manner, whereas women such as Sarah Bott usually painted a more vivid picture:

...it pleased god that presently after the first great fight hee dyed Leaveing your peticoner with five small children in a very sad and deplorable condicon destitute...[78]

Of the surviving petitions in the Quarter Sessions Bundles, 86 per cent of widows mentioned dependants, as opposed to 55 per cent of maimed soldiers; 43 per cent of the widows supplied specific details of their families, compared with 30 per cent of the men. The impact on the Bench is indicated by the entries made in the Order Book, which recorded detailed family information for eleven war widows (34%) as opposed to just three men (5%). Petitions which emphasised the family were effective: those granted pensions were almost three times as likely to have cited specific information about their children than those awarded gratuities. The Justices may have expected widows to have families rather than maimed soldiers. Geoffrey Hudson has pointed out that the printed certificates issued by the Treasurers at Cordwainers' Hall had space to record dependants in the widow's version, but not in the soldier's.[79] There are some practical reasons for this discrepancy; married soldiers were unlikely to have their families with them in London. However, it is noteworthy that although 55 per cent of the maimed soldiers' petitions mentioned their family, only 17 per cent of maimed solders in the Order Book were recorded as having dependants, as opposed to 41 per cent of widows.[80]

Maimed soldiers often emphasised their 'victimisation' by presenting themselves as civilians snared by war. The most common method of doing this was to mention one's peacetime occupation. Over half the male petitioners did this, to some effect.[81] The fact that most maimed soldiers were careful to relate their military service to their civilian misfortune reflects their awareness that war relief legislation required evidence that wounds or bereavement had affected their ability to maintain themselves. Richard Glascock, for example, having lost one of his legs in 1645, declared himself thereby 'utterly disabled for the acquiring of his trade & living in that Course of life wherein hee hath formerly beene bred & brought upp'.[82]

The timing of a petition could affect its chances of success. Most claimants, like Glascock, presented their petitions within two years of their injury. Those who took longer had to explain the delay. Martha Emming, petitioning nine years after her husband's death, mentioned her son's charity. William Yorke, appealing ten years after his wound, stated:

...knowing not of any generall reliefe to be had, have by his industry made shift for a hard living hetherto, but nowe by reason age groweth upon him and his wounded partes of his body very paynfull, disabling him from worke.[83]

Yorke compensated the chronological weakness in his petition with an itinerary of his long and faithful service to Parliament. The high percentage of maimed soldiers who indicated the circumstances of their recruitment (75%) shows that they considered it an important element of their claim. As the Quarter Sessions orders rarely repeated the information, it appears that the Justices only occasionally agreed. The question as to whether soldiers and husbands had joined the fight as volunteers, conscripts, or seconded militia affected the petitioners' ability to profess fidelity to Parliament. Volunteers invariably proclaimed their 'good affection', no doubt in the belief that the Justices would be sympathetic.[84] Sometimes former volunteers attempted to invoke the empathy of their judges by repeating the political slogans of the 'well-affected'. However, as Cliftlands has shown, the definition of 'well-affected' changed, and petitioners had to be careful to take this into account.[85] Thus, Richard Glascock in 1647 declared 'he voluntarily took upp armes for the Servis of the King & Parliament', whereas by 1653 events persuaded John Busbie to state that he had 'advanced his life in the service of the Common wealth [against] the Common Enemie'.[86] That plebeians were aware of the political implications of such slogans is suggested by the examination of a turncoat, George Mason of Wivenhoe.[87] Only 25 per cent of conscripts and militia made similar professions of loyalty in their petitions, apparently preferring to revive the neutral image they had had when wounded.[88] There was occasionally some official sympathy for families

affected by impressment. In 1649, the Colchester Committee instructed churchwardens in the parish of St. Runwald's to support two wives of husbands impressed in the parish, and ordered relief for a maimed soldier impressed in Lexden.[89] Normally, however, neither the circumstances of recruitment, nor professions of loyalty, appear to have influenced the Bench's awards.

If most of the tactics for soliciting a pension were passive declarations of helplessness, there were more aggressive options. Widows appear to have been more willing to quote legal or moral precedent to the magistrates than their male counterparts. Margaret Beavis asked the Court to grant her a pension, 'according to the act of Parliament as to other Widows in the like case hath bin granted'.[90] This was not the only arena in which women often felt more able than men to confront authority.[91] Lecturing magistrates on their legal and moral duty was risky, however; those quoting precedent tended to be less successful in obtaining pensions. A more successful 'offensive' strategy was importunity - returning with a fresh petition even when previously ordered to trouble the court no further. Essex, like every other county, had its share of repeat petitioners, driven by a stubborn belief in their right to receive compensation, or by desperation. William Gray of Braintree was perhaps the most determined and ingenious importuner of the Essex Bench, with at least three petitions in 1657 alone. Eventually the Bench, worn down by Gray's tenacity, or genuinely impressed by his inspired recourse to an independent medical examination, granted him a pension.[92]

Endorsements, whether communal or solicited from an individual, were often a vital element of many petitions.[93] The requirement for claimants to produce a certificate from the regimental commander of the maimed or dead soldier does not appear to have been uniformly enforced, but most maimed soldiers and widows were able to give such details. Endorsements from military officers, even though they included Oliver Cromwell himself,[94] were far outweighed by demonstrations of community support. As has already been discussed, there was often a considerable element of self-interest involved, not least the prospect of passing on the financial burden. At other times, the undertaking was a genuine campaign for a respected neighbour. In the case of Sarah Bott the local minister, John Fuller, signed ahead of six parishioners and added a postscript that the inhabitants of the parish knew Sarah 'to bee Industrious in hir calling and living honerably'.[95] Such demonstrations of community support must surely have made an impression on the Justices. The surviving petitions indicate that 42 per cent of those receiving pensions had received communal endorsements, as opposed to 10 per cent of those merely given gratuities. Widows were twice as likely to enjoy such support as maimed soldiers. It was the widow who could more readily demonstrate that she had made some effort to subsist by herself - precisely the moral contribution required of 'deserving' poor. Many of the maimed soldiers, however, did show concern for the burden shouldered by their community, such as the former weaver Richard Ellsing of Helions Bumpstead, who, on losing his leg in the war, 'hath been ever since very chargable to the said Parish'.[96] Thus, in addition to the poverty of the individual, the Justices were frequently called upon to consider the poverty (real or pretended) of their community. In areas where maimed soldiers and war widows appear to have been numerous, notably around Braintree, Bocking and Coggeshall, such hardship was real, and a strain on the 'good affections' of the area.

Petitioners, much though they could pressure the Justices into granting an award, had little opportunity to negotiate a price. Many petitioners had a clear idea of the amount they desired from the Bench, as Mary Burnham of Steeple Bumpstead revealed,

For the Lords sake to grante a Continuance unto her, the said peticioner of ffoure pounds per annum for the reliefe of yor said petitioner & her poore children.[97]

In the event, she received an annual pension of £2.[98] Trooper Jeremiah Maye's phrase, requesting the Justices to award, what "your pyous wisdomes shall seeme meete", was a more typical gesture of deference; an admission of dependency.[99] The only redress for a claimant unhappy with their pension or gratuity was to resort to importunity and pester the Bench to increase their maintenance. Despite the success of William Gray and others, this approach carried the risk of losing the Court's goodwill. Daniel Wright, a limbless ex-dragoon with a pension of 40s was sent packing without an increase.[100] War widows, with an average pension of 44s 5d per annum, appear to have been treated almost as generously in Quarter Sessions Orders as maimed soldiers, who were awarded an average of 45s 5d. Excluding amputees, maimed soldiers usually fared worse than widows.[101] The average widow's gratuity recorded in the Order Book was 40s 8d, compared to the maimed soldier's average award of 36s 7d. There were occasionally orders of apprenticeship for orphans of dead soldiers.[102] These awards compare unfavourably with related grants to normal civilians such as the pension of £4 per annum awarded to a man plundered of his goods in 1648.[103] However, the most telling statistic lies in a comparison with the wage rates set by the Bench in 1660. These show that both sets of pensioners received, on average, less than the legal yearly rate for teenage wash maids.[104]

The cultural skills and political awareness of the petitioners meant that they were not completely powerless. This knowledge informed their decisions on which aspects of their story to emphasise, and which to palliate. The lack of religious imagery in maimed soldiers' petitions is all the more noticeable when compared to its continued use by war widows, particularly when set against the often florid petitions submitted by civilian supplicants.[105] A faint echo of the social strata which we know existed in the military community remains to distinguish petitions from cavalrymen such as Jeremiah Maye from dragoons such as Daniel Wright or the conscripted infantry. Sarah Bott was careful to state that her dead husband 'did voluntarily at his own charge furnish himself with a horse and armes' for Parliament's service.[106] Essex petitions, however, betray no signs of 'lateral' consciousness or the radical idealism within the New Model Army. The sense of religious purpose, those tenets of armed *Israel* defiantly expressed by serving soldiers, are missing, replaced by a desire for survival and a fearful concern for their future in the local community. Maimed soldiers and war widows, increasingly viewed as parish poor, mostly endeavoured to conform, making the moral contributions required of 'deserving' poor in order to receive the support of their communities.

In the petitions, however, it can be seen that certain skills, 'weapons of the weak' in James Scott's phrase, were deployed with telling effect. Informal communications networks spread news of entitlement to war relief, helped by sympathetic social superiors as well as the close proximity of news outlets in the clothworking towns of north Essex. Illiterate petitioners were aware of flaws in their petitions, and consciously accentuated stronger elements to compensate. Not only were they able to cope with the requirements of written evidence, but the theatre of a Quarter Sessions enabled them to deploy practised visual and oral skills.

The advantages of moral support from the community, whether inspired by sympathy or self-interest, were appreciated by claimants, and eagerly solicited. The Justices should not be denied genuine feelings of pity for individual suffering, nor a sense of moral justice. In considering the wider problems of poverty induced by the conflict, however, the disproportionate success of 'communal' petitions indicate that it was the disruption of the local community, with its attendant threat to local order, which was uppermost in their minds.

In 1660, the new Essex Bench, once again styled "His Majesty's Justices of the Peace", included several survivors from the Protectorate. The continuity represented by such men contributed to precisely the social stability they most earnestly desired; a society led by the landed gentry, in which everyone knew their place.[107]

The study of war relief in Essex during this crucial period is hampered by the fragmentary evidence of the Quarter Sessions archives. The old Order Book closed with the Sessions of October 1661. Its successor, together with most petitions for war relief submitted after the Restoration, has not survived. As these documents covered the years following an Act of 1662 designed to relieve ex-royalists, a comparison with war relief under the Commonwealth is thereby severely limited. [108] The survival of seventy-six relevant Quarter Sessions orders of 1660-1661 allow us at least to compare the treatment accorded standing parliamentarian pensioners with that of the new royalist claimants. Twenty-four of these orders relate to former parliamentarians, fifty-two to royalists. There are, in addition, at least 41 Essex-based royalist officers featured on the *List of Indigent Officers*, published in 1663.[109]

By the Restoration, unpleasant memories of the recent military regime coupled with a general desire to put 'the troubles' behind them, had engendered an intense public dislike for all things military. Maimed soldiers and war widows, whichever side they had fought for, appear to have had few friends. The fact that Lord Fairfax had presented a petition on behalf of 6,500 claimants as late as 1659 indicates that war relief was still a significant burden in many parts of the country.

In Essex the work of the Treasurers for Maimed Soldiers and Charitable Uses continued. West Ham churchwardens made their highest recorded payment to the High Constables, £1 2s 9d, in 1661. The parish's contribution had been subtly renamed 'Charitable Uses', a styling soon echoed by Waltham officials.[110] Although the Divisional Treasurers apparently continued to be honour war pensions for the time being, many recipients must have realised that their income was threatened. Only two fresh claims were registered from former parliamentarians, both of which displayed considerable ingenuity.

At the Quarter Sessions of May 1660,[111] John Baxter was quite candid in his submission that he had lost one of his legs 'in the late Service of the Parliament'. Baxter, however, did not initially petition for money, requesting instead that his parish provide him with a loom and tools to work 'in the trade of a Weaver wherein he was brought up'. The combination of lost limb and willingness to work at no cost to the county stock obviously impressed the Bench, which duly granted the order.[112] Having established his 'deserving' credentials with the Justices, Baxter attempted to elicit money at the next Sessions.[113] John Merrington of Halstead, recommended to the Bench for relief in January 1661, demonstrated a diplomatic grasp of political niceties; although he had clearly incurred his disabling wounds in

Commonwealth service, Merrington referred to his old commander, George Monck, by the General's new title of Duke of Albemarle. The Justices, perhaps appreciating the irony, awarded £4 13*s*. 4*d*. but warned Merrington, 'not to trowble this Court any more for a pension'.[114]

At the same Sessions, the Bench began to pay off parliamentarian pensioners. The court ordered that four pensioners be given gratuities "in full Compensation of all Pencions for the future". Three were given 40*s*. and one, John Baxter, 20*s*.[115] Surprisingly, two other maimed soldiers, Andrew Hall and Thomas Butcher, had their pensions confirmed.[116] Another batch of pensions were terminated at the Michaelmas Sessions. Fourteen maimed soldiers and one widow, Mary Bromfield, were given an average of 24*s* each in lieu of further payments. The disappearance of the replacement Order Book allows only speculation as to whether further cessations were ordered. An order sent to the Midsummer Quarter Sessions in 1665 instructed the Justices to report persons disaffected to King Charles II, particularly 'such persons who have been in actuall armes against his Majesty or his Majestie's father of blessed memory, and have not given Testimony of their sorrow of the same'.[117] It is also possible that following the Act of 1662 an influx of royalist pensioners may have contributed to a further eviction of former parliamentarians.

Little is known about royalist activity amongst the middling and poorer sorts of Essex. A considerable number of Essex gentry joined the King in 1642-3, but few plebeians appear to have followed them. Ninety-four officers and men are known to have claimed some manner of war relief in Essex, compared with 1,142 royalist pensioners in Wiltshire and Dorset.[118] However, this figure may actually be more representative of Essex royalists than the present total of known parliamentarian claimants. The vast majority of royalist officers and men performed their service in Essex in 1648.[119] When it surrendered at Colchester, Lord Norwich's army totalled 3,526 men, of which the Essex contingent was unlikely to have been much over 1,000.[120] Supposing the casualty rate of ten per cent earlier projected for parliamentarians (and given that many would have died in the decade before the Restoration), the figure of 94 known claimants may well represent most of those in genuine need. Colonel Farr's regiment of the Essex Trained Band was severely mauled fighting for the royalists on the first day of the Colchester siege. As many in its ranks must have left widows, their absence from the Quarter Sessions requires some explanation.[121] It is also important to remember that there were degrees of indigence. Although, as Dr. Newman has indicated, we may assume that some of the officers "were properly destitute",[122] their poverty, and even that of non-commissioned officers, may have been

measured against the expected living standards commensurate with their social status.

Between 1660 and 1662, indigent royalists had little alternative other than to apply to the Quarter Sessions for satisfaction. There had, of course, been little point in them petitioning before. Before the Cavalier Parliament's legislation of 1662, 'knowledge of entitlement' among royalist soldiers was a question of moral belief and expectation rather than legal fact. Communication between potential royalist claimants often appears to have been through their former military contacts rather than through normal communal channels.[123] Indeed, the kind of underground networks which operated among royalist gentry during the Protectorate may have existed further down the social scale.[124] Women tended to be excluded from such networks, which may explain why royalist war widows were significantly less prominent than their parliamentarian counterparts. Such a practical explanation would be consistent with the observations of both Hudson and Underdown, that the royalist attitude to women was typically one which envisaged them in a 'natural' state of subordination.[125] In addition, indigent royalist widows would have been forced to survive on poor relief for at least twelve years before the Restoration, and children would either have died or grown up. The Justices would thus have had little pressing incentive to accept responsibility for their maintenance.[126]

Following one or two early opportunists, royalist claimants appear to have petitioned en masse in 1661. Whereas the numbers of war relief claimants during the previous decade had never exceeded sixteen in one year, the Quarter Sessions of April 1661 alone dealt with a batch of 32 royalist petitioners, who were dealt with in bulk. Only cursory information was consequently entered into the Order Book.[127] There are perhaps several reasons why none of the these petitioners were granted pensions. If many of them had attended in person, the effect on the Sessions House would have been chaotic, with little chance of any individual making an impact. Furthermore, if they were indeed organised (possibly by the officers in the group) and hoped by their number to pressurise the Bench into granting stipends, they were to be disappointed.

The next Quarter Sessions, July 1661, processed nineteen more royalist claimants, including three widows.[128] Most of the soldiers, or husbands, of this collection appear to have served in Major Stephen Smith's company, of the militia regiment which had followed Henry Farr over to the royalists in 1648. Rather than appearing en masse, these former militiamen and their relatives appear to have organised themselves through normal civilian networks, and certainly adopted traditional methods of presentation. The Bench was clearly alarmed at

the continued influx. John Eldred senior, Treasurer of the East Division, was ordered to transfer £50 into the keeping of three Justices, who,

> ... considering the merritts of each Peticioner, would be pleased to gratifie each Petticioner soe farr forth as the said fifty pounds will extend. And the respective Peticioners are to accept of what summe the aforesaid Justices or any one of them shall order as a farewell. And this Court doth declare not to accept of any Peticions of this nature for the future.[129]

The Justices had not reduced their burden of parliamentarian pensioners with the intention of supplanting them with royalists. The fact that petitions were submitted after the Bench's declaration not to receive any more, is almost certainly due to the passing of the 1662 Act. Virtually identical in its provisions to the Parliamentary Ordinance of 1647, it declared maimed soldiers and war widows to be the responsibility of their parish. Claimants were now required to demonstrate that they or their husbands had loyally served the King. Ever since his execution in 1649, royalist propaganda had promoted Charles I to the status of a saintly martyr, with Christ-like imagery that often bordered on the blasphemous. Service to the dead king was promoted as a sacred duty, while opponents were castigated as foul murderers.[130] The language of the Act allotting £60,000 to relieve indigent officers reflected this, requiring claimants never to have deserted King Charles II, or 'His Blessed Father's Service During the late times of Rebellion and Usurpation'.[131] For the Justices, especially those who had been magistrates under the Protectorate, hearing fresh petitions became not simply a legal duty, but politically expedient. In the increasingly charged atmosphere around the Cavalier Parliament, accusations of 'disaffection' could prove lethal.

From the available evidence, royalist soldiers and widows appear to have used much the same tactics as their parliamentarian predecessors, with deferential preambles, and closing 'prayers'. The number of petitions is too small to allow conclusive judgement as to whether royalist women as a group were more likely than men to present detailed information on their charges and circumstances. Some certainly did; the Order Book recorded that the death of her husband at Colchester had left Margaret Alsoppe of Chelmsford with 'six small Children to provide for'.[132] The fact that at the time of her petition the youngest of Margaret's children by Richard Alsoppe would have been at least twelve years old betrays an element of rhetoric sometimes overlooked.[133] All post-1660 petitioners featured in the Quarter Sessions Bundles show an awareness of the efficacy of mentioning their 'charges', an indication that children were still an important lever of successful petitioning.[134] The presence of Mary Gill's petition as late as 1670 is proof that women's

petitions were not totally excluded from royalist war relief. The fact that she only received a gratuity of 20s. despite having four children and being 'her selfe very low in condition', however, lends credence to the view that war widows after the Restoration no longer enjoyed equal access to the county's charity.[135]

The 1662 Act required magistrates to satisfy themselves that petitioners were destitute because of their service. The effect of these discretionary powers could lead to considerable differences between neighbouring counties such as Wiltshire and Dorset, depending on the Justices' interpretation.[136] As the events leading to the claim had taken place over a decade before, it was somewhat difficult for petitioners to claim that they had been unable to maintain themselves. The petition of Robert Browne, Thomas Sharpe and John Sweeteing stated ambiguously, that their service had left them 'much impoverished thereby'.[137] Three fellow members of the Essex Trained Bands similarly declared that they had 'sustained great losses thereby'.[138] Few, having survived so many years, impressed the Justices with evidence that their wounds had disabled them from following a living. Alexander Brookes of Witham was paid 20s. 'in regard he was wounded at Colchester Leaguer', but was warned 'to trouble the Court noe further'.[139]

Appreciating such flaws in their application, most royalist petitioners appear to have emphasised their loyalty to the Crown. Facing Presbyterian magistrates who had actively opposed Charles I, as well as Justices who had been sequestrated for their royalism, it is possible that many petitioners sought to exploit perceived divisions on the Bench, exerting moral blackmail on one side, whilst inviting empathy from the other. Royalists made little effort to appear unwilling victims of war; displaying instead the zeal of the volunteer. Aping royalist propaganda such as the Eikon Basilike, phrases such as 'his sacred Majesty' and 'Charles of Blessed Memory' were commonly inserted, together with references to faithful service and endurance. Many of the common royalist soldiers may genuinely have held a strong belief in Royalist principles. The service of a Hertfordshire labourer, who fought for the monarch in all three civil wars, suggests a deep commitment.[140] Where parliamentarians had tended to argue that their moral right to relief stemmed from economic and social disfunction within the community, royalists emphasised their individual fidelity. Henry Stokes of Widford mentioned his infirmity, but based his request for money on the grounds 'that he might bee allowed some reasonable satisfaccion for his service'.[141]

There is some evidence within the surviving documents to indicate that communal petitions may have survived as a tactical ploy, particularly among

widows. Mary Gill's petition was written for her by the Vicar of Naseing, who, together with the constable, the overseer and three other parishioners, certified that she was 'a very pittifull object of charitie'.[142] The Bench would often respond to less convincing parish petitions by returning the burden to their care. Browne, Sharpe and Sweeteing, for example, were simply recommended to the churchwardens and overseers of their respective parishes.[143] Individual endorsements from dignitaries were still eagerly sought. As late as 1678, Thomas Petchy, a Blackmore labourer was able to obtain the endorsement of Colonel Henry Farr, a royalist hero of the Colchester siege, along with two supporting dignitaries to further a belated claim for maintenance.[144] Such support was probably necessary, as Petchy's claim for war relief, made some thirty years after his service, was extremely tenuous.[145]

Royalist petitioners in Essex fared worse than the parliamentarian pensioners dismissed by the Bench in 1661. Unlike the confirmed parliamentarian pensioners noted above, none of the royalists appear to have been awarded pensions.[146] The gratuities, like the majority of the parliamentarian claimants were 'in full Compensation for all pencions for the future'.[147] Worse than this, whereas the parting remuneration averaged 26s. 4d. for the Roundheads, the royalists received an average award of 23s. 6d. – and that weighted towards the officers in the group.

The political complexion of the Essex Bench at the Restoration had a residual Presbyterian influence. This made it noticeably less reactionary than many equivalent bodies in areas such as the West Country, where traditional Cavaliers had regained control. The impact on petitioners for war relief was significant. Royalist petitioners in Essex, no less aware of the nature of their 'audience' than their parliamentarian predecessors, were notably less successful. Whereas Justices in the West Country were willing to bestow hundreds of pensions for loyalty to the King, in Essex they were not. Not only were numbers of indigent royalists in Essex far lower than Dorset, or even Cheshire, but few had solid support from their community. It is noticeable that Justices preserved the stipends of some Roundhead veterans, while the paucity of gratuities given to royalist petitioners indicate the Bench's lack of enthusiasm for their claims.[148] How the Act of 1662 affected this policy remains an item of conjecture, as the Restoration Bench in Essex clearly intended to dismantle the whole system at the earliest opportunity.

War relief for maimed soldiers and war widows was not, in itself, a blunt instrument of social control. Initially, it was an aid to the parliamentarian war effort, encouraging soldiers to fight. By 1647, war relief formed part of a wider Parliamentary policy to persuade the New Model to disband peacefully, and so defuse tension in the provinces. To the Essex authorities, war relief was a method by which to restore familial order and thereby a traditional culture of 'neighbourliness' dented by tax, bereavement and conscription. The survival of traditional civilian communities not only prevented the middling sorts from turning civil war into revolution; it dissipated the radicalism of returning soldiery. The ideological reconciliation effected by the Essex gentry in 1660 was reflected in the composition of the Restoration Bench. The short shrift given to new royalist claimants as well as old parliamentarian pensioners reflected the fact that war relief had already served its purpose in the search for social settlement.

Acknowledgements

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Notes

1　A useful anthology of current historiography can be found in R. Cust and A. Hughes (eds.), *The English Civil War* (London, 1997).

2　D. Underdown, *Revel, Riot and Rebellion* (Oxford, 1985); G. Hudson, 'Negotiating for Blood Money', in Kermode and Walker, eds., *Women, Crime and the Courts* London (1994), pp. 146-169.

3　H. Mah, 'Suppressing the Text: The Metaphysics of Ethnographic History in Darnton's Great Cat Massacre', *History Workshop Journal*, 31 (1991), pp.1-20; R. Rosaldo, 'From the Door of His Tent: The Fieldworker and the Inquisitor', in J. Clifford and G. Marcus, eds., *Writing Culture* (1986), p. 79.

4　For example, the Maldon grain riots of 1629. J. Walter, 'Grain riots and popular attitudes to the law: Maldon and the crisis of 1629' in Brewer and Styles eds., *An ungovernable people* (London, 1980) pp. 47-84.

5　Figures taken from Morrill, p. 85.

6　See Wrightson, p. 19.

7　In 1624 the Privy Council advised the Lord Lieutenant of Essex to enlist men for Dutch service, citing 'the ease and benefit the country will find in being disburdened of so many unnecessary persons, that want employment and live lewdly and unprofitably'; Hunt, p. 183.

8　J. Morrill, p. 27; Cliftlands, p. 4.

9　Firth & Rait, I, pp. 245 & 248-9.

10　Stowe 189, f.16; Stowe 842, f.25; Egerton 2647, f.86.

11　Stowe 842, f.6.

12　Holmes, p. 167; Egerton 2647, f.241; Add MSS 37491, ff.18 & 19.

13　Egerton 2647, f.199.

14　Although not met in full, the impressment ordinances account for thousands; Firth & Rait, I, pp. 73, 123, 241-2, 245-6, 330, 472-3, 938-40, 997-8.

15　See D. Appleby, 'Essex Men at the Battle of Worcester', *English Civil War Times*, Partizan Press, Leigh-on-Sea, Essex, , 52 (1997), pp.24-8, and M. Atkin, *Cromwell's Crowning Mercy* (Stroud, 1998).

16　Witness their bounty for Worcester; S/P28/227.

17　Carlton claims camp fever had a 75% fatality rate. It was probably responsible for the deaths of 4,500 New Model troops campaigning in Scotland in 1650. Carlton, p.212.

18　Kingston, pp. 134, 147; Egerton 2647, f.223.

19　Carlton (pp. 204, 213-4), with a lengthy caveat, estimates total deaths in England at 190,000 (3.7% of the population), 60,000 in Scotland (6.0%), 618,000 in Ireland (41%). Firth's estimate (p.22) that the total number of troops raised in England was around 120-140,000 would tend to argue against such a high figure. One would suspect that Firth's estimate should be raised and Carlton's scaled down.

20　Firth, p. 34.

21　CJ, vii, p. 627.

22　D/P265/5, ff.24-5, 77; D/P75/5/1, ff.114-7.

23　See Firth, pp. 264-5.

24　Firth & Rait, I, p.36.

25　Firth & Rait, I, p.102.

26　Firth & Rait, I, p.328.

27　Firth, p. 266.

28　This is the most obvious purpose behind Waltham churchwardens' payment of 5s. 'given to Widow Nicholson to bear her charges to London with the vestrye's consent', D/P75/5/1, f.117.

29　The Parliamentary Committee for Maimed Soldiers appointed local agents to monitor local authorities.

30　LJ, iv, p.127.

31　See Clark, pp. x-xi.

32　Firth & Rait, I, pp. 938-9.

33　Firth & Rait, I, p. 939.

34　Firth & Rait, II, p. 556. This Act was also cited in the certificates issued to Essex militia wounded at Worcester.

35　The author has thus far found positive evidence for 223 maimed soldiers and war widows in Essex records.

36　Q/SBa2/82, 84.

37　That state pensions were awarded to Essex claimants is indicated by the request of the Bench for William Humphreys to 'bring the like Certificate from the Savoy as he now hath from Ely House that he hath noe pencion there'; Q/SO1, ff.183v, 188v.

38　Allen (p. xxvi) has calculated this at 11.3%.

39　The Colchester Assembly issued detailed instructions for war relief within its parishes in 1654. Magdalen parish was exempt from the charges, perhaps because its hospital included military patients; CRO D/B5 Sr43. The Assembly was diligent in chasing tardy parish contributions; Stowe 842, f.1.

40　Appleby, *MA*, appendix III. The evidence of the Order Book 1651-1661 suggests that the East Division bore a far higher burden of war relief.

41　The Hundreds in the West Division were rated separately for Charitable Uses (£12 9s. 3d.) and for Maimed Soldiers (£15 11s. 9d.); D/DM 04.

42　Thomas Highaune, at the top of the list, and John Kettle at the bottom, can both be positively identified as veterans. Q/Sba2/61; Harl. 6244, f.25.

43　£2-4 per year.

44　Appleby, *MA*, appendices V and VI.

45　Appleby, *MA*, appendix I.

46　This is particularly noticeable in Waltham; D/P75/5/1, f.124v.

47　D/P265/5, f.41.

48　D/P265/5, *passim*; See also E223/8

49　D/P265/5, ff.24, 25, 29; Stowe 842, f.6.

50　*Ibid.* Hudson's figure for Essex (pp.161-2) is slightly different.

51　Q/Sba2/61-100; Harl. 6244, f.25.

52　Harl. 6244, f.17.

53　Firth, p. 265.

54　Q/Sba2/61; S/P28/227.

55　S/P46/114, f.123.

56　Hudson (p. 148), cites the information and encouragement given to Cheshire widows by Captain Bertles. There are several examples in the Essex Quarter Sessions of claimants banding together.

57　Q/SBa2/61.

58　Q/SBa2/105. This petition is included in the Epiphany Sessions of 1666, but as the Justice in question, Herbert Pelham, appears to have relinquished his office in 1660 the document must predate the Restoration.

59　Q/SBa2/92.

60　Hudson, p. 149.

61　Q/SBa2/82, /84.

62 Q/SBa/78, /82

63 Hudson, pp 154-5, Appleby *MA*, Table 7.3.

64 Hudson., p. 149.

65 See Underdown, chapters 6 and 7; P. Newman; *HJ*, 30 (1987), p. 889.

66 K. Burley, p. 21.

67 Q/Sba2/82. Author's italics.

68 S/P28/227; Harl. 6244, f.25.

69 Allen, p. xv.

70 Hudson, p. 156; Davis, pp.20-21.

71 John Arnet pleaded he was 'unable to beare the chardge of travayling' to collect money awarded him by the Essex Committee in 1651; S/P28/227.

72 Q/SBa2/91; Q/SO1, f.114v.

73 Margaret Walker may have appeared with a relative.

74 The Ordinance of 1643, for example, states that awards are for those maimed soldiers who 'are or shall not be able to maintaine themselves'; Firth & Rait, I, p. 328.

75 See the cases of Abraham Emming and Widow Saunders; Q/SO1, f.166v.

76 Q/SBa2/61; S/P28/227; Q/SO1, f.101r. Drummers were equivalent in rank to senior NCOs, and many military manuals of the time emphasise that they should be literate. Martha Emming's 'mark'(Q/SBa2/82), a very firm 'm' in a secretary hand, also suggests someone used to handling writing materials.

77 Davis, p. 87.

78 Q/SBa2/78. Hudson (p. 153) has noted a similar trend amongst Cheshire war widows.

79 Hudson, p.153; Essex examples can be found in Q/SBa2/78 & 82.

80 Appleby, MA, appendices IV and V detail the calculations stated in this section.

81 Those who specified their trades tended to be from the poorer middling sort: two husbandmen, three clothworkers, a blacksmith, and a cordwainer.

82 Q/SBa2/63.

83 Q/SBa2/92.

84 In fact all the surviving petitions of volunteers or their widows do this.

85 Cliftlands, *passim.*

86 Q/SBa2/63, 82.

87 CRO D/B5 Sb2/7.

88 Jeremiah Maye was an outstanding exception, declaring that he had refused a £40 bribe from a Cavalier. Q/SBa2/78.

89 Stowe 842, ff.6,7.

90 Q/SBa2/82.

91 See the protest recounted in D. Woodward & C. Cockerill, *Siege of Colchester* (Chelmsford, 1979), p. 22, and John Walter's account of the 1629 Maldon riots.

92 Q/SBa2/97, 100; Q/SO1, ff.141v, 145v, 154v.

93 Only seven such entries appear among 93 orders; Appleby, *MA*, appendix VI.

94 Q/SBa2/78.

95 Q/SBa2/78.

96 Q/SBa2/61.

97 Q/SBa2/82.

98 Q/SO1, f.30v.

99 Q/SBa2/78.

100 Q/SBa2/92.

101 See Appleby *MA*, appendices.

102 Q/SO1, f.177v.

103 *Ibid.*, f.163r, 177r, 157r.

104 *Ibid.*, f.254v-255v.

105 The petition of Thomas Anderson of Barking, for example, deliberately employed extensive Christian imagery to highlight the fact that his son was held prisoner by infidel Turkish pirates; Q/SBa2/61.

106 Q/SBa2/78.

107 See J. Cliffe, p.191.

108 14 Car. II c.9. Statutes of the Realm, V. (1819), pp. 389-90.

109 Newman; HJ, 30 (1987), pp.894.

110 D/P265/5, f.103; D/P75/5/1, ff.206, 210, 212.

111 The language of the Clerk of the Peace shows England still nominally to have been a republic; Q/SO1, f.209r.

112 Q/SO1, f.214v.

113 Q/SO1, f.224r.

114 Q/SO1, f.239v.

115 Q/SO1, f.240v.

116 The details of Butcher's pension match exactly with the awards given him in 1654 and 1657; Q/SO1, ff.89v, 158r.

117 D/DM5 O13.

118 Underdown, pp. 295-6.

119 At least 21 out of the 52 Royalists in the Order Book served at Colchester, and there is reason to believe that the rest did as well. Similarly, at least 16 of the 41 Royalist officers in the 1663 List also fought in the campaign; most of them had commands in Farr's regiment of the Essex Trained Bands.

120 Carter, p. 222. This figure excludes perhaps another 500 men lost through death or desertion. The contingent from Kent was perhaps around 2,000, with sizeable contributions from London and Hertfordshire.

121 The timing and circumstances of this regiment's defection to the royalists at Chelmsford would have left the militiamen little time to arrange substitutes.

122 Newman, p. 886. Three officers (Lieutenant Mason and Ensigns Bond and Rule) received awards from both the *List* and the Quarter Sessions.

123 The batch of 32 officers and men processed at the April 1661 Sessions appear to be in some semblance of regimental order. Certainly, Lieutenant Solomon Mason and Ensign John Bond, who follow each other in the Order Book, served in Captain Barker's company of Sir Charles Lucas' foot regiment in 1648.

124 See Underdown, *Royalist Conspiracy in England 1646-1660* (1960), regarding the Royalist gentry's networks. The chronology of events in 1648 also suggests the prior existence of such networks.

125 Hudson, p. 151; Underdown, *Revel, Riot and Rebellion*, p. 286.

126 Norfolk Justices explicitly banned widows from stipends in 1663.

127 Indeed, the only way they can positively be identified as royalists, is the appearance of several of the officers in the *List* of 1663.

128 Q/SO1, ff.259v, 263v, 264v, 266r, 266v, 267v, 268v.

129 Q/SO1, f.264r.

130 C. Wedgwood, *The Trial of Charles I* (1964), pp. 206-211.

131 14 Car. II c.8; Newman *1663 List*, p. 887.

132 Q/SO1, f.260r.

133 See Hudson, p. 153.

134 It should be remembered that they were also an important cause of poverty!

135 Q/SBa2/108.
136 Underdown, pp. 192-3.
137 Q/SO1, f.266r.
138 Q/SO1, f.266v.
139 Q/SO1, f.259v.
140 P. Leask, 'Aftermath 2: Hertfordshire', *Intelligencer*, 5 (1994), p 19.
141 Q/SO1, f.264r.
142 Q/SBa2/108.
143 Allen, p. 198.
144 Q/SBa2/124.
145 Possibility this was an attempt to attract some money before the 1662 Act lapsed, in 1679.
146 It is possible, of course, that some may have received stipends following the legislation of 1662.
147 Q/SO1, f.248r.
148 It will be interesting to find out how many other counties did this, and where.

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Ladies' boarding schools in Essex *c.*1791-1861. Two case studies – Billericay and Maldon

by Fiona Bengtsen

When the companionate marriage began to develop in the 18th century, it created a desire in both men and women to improve the education of women among the upper classes.[1] However, views on the agenda for such education varied considerably between the sexes. The prominent feminist writer of the period, Mary Wollstonecraft, demanded sexual equality in education to enable women to compete on an equal footing.[2] Daniel Defoe wanted women educated in order to make them better companions for their husbands, and some women agreed with this view. John Locke, the Enlightenment philosopher, thought women should be educated to enable them to teach their own children.[3] In a male dominated society, it was inevitable that the male view would prevail, and that women would become educated 'to render themselves pleasing to men' in accordance with the duties of women as preached in the popular conduct books of the period.[4]

Ladies' boarding schools for the upper classes had existed in the 17th century. Many of these specialised in providing accomplishments like dancing, music and French, not only to enable girls to attract suitable husbands, but also to occupy their considerable leisure hours. Prior to 1779, dissenters had been prevented from operating schools, but when these restrictions were removed many new private schools, for both boys and girls, appeared all over the country. The existing grammar schools, which offered only Latin and Greek (and then only to boys), like Newport Grammar School in Newport, Essex, were becoming increasingly unpopular with the new bourgeoisie who wanted more progressive education. They also wanted education for their daughters.[5] Relaxation of the conditions previously imposed on schools meant that experimentation with the curriculum was now possible. This led to the introduction of new subjects like the English language being taught.[6] Unfortunately, it also meant a lowering of standards.

All these factors, including the increased affluence of the middle-classes, arising from the effects of the industrial revolution, resulted in a market-driven expansion of boarding schools catering for middle-class girls. Unfortunately, in their desire to ensure advantageous marriages for their daughters these nouveaux riches demanded accomplishments. Such education did not equip the girls to provide for themselves, and this would prove to have disastrous consequences by the mid 1800s. These new ladies' boarding schools were based upon the finishing-school models of London and Brighton, with one major exception. Although they emulated the upper-class schools' choice of accomplishments, many of these middle-class schools were operated by dissenters, or clergymen's wives and daughters, who had strong views on education, and appear to have instilled a strict moral code into their pupils, which the finishing schools did not. Later in the period, from the 1840s, the borders of Essex and Hertfordshire were favoured by Missionary Societies which established a number of schools in this area like Susannah Fay's establishment in Walthamstow, for 26 girls aged 6-17 years, and the Marsh Street School, Walthamstow, for 20 girls aged 11-17, all from south-east Asia and the East Indies.[7] These schools were not private boarding schools in the strict sense of the word as they raised money from public subscription, but in all other aspects they operated like other ladies' schools.

Throughout the south-east of England, there was a gradual increase in the number of ladies' boarding schools from the late 1700s onward. In Essex, most major towns, and many small villages, had one ladies' school by 1790, and some like Billericay, Brentwood and Rayleigh had two. By 1823, Pigot's Directory shows as many as three in Billericay and four in Halstead. Larger towns like Colchester and Chelmsford, of course, had many more. Ladies academies were thriving during this period. There are numerous references in advertisements to intended openings of schools, like Mrs Miles in Ingatestone, who moved to better accommodation in 1799, as did Mrs Wink of Rayleigh, to a 'more convenient house....for the better health and improvement of those committed to her care.'[8] These schools were, of course, private businesses and relied upon the owner's business acumen as much as her ability to teach. Shortage of pupils meant schools failed through lack of funds. Competition was rife and often spilled over into open warfare. Miss Nelson of a Young Ladies' School in

Brentwood complained in July 1800 of 'insidious rumours in circulation that they are "declining their school"' and wished to quash them, claiming that these reports had arisen 'from the ill design of some interested person.' They were obviously in difficulties as they hoped that 'the high price of provisions will be only a temporary evil.'[9] Such problems may have resulted from food shortages during the French Wars. If solutions were not found the school would close, or be sold. Circumstances like these meant that many schools were short-lived; however, women teachers were very resourceful and some schools seem to have been extremely successful.

Billericay case study

A good example of an early Essex school is Miss Kent's, in Billericay High Street, which provided a basic, but genteel education for middle-class girls in 1791. The house was large, with a substantial vegetable garden, an orchard and flower borders, and possessed a separate schoolroom with a playground (Fig. 1).[10] A photograph of the building exists dated c.1890 which makes identification still possible today (Plate 1).[11] The school was well placed to receive boarders as it lay on the coaching route from Southend to London, via Rayleigh and Chelmsford. It is not known when the school began, but an advertisement in January 1791 gives evidence of increasing numbers.[12] Girls received 'polite education'. This normally meant just English and needlework, and cost 15 guineas per annum, plus the 1 guinea entrance fee, which appears to have been a fairly standard charge across all south-eastern counties, except London, where it was higher. French, writing and drawing were offered as additional extras, from 9s. to 15s. per subject. This brought the total fees to about 25 guineas per annum, which was high compared with some other schools of the period, but considerably less than the 57 guineas charged by Mrs Pemberton in Chelsea.

Very few mentally challenging subjects were included in early curricula. Nicholas Hans found only one school in Essex, run by Florian Jolly's wife in Leytonstone, that taught maths and science.[13] Arithmetic was occasionally included in early curricula, but usually as an optional extra. History is notable by its absence, although geography was occasionally taught. The Misses Fulcher and Dyer of Witham offered geography in 1790. Needlework and handicrafts continued to be taught in boarding schools under a bewildering array of descriptions, until well into the late 1800s despite divided opinion on its usefulness since much of it was considered frivolous and unpractical. Miss Bloss, of Halstead offered 'tambour work', embroidery using a frame, and Catherine Hart of Braintree had a 'teacher of wax flowers' (sic).[14] Fortunately, provision for English language, grammar and writing was
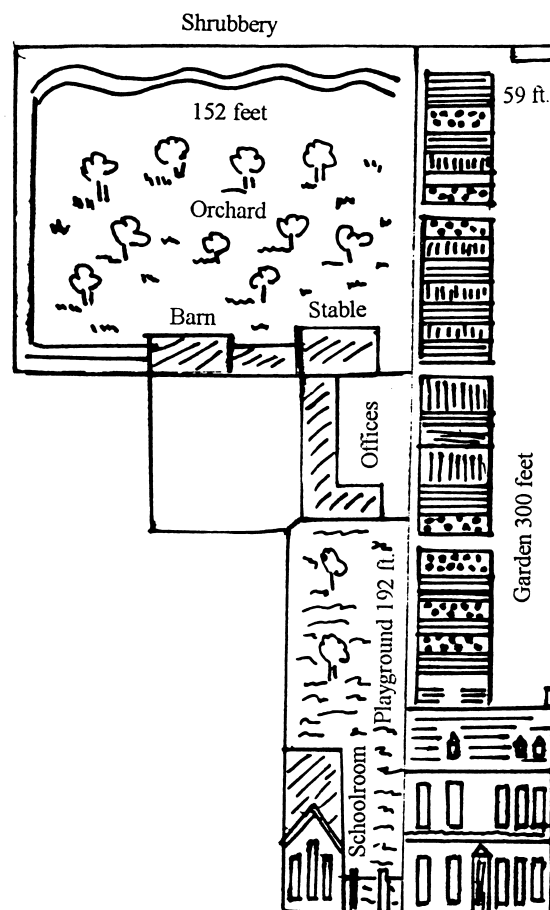
Fig. 1   Plan of grounds belonging to Miss Kent's Boarding School in Billericay (redrawn from British Museum Heal and Banks Collection 104.47).

constant throughout the county. Although standards may have varied considerably, these were at least useful subjects.

Throughout the development period of ladies' boarding schools, theories were advanced as to the correct curriculum content and housing conditions for girls. Several writers, like Fenelon, and Locke, favoured fresh air and exercise for good health, but standards of fashion and beauty often dictated the methods employed in these schools. This resulted in only singing, dancing, and sometimes walking, being encouraged during the period from 1790 to the 1830s, except for a few instances of bathing.[15] A curious advertisement exists, connecting Miss Kent's school with bathing facilities in Southend. In April 1797, Mrs Kemps, of Southchurch, offered to accommodate young ladies aged 3 to 14 years during the bathing season, 'without discontinuing the most essential parts of their education.' Further details could be obtained from Miss Kent in Billericay, and Mrs Cadman of Southend.[16] It is not known how this system operated, but it sounds as though some form of education was offered during the children's stay. Royalty set the trend for sea bathing in Southend in 1801, when George III's 5 year-old grand-daughter, Princess Charlotte, visited the town to bathe on the

Plate 1   Billericay High Street in a photograph by Fred Spalding, with the location of Miss Kent's school arrowed.

advice of her physicians.[17] Maldon also has an example of salt water bathing as part of the curriculum, which will be discussed later.

Up to age 11, children of both sexes were often boarded together. Examples of this have been found in Kelvedon and Stansted Friends' Schools.[18] Above age 11, the sexes were separated, with the girls invariably being taught in an entirely female environment to keep them chaste for marriage. Children were often requested to bring with them sheets, towels, and cutlery. In Stansted, in 1814, requirements specified 'a silver dessert spoon, knife, fork and 3 towels'. This was quite up-market for a small country village school.

Very little is recorded about the conditions in these schools. Fanny Keats, sister of poet John, was boarded at the Misses Mary Anne and Susanna Tuckey's school at 12 Marsh Street, in Walthamstow. This was such a popular school that it overflowed into the house opposite, owned by Miss Caley who was a friend of the Tuckeys. Forty children were boarded in these two buildings suggesting that conditions may have been a little cramped. John corresponded with his sister during her schooling, but unfortunately Fanny's letters to John are lost, presumed destroyed.[19]

Maldon Case Study

According to Richard Poole, Cromwell House School was regarded as the best ladies' seminary, not only in Maldon but in the whole of Essex. [20] Mrs Catherine Wilmshurst, the wife of Reverend Simon Wilmshurst, Congregational minister in Maldon from 1773 to 1800, started the seminary in the 1780s and, after her second marriage to Reverend Morris, continued her involvement with the school until she

died on 23rd November, 1846, aged 92 years.[21] So grateful were her pupils for the excellent education they had received, that they raised a monument over her grave 'setting forth her virtues'.[22] She was succeeded by her daughters Catherine and Ann Wilmshurst.

Maldon is situated on a hill at the head of the estuary of the Rivers Chelmer and Blackwater, and within easy reach of both London and Chelmsford.[23] The town's location meant it was well-placed to facilitate the flow of goods from sea-going vessels to the capital and inland towns. Its greatest period of economic development occurred in the eighteenth century, with a general increase in maritime trade. In 1775 the Maldon Stage Fly ran through Danbury, Great Baddow, Stock and Billericay to Shenfield where it connected with the London stage. Re-routed through Chelmsford, it became a daily service in 1785. There was also a packet, which linked Maldon to Kent.[24] So, although Maldon appears isolated, it was well-connected to both London and other towns. This was an important factor if boarding school owners wanted to attract pupils from outside the area, which Cromwell House School appears to have done. In 1801, the population of Maldon was 2,300 which had more than doubled to 5,144 by 1841.[25]

The 1841 census shows that Catherine Morris, aged 86, wife of Reverend Morris, the Congregational minister of Maldon, was head of the Cromwell House Seminary, but that Catherine and Ann Wilmshurst, daughters by the first marriage, were running the school with eight additional live-in teachers. Two of the younger teachers at this time, Mary Ann Dillerson aged 17, and Maria Lowe aged 20, took over the running of the school ten years later.[26]

The school was advertised as 'in a commodious, airy and healthy house' which it certainly was, as the building (which exists today) is situated high on a hill overlooking the estuary.[27] It was built by Sadd, a timber merchant with his own fleet of barges, who installed a belvedere on the roof to observe his ships' movements on the river.[28] It is a very large, three-storey Georgian house, with cellar, partial attic and adjoining coach houses.[29] All of this would have been necessary to house a total of fifty-five people; a huge number to feed and sleep, requiring good organisational skills. In 1841 there were forty girl pupils aged from 6-19, a staff of twelve, assuming all the teachers and servants lived in, and three family, in an entirely female household. The first record of the house is a lease for one year between Catherine Wilmshurst, John Sadd and Daniel Queneborough of Dunstable dated 1807.[30] A detailed plan of the site in 1848 shows Ann Wilmshurst as owning three adjoining plots.[31] There is a plantation and garden surrounding the buildings, which is larger than the plot size of the house, and would have given the whole a spacious feel.

Of the forty girls listed, slightly less than half, eighteen in fact, are shown as out-of-county, with seven pairs of pupils sharing common surnames. Sisters and cousins were frequently boarded together. This often accounts for the large disparity in ages between the girls. Although the school may have been intended for girls over 11 years, occasionally there were girls as young as 6 years also boarding, probably for reasons of convenience. It is unlikely that the school principals objected as it brought in much-needed funds. It was also quite common for brothers, and other male relatives of girls in boarding schools, to be sent to comparable, or better schools, in the same town. There were two male boarding schools in Maldon in 1841: Reverend Salisbury Dunn's School and William Wyatt's. There is no apparent kinship link between the pupils in Dunn's school and Cromwell House in 1841, but Wyatt's school has five boys with the same surname as five Cromwell House girls.[32] This is significant because Dunn's School taught Classics, whereas William Wyatt's school taught modern, commercial subjects, more in keeping with bourgeois needs.

An undated prospectus exists for Miss Wilmshursts' & Miss Banger's Seminary, Maldon, Essex, 'In a commodious, airy and healthy house.' This probably refers to Catherine Wilmshurst, daughter by the first marriage, who may have taken over the running of the school from her mother, Mrs. Morris, some time after 1823. The young ladies were boarded and educated in English, French, Geography and History with useful and ornamental needlework, at 24 guineas a year, plus one guinea entrance. Pupils paying 34 guineas a year could be taught all accomplishments 'by ladies of the family' and supplied with the use of music (which suggests that either singing or instrument lessons were given). School books, and materials for drawing and writing were included in the cost; only washing was extra. Bills were to be paid half yearly and a quarter's notice was required of removal.[33]

The Wilmshurst school was very progressive in its choice of curriculum subjects. Few schools appear to have taught history, and then only as an optional extra. Miss Wilmshurst not only taught history and geography, but she wrote a geography textbook for use in the lessons. This clear, concise book appears to have been popular, and ran to eight editions as it was doubtless a boon to teachers in a period when few instructive books were available.[34] Geography and 'use of globes', taught together, was the furthest most girls ventured into the field of science, largely, one suspects, because it was considered unladylike, but also because of the dearth of school manuals on scientific subjects, even if the women knew how to teach them, which they probably did not. Teachers were not formally trained, so could only offer the subjects they knew. Specialist teachers were brought in to supply pupils with additional subjects. The Wilmshursts offered, 'Dancing and French taught by Mr. Mason and M. Danet'; the latter title suggesting that authentic French was offered by a Frenchman. Many French and dancing teachers were male, French nationals, particularly after 1789 when society was permeated by refugees from the continent. This intrusion of males into the convent-like conditions of these female establishments must have been potentially disruptive to life in the school.

An intriguing extra on the original Wilmshursts' and Banger advertisement is a subscription to the salt water bath for 'one guinea the season.' In *Encyclopaedia Londinensis*, 1816, under Maldon, it states 'a new and handsome bath erected, which brings much genteel company.'[35] John Handley owned the sea water baths at The Hythe, on the south side of the Chelmer, which he had purchased in 1840 for £150. He died on 8th March 1863 and left the bath house to Benjamin Turnage Handley, so presumably it was still operating at that date, although bathing machines were certainly in use later.[36] A photograph of the building exists, dated 1927, which shows Bath Cottage at the edge of the creek blocked to form the popular Marine Lake which was completed in 1905.[37] Quite how these baths operated is not known, but no doubt it was an amusing, and healthy, optional extra for Miss Wilmshurst's pupils, to relieve the tedium of lessons.

The 1851 Census records Maria Lowe, aged 29, and Mary-Ann Dillerson, aged 27, previous teachers, now governesses, running the school with Lowe's sister, Rachel, aged 20, plus two other female teachers and a retired governess, Catherine Wilmshurst, as 'boarder.' All these females were unmarried. By the 1850s, there was a growing number of unattached women due to the widening

gap between the number of males and females in the population, which meant there were plenty of females available as both teachers and pupils. There were then only twelve pupils, four from London, the others from Essex county, plus two female servants. No girls came from Maldon, although one was from Heybridge. Several had been baptised within a 5 to 10 miles radius of the town, from places such as Woodham Mortimer, Little Baddow and Witham, but there were also pupils from Waltham Abbey and Norton Mandeville, distances of over 30 miles away, assuming the children still lived at the place of baptism (Fig. 2). Of the eight pupils from Essex, four pupils were traced using nominal record linkage, and tentative links were made with two others. These show that Mary Bygrave was the fourth child born to Edward and Julia Bygrave in Little Baddow, of five girls and one boy baptised there between 1830-39. Her father is shown as 'Gentleman Farmer.' Two other pupils' parents were listed as farmers; one was a druggist; another, Joseph Going, was a 'Shipowner, sailmaker, coalmerchant and agent in Heybridge Basin' in Pigot's Directory for 1850.[38] The Going family became well-established as ship-owners, and a Going's Wharf still exists in Heybridge.

There were numerous reasons why girls were sent to boarding school, but for Sarah Jane Kernot of Rayleigh it was probably because her father had died, and her mother may have taken over the family business. Her mother is listed in 1850 as 'Druggist' although the baptismal register shows George as the 'chymist.' He was buried on 26 May 1848, aged 45 years. One of the other girls, Ann Pitcairn, appears to be related to a local councillor, a land tax commissioner and a wine merchant, and Harriet Hutley was from a farming family in Witham. It would appear, therefore, that the girls attending this school were all from well-connected, middle-class families with good incomes. Hobsbawm states that generally the middle-class income in mid-Victorian Britain was between £1,000-£5,000 a year; this group included merchants and ship-owners.[39]

By 1861, former teachers Sarah Carter and Rachel Lowe are shown as principals of a much diminished school, with Catherine Wilmshurst, now 74, as a boarder. There is only one female teacher, a servant, and five pupils. One pupil is from Kent, the remainder from Essex. One child is the daughter of a farmer in Hockley, the other may be a cousin. Perhaps the reason for the reduction in student numbers was due to the effect upon navigation of competition from rail transportation, creating a local
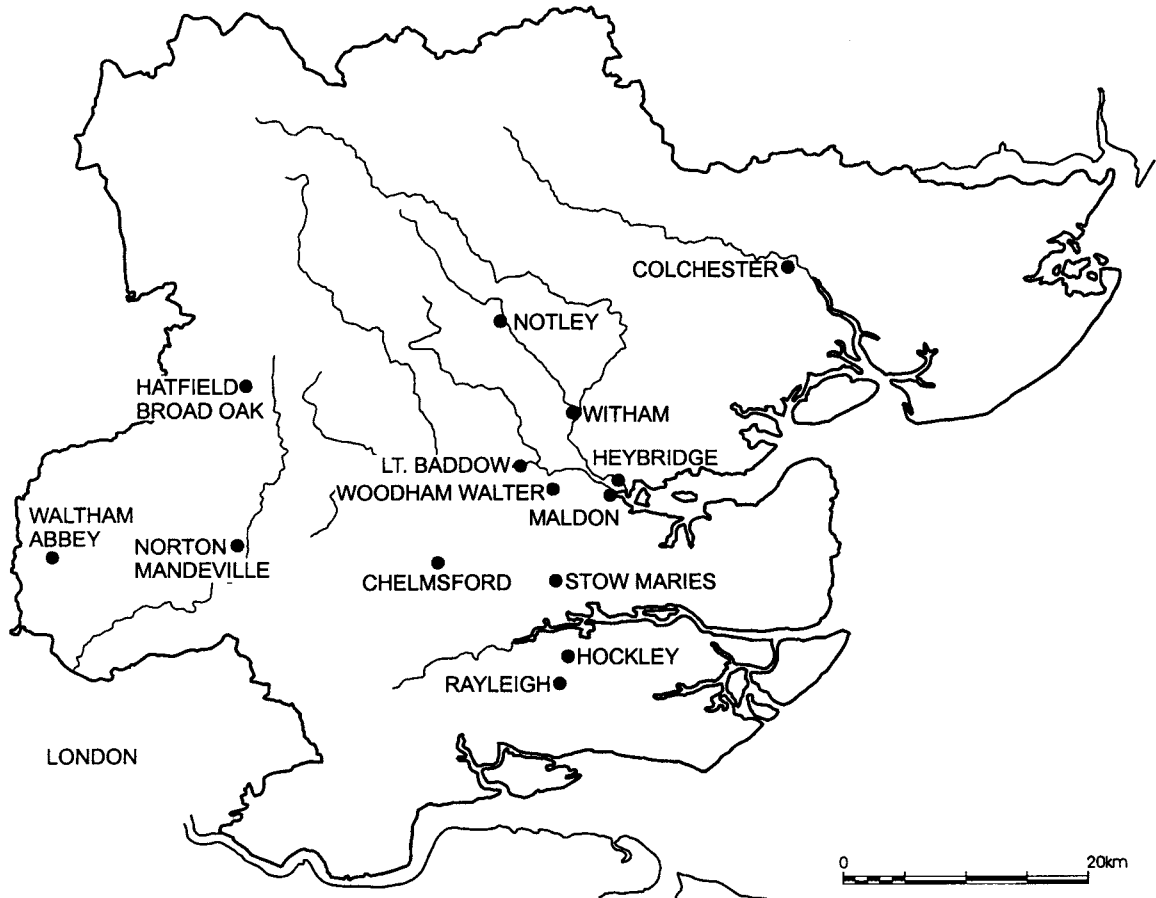

Fig. 2   Places of baptism in Essex of girls attending the Cromwell House School, Maldon, in 1851 and 1861.

depression. It may also have been known that the Cromwell House school was in decline, as Catherine Wilmshurst died the following year in October, 1862 aged 75 years.[40] Mrs Morris's educational establishment had survived for 59 years during her lifetime, and continued as a ladies' school for at least another fifteen years after her death.

Cromwell House was a long-lived and successful school. The quality of education it offered is unknown, but it appears to have been better than the average ladies' boarding school. Nevertheless, it was still a business, supplying a demand for genteel education, which included accomplishments. To prepare girls for marriage and motherhood at this time was becoming increasingly inappropriate as many now faced the prospect of spinsterhood. But, throughout the 18th and well into the 19th century these schools continued to be both class and gender-based. They provided an education which did not equip the girls to earn their own living, and yet, as the century progressed it became increasing necessary for them to do so. One of the few options open to them was teaching. This was regarded as an extension of child-rearing and therefore, socially acceptable as an occupation for women. Unfortunately, these women were merely perpetuating their own poor education. It needed a radical change in social attitude to break the cycle, but this was still some years in the future.

Despite all the criticisms levelled against them, these private ladies' schools delivered the kind of education demanded of them by their middle-class clientele. If they had not done so they would not have survived as long as they did.

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'A Venture of Faith': the building of a school in Stow Maries

by Beryl A. Board

The history of schooling in Stow Maries is similar to that of many other small rural parishes. It was, however, distinguished in the 1920s by the building of a new Church school, an achievement which at that time gained official commendation and national press publicity. An account of the old school and of parish politics in the years after the First World War is necessary to an understanding of the enterprise.

The story begins in 1914 when Gordon Fuller Smythe became rector of the parish. He came from St Andrew's, Haverstock Hill, a London parish of 17,000 people, to a small agricultural parish with four farms and a population of *c*. 200.[1] It had a National school with an adjoining teacher's house, built on glebe land in 1871 when the population was 279 (Plate 1). The schoolroom could accommodate 68 children and between 1905 and 1913 the numbers on the register fluctuated between 42 and 68.[2] The numbers were inflated by the attendance of children from the neighbouring parish of Cold Norton, where the Church school was closed in 1908 in anticipation of the provision of a council school, a project that was not accomplished until 1914.[3] In 1911 an inspector found the work in the Stow school 'very busily carried on' by the two teachers and the children. He noted that the older children seemed to think and work more quickly than was usual in rural schools, but a separate room was needed for the infants. The school managers, unable to provide the extra room, suggested that a joint council school

Plate 1. Stow Maries, the old National school and teacher's house.

should be built in a central position between Stow Maries and Cold Norton to serve the two parishes. The living was served at that time by a curate in charge and when the rector, F.H. Surridge was told of the proposal he strongly opposed the closure of the Church school and the managers withdrew their proposal. When the Maldon Sub-Committee agreed to allow division of the existing schoolroom instead of an addition, Surridge said that he would be responsible for the collection of a fund to meet that modified demand. There is no evidence that the division was made and in 1912, the Board of Education raised again the need for a separate infants' room, pending the opening of Cold Norton council school. The managers contended that the new school would draw away half the children from the Stow school; in the event only ten children, all resident in Cold Norton, left to attend the new school when it opened in January 1914. The Board of Education decided, however, not to press for provision of an infants' room at the Stow school, which by 1915 had only 31 children.[4]

Gordon Fuller Smythe (Plate 2), like his predecessor, was committed to the preservation of the Church school. Children were his special concern. His influence was felt throughout the parish, for which he adopted the spurious name Stow St. Mary, supposing the name to be derived from the dedication of the parish church. That form had occasionally been used before Smythe's arrival, instead of the feudal addition Mareys or Marris, and in his time it came to be used on signposts, and as the name of the railway halt.[5] Smythe was an Anglo Catholic and proceeded to make the parish church what he called 'an outpost of Catholicism in south east Essex'. Although his churchmanship put him in conflict with the bishop of Chelmsford, J.E. Watts Ditchfield, Father Smythe, as he was known, maintained it throughout his ministry, attracting a large, regular congregation at the daily mass and three Sunday services.[6]

Soon after his arrival the school managers, under his chairmanship, made improvements to the schoolroom.[7] He and his wife, Emily, organised the production of plays, concerts, and dances. At Christmas the children were given a party at the

Plate 2.   The Reverend Gordon F. Smythe.

rectory, with a candlelit Christmas tree and presents for all, and the rector joined in their games.[8] He seems to have served, perhaps unofficially, as chaplain to the wing of 37 Home Defence Squadron based at Flamberds farm, and three of the airmen, casualties of flying accidents, were buried in Stow churchyard. The airfield closed in 1919,[9] but Gordon Smythe and his wife formed an enduring friendship with Claude Ridley, the first officer commanding that wing of the squadron,[10] and the wartime association of the parish with the squadron, as well as the military service of local men, added force to the rector's efforts to establish a village war memorial. Immediately after the Armistice in 1918 he called a parish meeting to discuss the provision of a memorial. Among the projects he suggested were an additional classroom or cloakroom for the school and a recreation and reading room. The meeting chose the latter, and Smythe said that he would give three or four acres of glebe land for the building, a playing field, and a cricket pitch. A war memorial committee was elected but nothing had been done by the next annual parish meeting, at which some people doubted that the proposed building would be held in perpetuity for the village. The rector assured the meeting that his gift of glebe land would be secure and that the building would not be used for

religious purposes. The minutes of the next annual meeting in 1920 record only that 'many remarks were passed ... the meeting closed with nothing definite settled.'[11] A few days after that meeting Smythe's only son, Lee Fuller Smythe, died at sea after contracting malaria during his service with the Bengal Rifles in India. No parish meeting was recorded in 1921 and in that year Smythe planned to install an aumbry for the reservation of the sacrament, to be dedicated to the memory of his son,[12] but his desire for a parish war memorial was frustrated by controversy and indecision among the parishioners. At the parish meeting in July 1922 he sought to bring 'peace and goodwill' to the reading room project which, he said, had caused friction in the parish, by a new proposal that the memorial institute, for which he would borrow money on mortgage, be built on land opposite Graylin's shop in The Street. The meeting accepted the proposal, subject to the institute being granted to the parish without restriction.

The next parish meeting in May 1923 rescinded the minute of the July meeting. Smythe, who had prepared a conveyance of the land and plans for the building, threatened to put an embargo on the £70 that had been collected already. The meeting responded by appointing the parish council trustees of the fund.[13] The erection of a war memorial in the church may have influenced the meeting's rejection of Smythe's proposals for the memorial institute, for he had completed a scheme for re-ordering the sanctuary of the church as a war memorial. A reredos and a tabernacle for the reservation of the sacrament were installed, and oak flooring was laid in the chancel. A plaque on the chancel arch, bearing the names of men from the parish and of three airmen of 37 Squadron, who had died in the war, and of Smythe's son, was unveiled on 23 July 1923 by Air Marshall Sir Hugh Trenchard, Chief of Air Staff and creator of the Royal Air Force.[14]

In November 1924, at its last recorded meeting, the war memorial committee admitted that with £70 in the bank they were 'no forwarder' after six years' indecision and argument, but they were unanimously against using the money to help rebuild the Church school. The committee agreed to take up the suggestion from 'a Gent from Cold Norton' that the two parishes might join in building a hall to serve both parishes, on condition that it was sited on the Stow side of Honeypot Lane, which formed their parish boundary, that the parishes contributed equal amounts of money and, more significantly, that no clergy were to be eligible for service as committee members or trustees, no religious meetings were to be held in the building, and that it should not be erected on glebe land.[15] Cold Norton had a hall opened in 1922, but its trust, in which the church was involved, was controversial[16] and the suggestion of a joint hall

with Stow Maries in 1924 may have been mischievous. Neither the proposed meeting with representatives of Cold Norton nor its outcome is recorded; the hall was not built.

The county education committee suggested in 1923 that the Stow school should be closed for reasons of economy and the provision of better educational facilities, and the children transferred to council schools in Purleigh and Cold Norton. The managers condemned the proposals. Fifteen months later the number of children on the register had risen to 38, and a new supplementary teacher was appointed.

By the time the school managers met in June 1925 Smythe had formulated his plan to build a new school and acted on it. He had already interviewed the education secretary at Chelmsford, the National Society for the Education of the Poor in the Principles of the Established Church, and officials at the Board of Education, and found that the old National school could be sold. The Board of Education permitted schools to be built in whatever material was allowed in the district for new government houses, so the local authority would allow the building of a school in wood on brick foundations and cement, which would save considerable expense (Plate 3). He had asked Wykeham Chancellor to prepare plans for a school to be built on glebe land adjoining the old school, which he would give for the new one. He told the managers that he could see his way to getting grants of £150 to £200, thought the old school could sell for £400, and he was prepared to devote to the project the proceeds

of the big fete in July, expected to bring in £100 at least. The remaining sum 'could be begged from generous lovers of church schools.' The managers asked him to proceed in the matter.[17]

Smythe claimed that he was an experienced beggar, having been responsible for the building of one church and restoration or renovation of three others. His method was straightforward. He identified the people who could provide what he needed and simply asked for it, often in person, believing in their generosity and the right of his cause. His appearance was striking and probably contributed to his success. He was 6ft. 4in. tall and usually wore a cassock, which proclaimed his calling (Plate 2). In his previous parish in Haverstock Hill he had organised annual two week seaside holidays for 150 children. He told how in 1913 he had been talking to a friend in the House of Commons, when he was introduced to another Member, who showed interest in his work for the children of his parish and soon afterwards sent a cheque for £100; the donor was Stanley Baldwin. In the cause of his London children Smythe begged as effectively in the City as he did in the House of Commons. Each year the meat merchants of Smithfield market sent fifty pounds of the best meat daily by the early morning train, free of charge and carriage paid, for the fourteen days of the children's holiday. He wrote, 'the meat merchants must have shivered when they saw my gaunt form.' On another occasion, when he was short of £25 a few hours before setting out for the children's seaside holiday, he called on a city businessman, who justified his reputation for
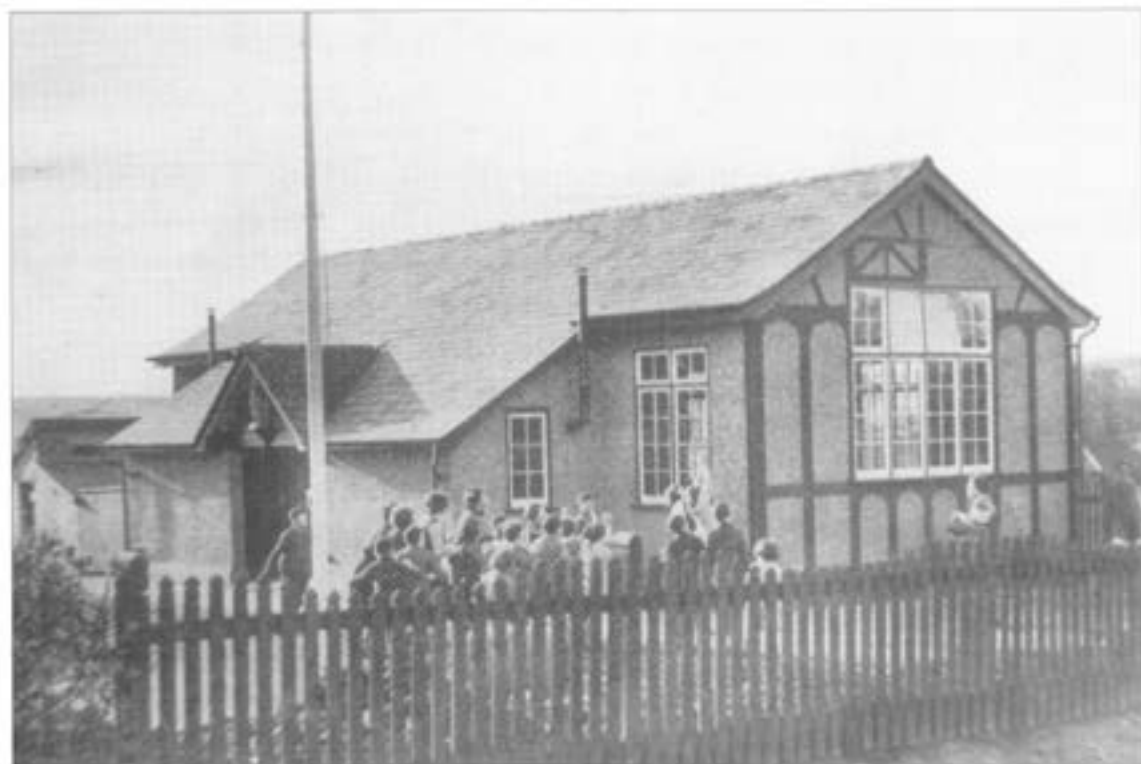

Plate 3. Stow Maries, the new school.

Plate 4. The classrooms of the new school.

generosity by giving the sum immediately. J.B. Sainsbury and his wife were frequent benefactors of the holidays and the financier Jack Barnato Joel gave £25 for that cause when his horse, Sunstar, won the Derby in 1911. After the First World War, however, Smythe found that those who in pre-war days were always ready to recognise their obligation and were generous, were often unable to do so owing to heavy taxation and the increased cost of living. Those who had accumulated wealth since 1914 had not yet recognised their obligation to be generous. Although when he sought donations to the school project he had never found it so difficult to obtain money, he was struck, as he had been through many years of begging, by the ready response of those who did not as a rule reckon themselves orthodox in their religion. He found the City of London 'full of these generous souls' and he received great kindness from those of Jewish faith.

Having the site and the plans for the school and mindful of the cost of letting the work out to contract, Smythe decided to obtain the building materials himself and employ a local builder, Fred Woodward of Cold Norton. He appealed to several well known firms in the trade and was seldom refused assistance. The result was that twenty-five firms helped to provide building materials and equipment. Their gifts included the cement (12 $\frac{1}{2}$ tons), nails, screws, paint, distemper, varnish, the

panelled ceiling, the wireless set, the flag and flagstaff, some of the wood, and part of the tar for the playground. The work of levelling the site was done voluntarily by men and boys of the village and farmers lent their horses and carts to carry the materials from the railway station at Cold Norton.[18]

By October 1926 the building was almost complete. The final cost was estimated at between £1,300 and £1,400. Among the gifts of money were £300 which Smythe had paid to buy the old school, £100 each from the diocese and the National Society, and over £200 raised in the parish. A sum of about £500 was still needed.[19] By the time the school was officially opened the outstanding sum had been reduced to £450.

The school comprised two classrooms, separated by a folding partition, two washrooms, each fitted with a bath and wash basin with hot and cold water, and water closets in a separate building behind the school. Whereas the old schoolroom, built on the north side of the teacher's house, caught the sun from the east before the children came to school, and from the west after they had gone home, the new school had windows on all sides. The rooms were decorated with pictures and friezes and there was a piano, a wireless set, and, for the infants, a rocking horse (Plate 4). In the playground were gardens for the children to manage, a bird bath, swings, and

statues of Pip, Squeak, and Wilfred of the *Daily Mirror* comic strip, which the children themselves had chosen.[20]

In December 1926 Smythe went to the Board of Education in London asking that the Parliamentary Secretary for Education, the duchess of Atholl, should open the new school. Of the three officials who commented on his application, the first observed, 'I rather hesitate to express an opinion in the matter. I only met the rector on one occasion and did not appreciate his manner to me personally, but that is neither here nor there. I don't see that the opening of this school calls for a visit by the Parliamentary Secretary.' The second saw no special reason to agree to the request, but the third, who was private secretary to the duchess, wrote, 'I feel that the enterprise shown here and the very practical interest shown by local people in the school deserves encouragement such as a visit by the Parliamentary Secretary would give. In my experience the circumstances are quite exceptional.' The same day Smythe wrote to the duchess telling her of the great effort made to build a school that would compare favourably with any in the country, and that to have her presence at the opening would give great joy and reward to the people for all the labour given. He assured her that Stow was in an easy motor ride from town and on a good road, and that she would receive a very hearty welcome from the countryside. He apologised for troubling her, knowing the many engagements she had in more important places, and ended his letter, 'We are very small and insignificant but we have built a school for the Church and Education worthy of both.'[21] The duchess agreed to open the school on Saturday 5 March 1927.

Katharine Stewart-Murray, duchess of Atholl, was M.P. for Kinross and West Perthshire, 1923-1938, and in 1924 Stanley Baldwin, recognising her knowledge, experience, and interest in education, invited her to be Parliamentary Secretary to the Board of Education. She was the first woman to hold ministerial office in a Conservative administration. She was a small woman with an earnest schoolmistressy air and she dressed plainly, but some people saw that she was beautiful. She was upright and uncompromising and in the 1930s she campaigned courageously against the cruelty of both Communist and Fascist regimes. Her opposition to Chamberlain's policy of appeasement of Nazi Germany caused her to lose a by-election to another Conservative in 1938.[22]

With the date fixed, the rector sought to involve other eminent people in the celebrations, drawing together the three themes of education, religion, and patriotism. A choral eucharist was to be celebrated in the church on the morning of the opening[23] and a preacher was needed to deliver the sermon. Smythe, no doubt by his habitual direct approach, sought the

interest of the Very Revd. W.R. Inge, dean of St Paul's Cathedral. Since 1921 Inge had contributed weekly articles to the *Evening Standard* in which he attacked, among other popular superstitions, the optimism of those who thought that 'the war to end war' had really succeeded. He was a popular figure with the nickname 'the gloomy dean', and was admired for saying what he thought. He had been brought up in the Tractarian tradition, although later he criticised its theology,[24] and was probably less uncomfortable at the celebration of mass in that tradition in Stow church than many other churchmen would have been.

The failure of the scheme to erect a reading and recreation room left unfulfilled Smythe's proposal for a village war memorial to the men who had served in the war. The reredos and flooring in the sanctuary were in memory of the dead and the village lacked a memorial to those who had served and survived. In the building of the new school an opportunity arose to honour both service and sacrifice by dedicating as a memorial the folding screen that formed a partition between the juniors' and infants' classrooms. A brass plaque, inscribed to that effect, was mounted near the partition. The Air Ministry, perhaps prompted by Smythe or Claude Ridley, presented an aeroplane propeller in memory of the officers and men of the R.A.F who were stationed at Stow Maries aerodrome during the Great War and of the three officers who made the supreme sacrifice.[25] The unveiling of the two memorials required some ceremony and the Under-Secretary of State for Air, Sir Philip Sassoon, was invited to unveil them at the school's official opening. Sassoon had been private secretary to Field Marshal Sir Douglas Haig from 1915 until after the Armistice, and he quickly comprehended the meaning of air power and took an enthusiastic and personal interest in the R.A.F. He was M.P. for Hythe from 1912 until his death in 1939, and in 1924 was appointed Under-Secretary of State for Air. He was a politician and a connoisseur of furniture, glass and silver. Osbert Sitwell wrote of him, 'No picture of life between the wars is complete without some account of one of his houses, filled always with politicians, painters, writers, professional golfers and airmen.'[26]

The bishop of Chelmsford, F.S.G. Warman, had intended to preside, but was unavoidably absent. His place was taken by Major E.A. Ruggles-Brise, M.P. for the Maldon Division.[27] It seems to have been a damp day; an umbrella appears on the edge of a photograph. Dean Inge preached on the education of the child Jesus, a country boy, observant of the lessons of nature, who studied the literature of his religion, and the history and culture of his own country. 'Religion', said the dean, 'is caught, not taught - caught like the measles from someone who has it.'[28] Inge is said to have preached habitually as

he lectured, with no oratorical art and with his eyes fixed on his manuscript.[29]

Luncheon was served in the old schoolroom, and before the official opening the whole company went to the new school to hear a special message broadcast by the B.B.C.[30] The duchess, on formally opening the school, said that she had come because she felt that there was something very special about the new building. It was not built by the education authority nor by the church, but by the rector and people themselves, who gave their time and their labour. She found the rooms charmingly and tastefully furnished, approved of the bathrooms which would help to teach habits of health and hygiene, and was especially interested in the wireless set. She was a talented musician and said that she hoped that the children would learn from the broadcasts to enjoy music and, perhaps, one day to attend concerts. The wireless would also lead them to read good books. 'Once you learn to love books', she said, 'you need never be dull, never be dependent on your other friends for amusement.' She told them that in the building of the school they had a wonderful object lesson of how everybody worked together. Nobody thought of himself; everybody just thought of the school. The children would learn to work together for the good of the school and when they grew up they would be able to think of the welfare of the country as a whole, just as they thought of the school.[31]

The Royal Air Force provided a guard of honour for Sir Philip Sassoon, who said that the joint unveiling of the memorials emphasised the interdependence of the air and land forces. The men who were stationed at the aerodrome were greatly helped and encouraged by the goodwill and sympathy shown them in the village when they were fighting for the same cause for which young men of the village fought and died on foreign battlefields. He spoke of the squadron's constant patrols to break up and disperse German raiders and of the turns that village people took in working the searchlight on the aerodrome. He was confident that the way those who had gone would wish people to show their abiding gratitude, would be to set before them, as their chief duty in peace, the steadfast pursuit of those great ideals of justice and humanity for which they gave their lives. So long as the memorials stood they would bear witness to what men can do and suffer, who set the service of their fellow men and women above their own safety and advantage. They would serve as an enduring example and encouragement to succeeding generations who might be called upon to make the same great choice between self seeking and self sacrifice. The R.A.F buglers sounded The Last Post (Plate 5).[32]

The opening of the school was widely reported in local, national, and provincial newspapers, including four Scottish papers interested in the involvement of the duchess of Atholl. One newspaper claimed that it

Plate 5. 'The Last Post'. The old school in the background.

was the finest rural school in England. Smythe himself wrote of it, '... it is not an ordinary school; it is a school of love; a school of personality and individuality. For months care and thought have been lavished on each detail.' The school had a Latin motto, 'Hic Amor Hic Patria', which Smythe translated as 'Here we give our love, here we own a home'.[33] The children wore school uniform: the boys wore jerseys, shorts, caps and striped ties and the girls navy blue tunics and berets with white blouses.[34] The school had its own song, 'Up and On', written by John Oxenham to the music of James Edmund Jones. Oxenham, a prolific writer since 1898, wrote popular patriotic and religious verse during the war. A reference to 'our boyhood' in his message to Smythe on the school's opening suggests that they were boyhood friends. He wrote 'The School that Stow Built', verses with the refrain 'The jolly new school that Stow built' and the lines:

... the school that the Rector, in service grown grey,
So cleverly planned :- head, heart and deft hand,
All went to its making and showed the right way
To build for tomorrow as well as today.[35]

When the celebrations were over there yet remained a debt of £450 for which the rector was personally responsible and felt compelled to appeal for outside help. A friend had promised £10 if twenty-four similar donations could be raised. An illustrated booklet was published, containing an account of the school, the sermon and speeches made at the opening, the school song and verses by John Oxenham, a preface by the bishop of Chelmsford and articles entitled 'Seditious and blasphemous teaching', by Captain H.P. Holt, M.P., 'The Church and the schools', by Annerly Ashworth Somerville, M.P. and 'Build not for today', by J.R. Griffin. An abridged version of the booklet was printed to advertise the full version, which was sold for 2s. 6d. The result of the appeal is not recorded.

Smythe's letter of appeal stressed the daily religious teaching in the school as 'an antidote to the Bolshevism that is in our midst.'[36] On March 11th a few days after the opening of Stow school, Captain Holt, who represented the Upton division of West Ham, moved the second reading in the House of Commons of the Seditious and Blasphemous Teaching to Children Bill, which would have made it an offence to teach such matters to children under the age of sixteen. In his contribution to the appeal booklet he presented evidence of the distribution in council schools of Communist propaganda, which mocked religion and encouraged disobedience, rebellion and the children's involvement in strikes. He claimed that thirty-nine Communist school groups had been established since the beginning of 1927.

Annerly Somerville, Member for the Windsor division of Berkshire, had been senior assistant master at Eton and from 1927 was President of the Independent Schools Association. His contribution

Plate 6. School children with teachers and Father Smythe.

was an account of the pioneering role of the Church in education. In conclusion he wrote, 'Great, sustained and self denying efforts have been made by the members of the Church of England to maintain their old schools and where necessary to build new ones. A striking instance of such an effort is the school just built at Stow St. Mary by the rector and his parishioners, the remarkable result of parish faith and energy.'[37]

J.R. Griffin, Assistant and Organising Secretary to the British Legion, and a friend of the Smythes, had been trained as an architect before the war. He was consulted on the plans for the school and supervised its building. He wrote of the contribution of the rector's personal friends, and of those who had no connection with the parish but who responded to 'the kindly and inspiring suggestion of the leader of this creative work ... that they, too, had a duty to Stow and to the great principles for which its school would stand.'[38]

The school usually had about 30 children, taught by two teachers (Plate 6). There were 13 seniors and 17 juniors and infants c.1928.[39] The splitting of elementary schools into two stages, junior and senior, was propounded in Board of Education Circular No. 1351 in January 1925 and although it became commonplace among many educational administrators, it was not so among Anglicans and Roman Catholics, who saw it as a threat to their schools. The Hadow report, *The Education of the Adolescent,* incorporated the policy in its conclusions.[40] That policy prompted Smythe to propose in 1929 that a Church Central school be built in the parish for senior children from Stow, Cold Norton, Latchingdon, and Purleigh. The managers of the Purleigh school responded favourably but when Purleigh parochial church council heard of the plan they passed a series of resolutions opposing it, which were printed for circulation at a meeting of ratepayers and parents called at the request of Father Smythe. The wording was unequivocal. The first two resolutions were: '1. While we should welcome a good Church of England school we cannot tolerate the idea of a school under the Reverend Gordon Smythe. 2. We look with grave suspicion on his offer to erect a school "by voluntary means." Where is the money coming from?'[41] Canon Frederick Macdonald, rector of Purleigh, disliked Smythe, probably because of his Anglo-Catholicism, and is quoted as saying, 'I've a rod in pickle for him.'[42] In 1930 Macdonald bought the advowson of Stow church, presumably to have some control over the presentation of the next incumbent, but also depriving Smythe of the support he might have expected of a patron.[43]

The Central school plan failed but in December 1931 Smythe proposed the addition of two rooms to the Stow school for the special instruction of children of eleven and upwards in, for example,

carpentry, cookery, printing and weaving. He called this 'a venture of faith' and appealed for donations towards the probable cost of £1000.[44] Nothing more is recorded of the enlargement plan and on Sunday, 11th September 1932, Gordon Fuller Smythe died suddenly of a heart attack, aged 61 years.[45]

His school survived for a few more years. In 1935 a government inspector found improvements, but numbers were falling as families left the parish, probably because of the inter-war depression in agriculture. The County Council wanted to close the school and their opportunity came in October 1940 when the army requisitioned the building. The school was closed and the few remaining children were transferred to other schools. The army did not occupy the building, but the school was never reopened. The building continued to be used as a parish hall, but in 1950 it was among redundant Church schools scheduled to be sold under the 1944 Education Act. The rector, having consulted Mrs Emily Smythe, argued that it was founded as a school and a parish hall, and was still used as the latter. Moreover, Smythe had inserted a reverter clause in the original deed by which the building would become glebe again if it ceased to be used as a Church school. The Minister of Education received conflicting legal advice about the validity of the clause and decided not to pursue the matter. The building was managed by the parochial church council on behalf of successive incumbents, until 1972 when the priest in charge set up a management committee, under his chairmanship, of representatives of the parochial church council and of the parish council, with responsibility for the maintenance of the building. Its ownership was transferred to the diocese under the Endowments and Glebe Measure 1976, and was leased to the parochial church council for a term of twenty years from 1982. The building was renamed The Smythe Hall in memory of its founder,[46] whose 'venture of faith' gave the parish a building that, although no longer a school, is still used for meetings, children's parties, and entertainments, and where the war memorials provide, as Sir Philip Sassoon predicted, 'an enduring example and encouragement to succeeding generations.'

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Notes

1. *'Hic Amor, Hic Patria' : the building of Stow St. Mary's School, Essex,* 48 (There is a copy in Essex Record Office (ERO) pamphlet box and another, with a letter of appeal inserted, in the British Library (B.L.08364 ee 33); *Crockford's Clerical Directory* 1909.
2. Public Record Office (PRO), ED21/5375; V.C.H. Essex, ii, 347.
3. P.R.O., ED2/161; E.R.O., A9358.
4. E.R.O., D/P 391/28/2; ibid. A10602.
5. *Kelly's Directory Essex* 1926; D.I. Gordon, *Regional history of the railways of Great Britain. Vol. V, The Eastern counties,* 55.
6. Chelmsford Cathedral Library (C.C.L.), Bishop Inskip's diaries, i. 211; ii. 306.
7. E.R.O., D/P 391/28/2.
8. Information from former pupils.
9. His name is on the war memorial of those who served; J.D.R. Rawlings, *Fighter squadrons of the R.A.F.,* 103.
10. Information from Mrs C. Ridley.
11. E.R.O. D/P 391/30/6.
12. C.C.L., Bishop Inskip's diaries, i. 211.
13. E.R.O., D/P 391/30/6.
14. Plaque in church; service sheet in author's possession.
15. E.R.O., D/P 391/30/6.
16. Ibid. A9358.
17. Ibid. D/P 391/30/6.
18. *'Hic Amor, Hic Patria',* 6-7, 48-9, 53; information from Mr T. Woodward.
19. *Essex Weekly News,* 15 Oct. 1926.
20. *'Hic Amor, Hic Patria',* 48-9, 53-45.
21. P.R.O., ED21/28304.
22. *Dictionary of National Biography (D.N.B.);* S. Hetherington, *Katharine Atholl 1874-1960: against the tide,* 1989, 9, 109-18, 215-17.
23. *Chelmsford Diocesan Chronicle,* Apr. 1927, 63.
24. *D.N.B.*
25. Memorial plaque in Smythe Hall; P.R.O., AIR 1/691/21/20/37.
26. *D.N.B.*
27. *Chelmsford Diocesan Chronicle,* op.cit.
28. *'Hic Amor, Hic Patria',* 23, 25.
29. *D.N.B.*
30. *Chelmsford Diocesan Chronicle,* op.cit.
31. *'Hic Amor, Hic Patria',* 15ff.
32. *Southend Standard,* 10 Mar. 1927.
33. *'Hic Amor, Hic Patria',* 6, 46, 51.
34. Information from former pupils.
35. *Who Was Who, 1941-1950;* e.g. *Hearts Courageous,* 1918; *'Hic Amor, Hic Patria',* 11, 13, 27.
36. B.L., 08364 ee 33.
37. *Parliamentary Debates* H.C. 203, 5th ser. col. 1525; *Who's Who of British Members of Parliament 1919-1945; 'Hic Amor, Hic Patria',* 32-8, 41-5.
38. *'Hic Amor, Hic Patria',* 39-40; letter from Mrs Smythe in Smythe Hall file in church safe; *The Royal British Legion Journal,* liii (10), Oct. 1973.
39. P.R.O., ED21/28304.
40. Percy, Eustace, Lord Percy of Newcastle, *Some memories,* 1958, 99. Reproduced in *Education, the child and society,* ed. W. van der Eyken, 1973, 305.
41. E.R.O., D/P 197/29/1.
42. Information from Mr G. Barber.
43. E.R.O., D/CP 17/42.
44. C.C.L., Bishop Inskip's diaries, ii. 306.
45. *Essex Review,* xli, 213; parish register.
46. E.R.O., A10602; Smythe Hall file in church safe.

Shorter Notes

TWO UNUSUAL FLAKED FLINT AXES

Hazel Martingell
Two flaked flint axes submitted for comment both have particular features of interest (Fig 1).
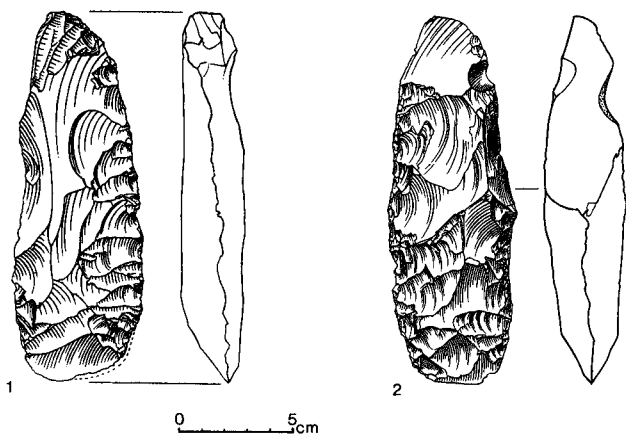

Fig. 1   Flint axes from Writtle Forest (1) and Cray Hill, Billericay (2).

1. The Writtle Forest flaked axe, 160 x 57 x 28mm, has a pointed butt formed by alternate blade removals flaked diagonally across the plane of the axe. These blades cut through the brown stained white patinated surface that otherwise covers the surface. The axe appears to be a Mesolithic tranchet axe (8000-4000 BC) which was subsequently modified by these blade removals, either to convert the axe into a blade core for the production of blade blanks, or to modify the butt end for use instead of the blade end. This modification probably occurred during the early Neolithic c.3000BC.

2. The Cray Hill, Billericay, flaked axe 160 x 57 x 36mm, is unusual in that it appears to be half finished on a very large flake. The lower half of the illustrated side is finely flaked, while the top half and reverse side have only large primary flake removals. As a result, it is difficult to date this artefact with any certainty, but it is probably Neolithic (4000-2000 BC).

Both axes are of markedly similar dimensions and it is possible that this was a standard size and weight.

A FLINT AXE OR ADZE FROM CRESSING

Edward Biddulph
This well-preserved grey/brown flint axe or adze (Fig. 2) was found some ten years ago in a field north-east of Adam's Wood at NGR TQ 783 195 between Cressing and White Notley. The tool, sub-triangular in section, is elongated with parallel edges, narrowing to a point at the butt end. It was tranchet flaked with one surface (illustrated) receiving more attention than the other. The cortex on the illustrated surface has not been entirely removed, and four patches remain. Like the Mesolithic axe/adze from South Benfleet (Crowe 1992, 1), this may indicate a somewhat cursory effort given to its production. The edges are also differentially flaked, with the greater amount of retouch occurring on one edge, giving the tool a decidedly knife-like profile towards the butt end. The blade has been ground and displays traces of use-wear, or 'glossing'. Tranchet flaking is characteristic of Mesolithic stone working, while grinding or polishing is a Neolithic technique. A late Mesolithic or early Neolithic date applied to this piece would therefore seem to be appropriate.

Adam's Wood lies within the Brain Valley, an area well suited for prehistoric settlement. Artefacts of late Mesolithic or early Neolithic date have nevertheless rarely been found there. The discovery of this axe/adze goes some way to filling this lacuna.
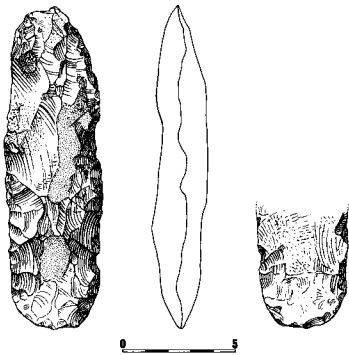

Fig. 2   Flint axe or adze from Cressing (drawn by David Williams).

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A ROMAN WALL IN ALL SAINTS CHURCHYARD, GREAT CHESTERFORD

by Daniel A.G. Gadd

A test hole was excavated at the gateway at the north-east corner of All Saints churchyard, Great Chesterford, to investigate the archaeological implications of widening and remodelling the entrance to the churchyard. The site lies adjacent to the Scheduled Ancient Monument of the Roman town of Great Chesterford. The earliest Roman feature in the area consists of a fort, constructed in the 1st century AD. The fort was relatively short lived, being succeeded by the town. The town walls were constructed in the 4th century, enclosing a polygonal area of 14.5ha. The walls were still visible in the 18th century, after which they were robbed for building material and hardcore (Collins 1996).

The development site lies 140m south-east of the Roman walled town but is still within an area of considerable archaeological interest (Medlycott 1999). In 1756 a Dr. Gower recorded that in addition to the main walled area there was a second enclosure on the southern side of Newmarket Road, between the mill and Crown Inn. Excavations in 1986 uncovered a wall foundation at Mill Cottage, and the northern churchyard wall was found to be standing on the foundations of a substantial wall about 3m wide (Fig. 3). Although the enclosure has not been securely dated, it is presumed to be of Roman date (Collins 1996). Small-scale excavation within this enclosure has identified Roman remains, consisting of 4th-century building remains overlying an earlier road and ditch features (Garwood in prep.). Previous excavations within the churchyard (within the presumed enclosed area) have also identified a large number of Roman pits and wells (Miller 1988). One of these pits, excavated in 1854, contained a smith's hoard consisting of over ninety iron items, mainly for agricultural use, but also an anvil and anvil bed (Neville 1856). By the 5th century the site was in use as an early Saxon cemetery, before becoming the site of the parish church, which it has been suggested may have its origins as a late Saxon minster.

In May 1999, a 1m square trench was hand excavated, next to the existing gateway, revealing a flint wall filling the entire trench (Figs. 4 & 5). The wall consisted of flint nodules bonded with a mid brownish-grey mortar with tile flecks. The upper
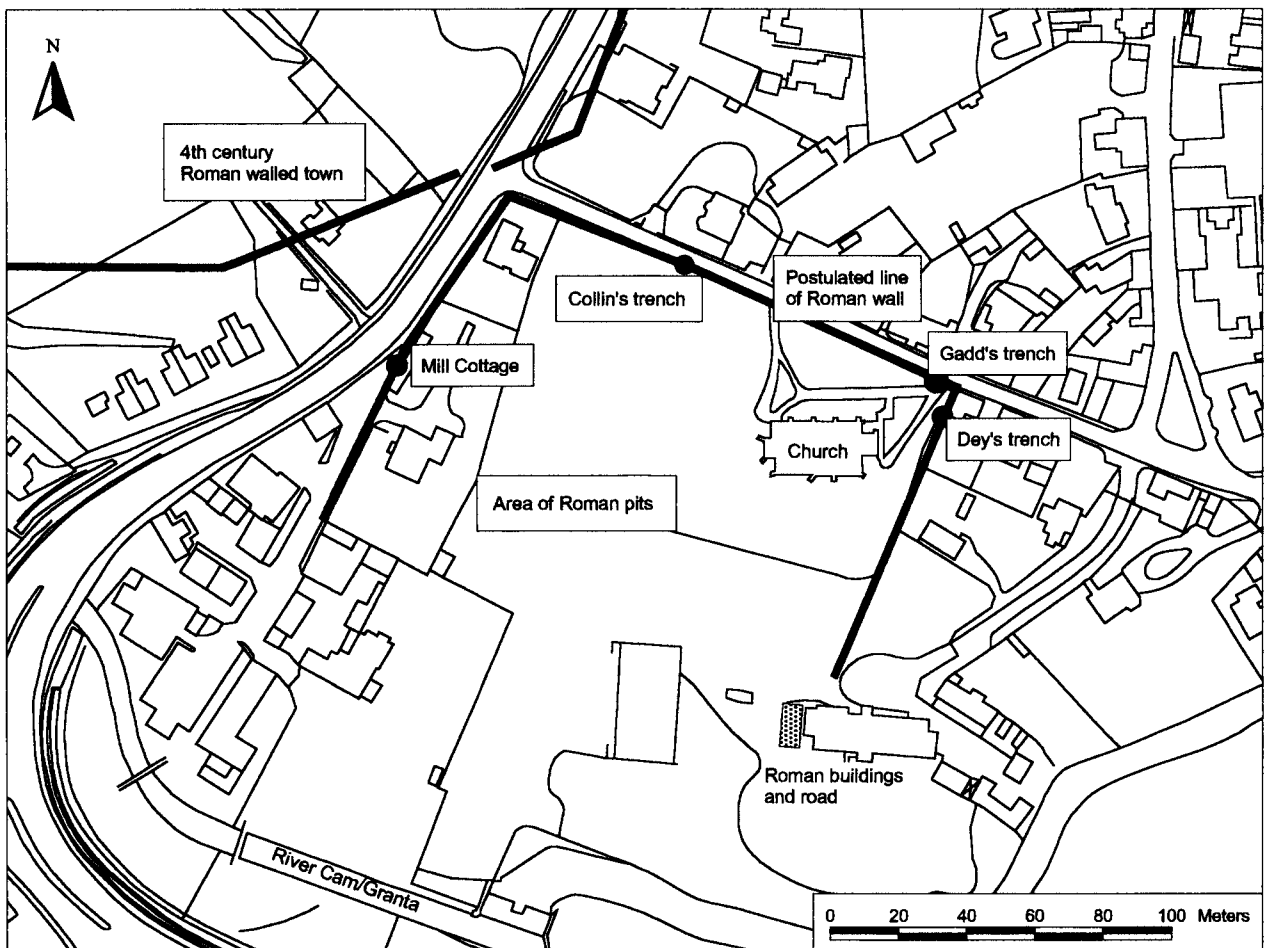

Fig. 3   Plan of Great Chesterford showing 4th-century town, suggested line of Roman walls, and location of excavations.
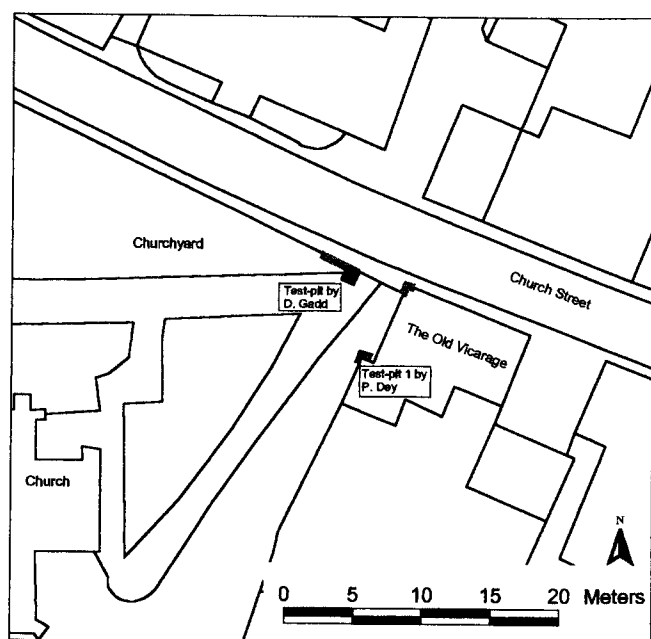
Fig. 4   Great Chesterford, plan showing location of test pits. (© Crown copyright Ordnance Survey. All rights reserved. MC10001480)

four courses were made of larger flints than the lower part of the wall. These upper courses formed a stub of masonry, 0.45m high by 0.35m wide and 0.60m long, rendered with mortar on the south-western side. It is likely that the wall at this level would have been visible in antiquity, though its full width above ground level was not established. The footing courses were cut by a modern post-hole. There were no finds to date the wall.

Whilst excavating this trench, it was noted that there is a flint and mortar foundation in the bottom of the wall of the old vicarage on the opposite side of the entrance to the churchyard. This has similar flint nodules and mortar to those in the wall revealed in the excavated trench and also shares the same alignment.

The wall found in the trench seems to be part of that noted in 1996, about 10m further to the north-west (Collins 1996). This had similar footings and was on the same alignment as the present churchyard wall. The presence of *opus signinum* in that stretch of wall suggests a Roman date, which would correspond to Dr. Gower's second enclosure. The construction of the present churchyard wall removed the other exposed face of the Roman wall, so its true width remains uncertain. Collins presents a number of alternatives, either that it was a fortified military post pre-dating the enclosure of the town or that it was part of the Theodosian military assistance to the towns in the late 4th century

Excavations at Bishops House and in the churchyard, within the area defined by the walled enclosure, has revealed activity starting in the 1st century in the form of pits and ditches. During the early 3rd century, there seems to have been a period

South-eastern facing Section of trench.
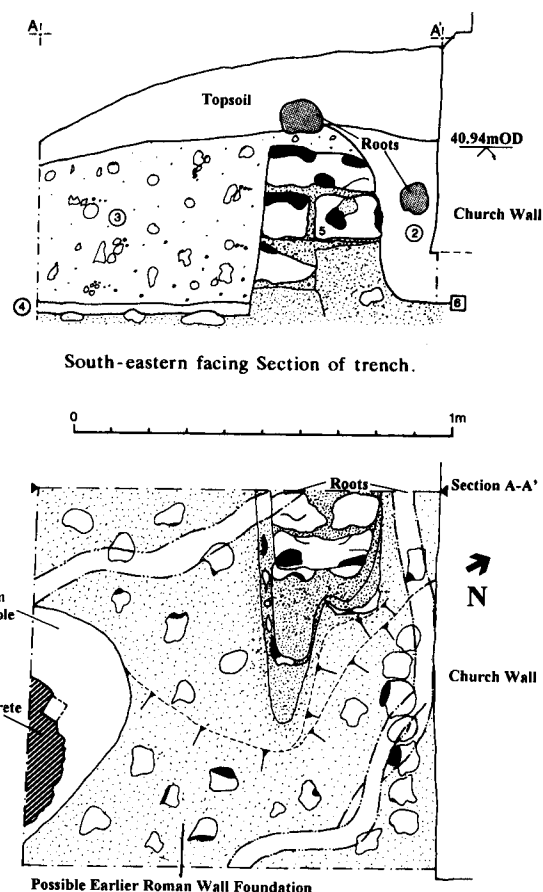
Fig. 5   Great Chesterford, plan and section of trench at churchyard gate.

of levelling and build-up of the ground surface. It is not until the early to mid 4th century that buildings appear on the Bishops House site: one of masonry construction, one of timber construction (Garwood in prep.). The function of these buildings remains unknown, though the construction of the masonry wall found in the Bishops House excavation is comparable to that revealed in the churchyard.

Supplementary information by P. Dey
A watching-brief on the removal of approximately 3m of the churchyard wall revealed that the Roman foundations did not extend north beyond the wall into Church Street, and may well have been not more than about 1.4m wide. In addition two trial trenches excavated against the property wall between the Old Vicarage and the churchyard revealed further flint foundations in a mortar matrix. The southernmost of these trenches recovered 29 sherds, dated to the late 3rd through to the late 4th century AD. The interpretation is that the eastern side of the churchyard may mark the eastern extent of the walled enclosure.

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A ROMAN SITE AT SAFFRON WALDEN

David Fell & Ron Humphrey

A small archaeological excavation was undertaken on land adjacent to 22 Gibson Way, Saffron Walden (NGR TL 53620 38316), in advance of the construction of a new house (Humphrey & Fell 1999). The site is located on the west side of Saffron Walden and comprises an area of c.11m by 7m (Fig. 6). It lies within the area enclosed by the medieval town ditch (the so-called Battle Ditches), immediately east of a Saxon cemetery and adjacent to an area of suspected Roman occupation – the suggested line of a Roman road lies some 50m to the

north of the site, and it is possible that a Roman fort may have been located to the west of the development area (Bassett 1982). In addition, a number of inhumation burials dated to the 3rd and 4th centuries have been found c.100 m west of the site.

Topsoil and a silty loam subsoil (L1000) overlay the natural strata of mixed chalk brash (L1001) to a depth of 0.5-0.8m. Six archaeological features were present within the excavation area, comprising three ditches and three pits and post holes, concentrated within the southern half of the site (Fig. 7). Most features were shallow, suggesting some previous truncation.

An east-west ditch (F1004) 800mm wide and 200mm deep traversed the southern part of the site. Just to the north of it there was pit or large post hole (F1012) which, together with the ditch, was cut by a similar feature (F1010). A further small post hole lay to the south (F1002). None of these features produced datable finds.

A north-west/south-east pit or ditch terminal (F1006) 800mm wide and 140mm deep was located on the eastern edge of the site, cut by a second, smaller, parallel gully (F1008). The former produced pottery sherds of a 2nd-4th century date, in addition to animal bone; the latter produced a single mid 2nd-century sherd.

The excavation confirmed the presence of Roman activity within the area. A ditch/pit (F1006) and
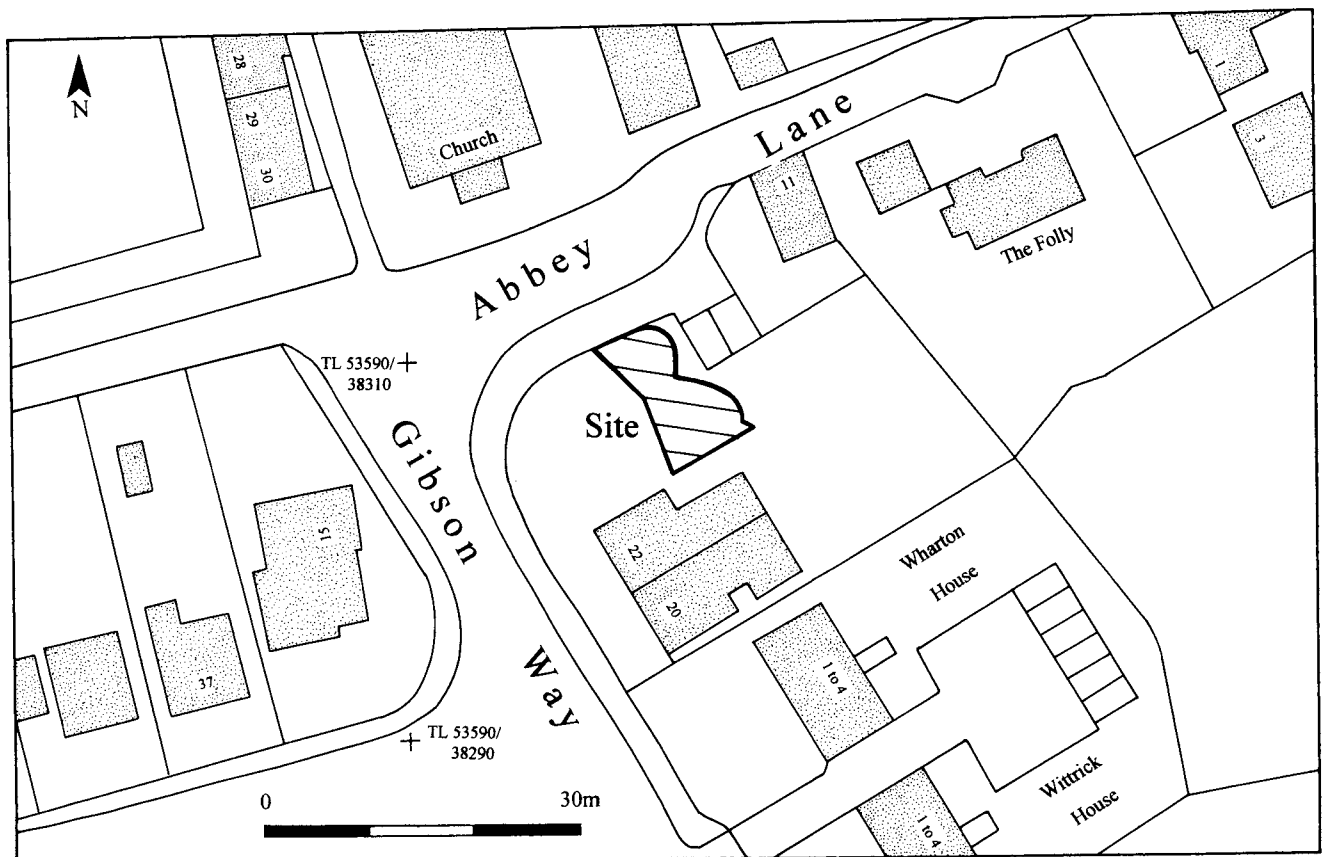

Fig. 6   Saffron Walden, Gibson Way, site location map.

gully (F1008) were dated by a small amount of pottery to this period. The remaining features were undated but probably Roman. The Saxon cemetery discovered to the west of the site in the 19th century did not extend into the area of excavation. Due to the limited extent of the excavations, the character of Roman settlement could not be established, but the Roman features could be interpreted as additional evidence for the presence of a Roman fort in the area.

Acknowledgements

The excavation was funded by Wood Hall Estates (UK) Ltd and carried out by Ron Humphrey on behalf of Hertfordshire Archaeological Trust. Advice was provided by Essex County Council AAG. Illustrations are by Donna Cameron.

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A ROMAN SITE IN RADWINTER

R. Havis

A watching-brief was undertaken on a development site at East View Close, Radwinter in 1998 (Fig. 9; EHCR 19095; TL60753755). Two ditches (1 and 3) were identified running across the site in a south-west by north-east direction, with two smaller ditches (6 and 7) running approximately north-west to south-east (Fig. 8). The ditches were probably field or paddock boundaries. A large dark spread (8) was observed in the northernmost corner of the site: surface finds were recovered but it was not excavated. The remaining features comprised rubbish-pits (2, 4 and 5) on the eastern side of the site. The pottery all dates to the first two centuries AD, and comprises a mix of table-wares, cooking vessels and storage jars.

The features were interpreted as a series of small fields or paddocks, parallel to the Roman road from Radwinter to Wixoe in Suffolk (1565 on Fig. 9), and at right-angles to the river and the Roman roads from Radwinter to Great Dunmow (1452), and Radwinter to Great Chesterford (1437). Previous investigations to the south of the site (1541-2) revealed at least two pits, which had been cut by the river, containing Late Iron Age and Roman pottery, animal bone and a hammer-stone. More surprisingly the finds also included a Greek coin from Knossos in

Fig. 7.   Saffron Walden, Gibson Way, trench plan.

Figure 8. Radwinter, site plan. Archaeological features in tone and numbered

Fig. 9   Radwinter, location of watching brief. The numbers on the plan relate to other Roman sites recorded on the Essex
Heritage Conservation Record. (© Crown copyright Ordnance Survey. All rights reserved. MC1000148001)

Crete, although this item maybe a later collector's loss. It is evident however that there is an extensive Roman site at Radwinter, possibly either a villa or farm estate, or a village which had developed at the road and river crossing.
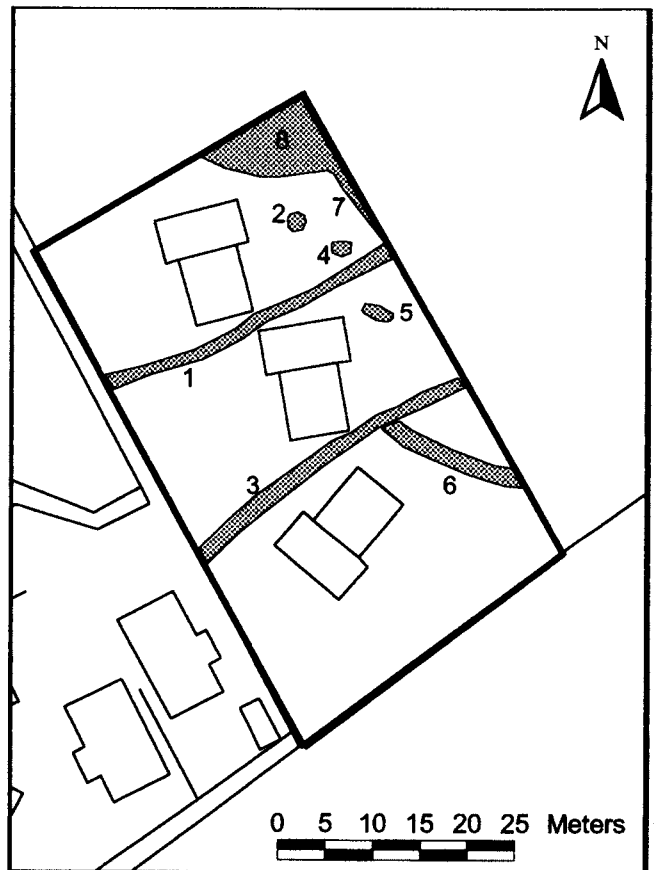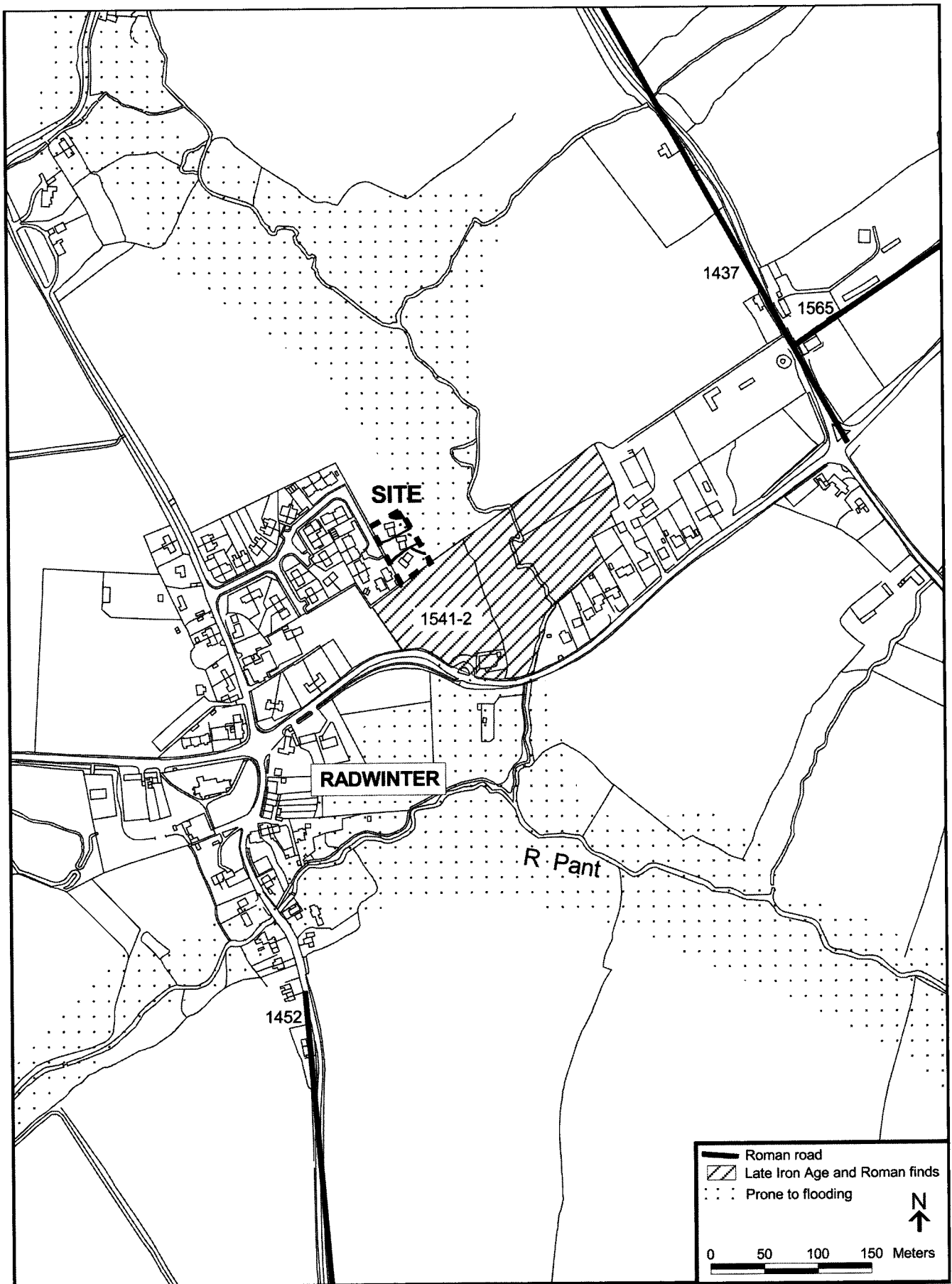
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AN IPSWICH-TYPE WARE VESSEL FROM ALTHORNE CREEK

Helen Walker

This vessel (Fig. 10) is an incidental find recovered from Althorne Creek, near Burnham-on-Crouch (EHCR 19328). The body of the vessel is complete, although the neck and rim are missing, and resembles a very thick-walled cooking pot. It is wheel-finished in a grey sandy fabric, and although abraded shows rilled, slightly burnished, surfaces. The vessel is undecorated and shows no evidence of use. It has been identified as Ipswich-type ware, made in Ipswich and perhaps related centres during the Mid-Saxon period. This was the first English pottery since Roman times to be fired in permanent kilns.
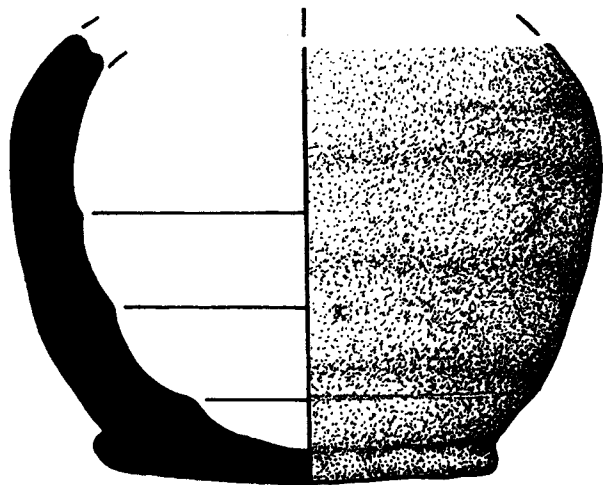

Fig. 10 The Ipswich-type pot from Althorne Creek (drawn by Nick Nethercoat).

An unusual feature of this vessel is its disk-shaped base, as Ipswich ware cooking pots normally have a sagging base. However, a comparable Ipswich-type ware disk base has been excavated in London (Blackmore 1988, fig. 26.40). Another interesting feature of this pot is the stepped internal profile. This sometimes occurs on the smaller Ipswich-type ware vessels, and may have been formed by inverting the pot over a last (Blackmore 1989, 79).

Ipswich-type ware is not common in Essex, but where it does occur has a mainly coastal and riverine distribution (Hurst 1976, 301). It has been found at the nearby ports of Colchester (Cotter 2000) and Maldon (unpublished), and on the coast at Bradwell (Rodwell 1976, 236). Therefore, the location of this find is in itself evidence that this is indeed an Ipswich-type ware product. Other find spots of Ipswich-type ware in Essex include Hill Farm, Tendring (Walker forthcoming); Mucking and Barking Abbey on the River Thames; Waltham Abbey on the River Lea (Vince 1984, fig. 1) and Wicken Bonhunt in the north-west of the county (Wade 1980, 98).

Ipswich-type ware is conventionally dated from the early to mid 7th century to the mid 9th century (Hurst 1976, 301-3). Perhaps the best dated example from Essex is the find from Bradwell, which came from a deposit immediately predating the building of the church of St. Peter on the Wall in *c*.654 (Rodwell 1976, 236). However, recent work in London shows Ipswich-type ware did not reach the capital until *c*.750 and did not became abundant until *c*.770 (Blackmore 1999, 39). There is also new evidence from Ipswich that it continued to be made into the late 9th and early 10th centuries (Vince and Jenner 1991, 88).

Acknowledgements

The author would like to thank Susan Anderson, Paul Blinkhorn and Keith Wade for their comments on this vessel.

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ARCHAEOLOGICAL INVESTIGATIONS AT THE MOATED SITE OF CHISWICK HALL, CHRISHALL

Jon Murray

During 1998 and 1999, archaeological investigations at the moated site of Chiswick Hall, Chrishall, (TL 4501 3755) (EHCR 3885), revealed the presence of a mediaeval building within the moated platform. Chiswick Hall is a grade II listed building and the moated site is a scheduled ancient monument (SAM 20683). It was a Domesday manor. The site consists of a rectangular moated enclosure, some 50m by 45m, formerly with fish ponds immediately to the north and south. The moat arms are 7-9m wide, and have recently been dredged. The present building is dated *c*.1600 (DoE listing) and occupies the western part of the moated platform, with a smaller outbuilding to the east. The excavation was occasioned by a proposal to link these two by a new structure, and also to construct a new boundary wall on part of the inner edge of the moat. Three trenches were excavated by hand to assess the nature and preservation of deposits on the site. One trench (3m x 1m) was located in the area of the proposed building, whilst two further trenches (1m x 1m) were dug on the line of the proposed moat wall (Fig. 11).

The site lies on a Boulder Clay hill-top (at a height of *c*.123.5m AOD), where a number of archaeological finds of earlier periods have been made. Two Mesolithic flint tranchet axes have been found close to the hall (EHR 3889). Fieldwalking in the early 1980s suggested the presence of a Neolithic site and a possible Roman settlement to the north and north-east of the hall (EHR 3886 & 6572). A Roman Kimmeridge shale bowl is recorded from the site of the hall (EHR 3888) and other Roman and mediaeval finds scatters have been found close to the

buildings (EHR 6569 & 6570). Recent excavations by Hertfordshire Archaeological Trust on the line of the Royston-Wendens Ambo Pipeline also revealed a Romano-British site to the north-west at Building End.

The natural sub-soil comprised a pale yellow flinty boulder clay with chalk flecks. Some of this appeared to be redeposited upcast from the moat. Shallow overburden comprising topsoil (L1000), and modern levelling deposits (L1001/1007), overlay the archaeological horizon (commonly 0.15m deep in Trenches 1 & 3, and 0.28m deep in Trench 2). Two residual struck flints and a small quantity of animal bone were recovered from the latter deposit.

Trench 1 contained the foundation of a mediaeval building. This took the form of chalk rubble with an orange/brown lime mortar core (0.42 m wide, 0.19 m deep) (F1009). It was constructed within a 0.8 m wide foundation trench (F1004), that had been backfilled with clay, tile fragments and mortar flecks (L1005). The foundation was aligned north-south, was faced with flint along its (external) eastern edge, and exhibited a smoothed mortar face along its (internal) western face. A possible post hole, filled with clay and mortar, was recorded to the north-east within the foundation trench. Subsequent observation of groundworks associated with the redevelopment revealed further traces of the wall foundation some 6m to the north when the foundation of the new link building was dug. Here, the mediaeval wall foundation comprised roughly-hewn large flint and chalk cobbles and blocks, bonded by a pale yellow, sandy lime mortar, here up to 0.77m wide. It lay only 0.08 m below the present ground surface.

A possible surface of flint cobbles (L1008) was revealed within Trench 2 at the eastern edge of the island. This formed a compact layer in a dark brown clayey silt matrix. The surface was only present in the northern half of the trench. No finds were made in association with the layer.

Substantial levelling and ground disturbance was recorded across the site, though sparse archaeological features almost certainly pre-dating the present (?17th century) building were present. The principal feature revealed was wall foundation (F1009/F1010). This was similarly aligned with the present standing buildings and moated enclosure. It clearly showed that the internal part of the building lay in the north-west corner of the moated platform, though no further evidence of the form or function of the building was identified. No dating evidence was found in association with the wall foundation, but it is almost certainly of mediaeval origin. A small area of flint cobbling in the south-eastern edge of the site probably represented the remains of a surface (L1008), possibly a yard surface or perimeter track along the inside of the moat.

Acknowledgements

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ON DATING FROM CLAY PIPE STEMS FOUND IN MALDON

Bill Clark

Tobacco was introduced into Britain in 1558 and by 1660 clay pipe smoking was becoming widespread. Clay pipes were cheap or provided free with tobacco, but were fragile and easily broken. Consequently
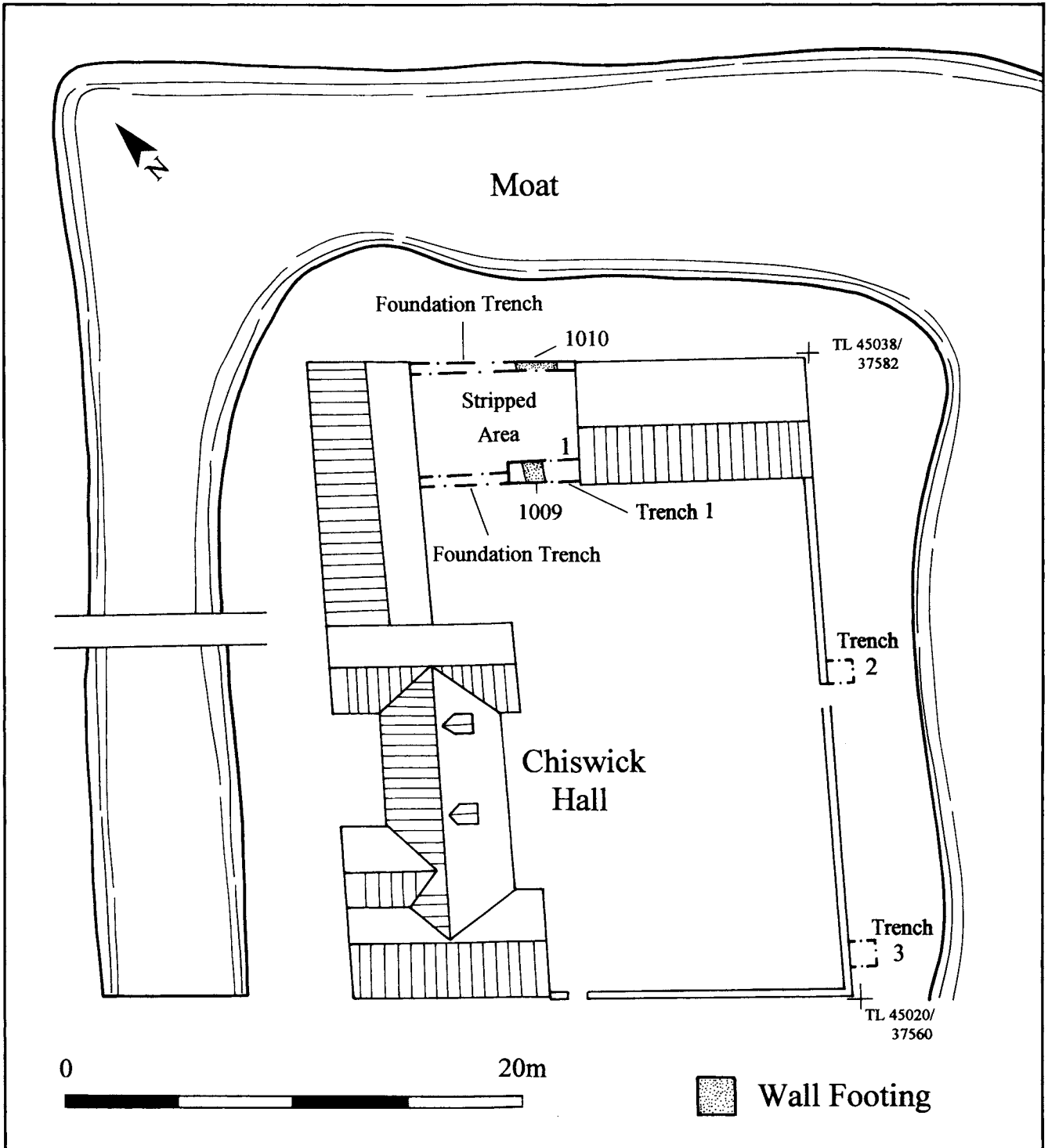

Fig. 11   The moated site at Chiswick Hall, Chrishall, showing the location of the excavations.

they had a short life before being discarded. The bowls when distinctive, particularly if decorated with the makers' initials, are closely datable, but only if historical data on pipes and pipe makers exists in a particular region. On archaeological sites, however, undamaged bowl fragments are much less common than short lengths of stem.

In a Maldon Archaeological Group Report published by Arthur C. Simpson entitled *Clay Smoking Pipes and Pipe Makers of Maldon,* data is presented on some 63 pipes relating to bowl characteristics, period of manufacture and stem bore hole. On page 22, he draws attention to the *'progressive reduction of the diameter of the hole through the stem from 3.5mm in 1600 to 1.5mm in 1850'.* This relationship seemed to imply a proportionality between date of manufacture and the diameter of the hole in the stem. If this were true, then a simple linear equation could be derived to express date of manufacture in terms of the hole diameter in millimetres. Could it be that easy ? The way to find out was to derive an equation, plot it on a piece of graph paper and test its accuracy, using the data recorded on Maldon pipes by Arthur Simpson. The equation turned out to be:

$$D = 125 (16.3-H)$$

where D is the year of manufacture and H is the hole diameter in mm.

Quite simply, you measure the hole diameter through a suitably high powered magnifying glass against a measuring scale marked in 0.5mm graduations to find H. Subtract the figure from 16.3 and multiply by 125 to find the date in years. The straight line graph, passing through the co-ordinates (1600, 3.5mm) and (1850, 1.5mm), relating D to H is shown in the illustration (Fig. 12). Superimposed on this graph is the data recorded by Arthur Simpson for clay pipes found in the Maldon area.
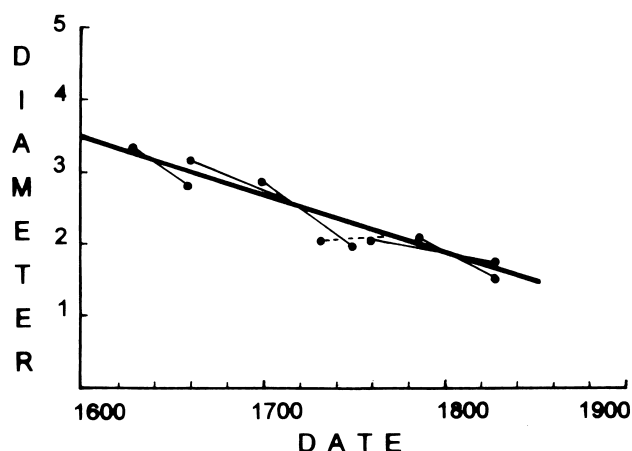

Fig. 12   Empirically derived graph for dating Maldon clay pipe stems (diameter in mm). Plotted against the straight line, and confirming its general validity, are data groups from Simpson's study of Maldon pipes, represented by lines joining earliest and latest dates.

The data in Arthur Simpson's book illustrates bowl characteristics and stem bore hole diameter relating to a particular age range. For each of these data groups, the earliest and latest dates are superimposed on the graph against the range of hole diameters. In this way, it is reasonable to argue that each pipe in a particular data group lies somewhere along the straight line joining its two ends. It will be seen that virtually all the data clusters about the straight line graph relating D to H, providing empirical evidence that the suggested formula provides a reasonably valid and essentially practical means of estimating the age of manufacture of a clay stem.

Having completed the work which led to this proposal, we learned that Arthur Oswald (1975, 92) had published an essentially similar formula, which (after converting to metric units) was:

$$D = 1932 - 96H$$

Rearranging the Maldon formula along similar lines gives: $D = 2038 - 125H$.

Comparing the two formulae shows that when H = 3.5mm, the difference is only a negligible 4 years. However, when the hole size is small, i.e. H = 1.5mm, then the error is no less than 62 years. Now it must be recognised that Oswald's formula was empirically derived from clay pipes found in the London area whilst the MAHG formula derived from Maldon data. (Simpson excluded pipes originating outside the area, for example from railway construction).

This leads to the conclusion that the technology of clay smoking pipe manufacture was such that, for all practical purposes, the hole in the stem provides a good indication of the date of manufacture according to a simple formula. However, the technology seems to differ between manufacture in one region and another, presumably dependent on the choice of the supplier of the jigs used to mould the pipes. We have demonstrated that the formula is likely to be accurate when applied to pipes manufactured in Maldon but, at this stage, we do not know over what geographical area its validity holds. It would be useful, if the opportunity arises, to collate information on pipes of known date from surrounding towns in order to better understand the extent of any regional variations.

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THE HARWICH CRANE RESTORED

D.D. Andrews and B.J. Crouch

Background

The explanatory sign at the site of the Harwich crane records that it was built in 1664, moved to its present site in 1932, and restored in 1993. This is an oversimplified version of the history of the crane, which also, as will be seen, falls into the common trap of associating buildings with historical documents on inadequate grounds.

Improvements were made in the Navy Yard after a visit by the Duke of York in 1666/67 when it was found to be in a bad condition. New equipment was ordered, including a 'house crane, similar to that at Woolwich'. This was erected shortly after at a cost of £392 (Clark 1933). It is this record which has in the past been commonly associated with the crane (cf. also Weaver 1990, 2). It should be observed, however, that old views of the town, including the Kips view of about 1713, do not represent the crane, though omission on records of this sort need not be of significance. In 1927, the Navy Yard was demolished and the crane subsequently moved to the Green to the south of the town on the east side of the promontory (Weaver 1990, 109).

Description of the crane and wheelhouse

The crane consists of a wheelhouse containing a windlass operated by two great treadwheels (Fig. 13). From the windlass a chain runs longitudinally through a hollow beam which projects from the centre of the wheelhouse to a jib inclined upwards at an angle of approximately 7° secured to a mast which was originally on bearings allowing it to be swivelled from side to side (Fig 14). The hollowed-out beam which houses the chain is supported on a strainer beam set below the level of the wheelhouse tie-beam and on a fixed post set a little behind the mast. At the jib end of the beam, the chain passes through a pair of pulleys which could accommodate lateral movement as the jib moved sideways. From the pulleys the chain runs to the end of the jib where there is a hole for a pulley, the spindle of which is secured to a pair of wide T-shaped iron plates. The bearing between the mast and the chain beam was made with two iron plates, now rather corroded but originally incorporating a pivot. The bottom of the mast is a replacement now fixed into the ground and no bearing survives. A small shackle which dangles from beneath the end of the jib was probably for a rope to pull it from side to side, or else possibly to help stabilise loads attached to the chain.

The crane bore the scars of a long working life. The end of the chain beam had had a new piece of timber scarfed on to it, a repair evident in Clark's post-restoration photographs. The jib was substantially original, except for the end nearest the mast where the top of it had been renewed through the insertion of a large timber plate which can be seen in the photographs published by Clark (1933). The mast, in contrast, was in very poor condition, its outside face having been repaired with a large oak insert, and its base having been replaced in softwood. This new timber, and the scarf used to join it to the post, had parallels in the wheelhouse where most of the storey posts have been similarly treated. This repair, and the insert in the outer face of the mast, are not evident on the photographs published by Clark, and must therefore have been subsequent to the restoration of 1933. Although a hanging knee is visible on photographs of the crane before it was moved, the existing one looked like a replacement dating from 1933 or later. In 1992, the bottom end of the diagonal brace had been renewed, the new timber being joined to the old with a steel flitch plate secured to each with four bolts.

The crane bristled with ironwork, straps and bolts having been added to every joint. Apart from the pulleys and bearings, little of the ironwork seemed to be very old, most of the bolts having hexagonal nuts. The older fixtures included the strap to prevent the end grain at the end of the jib from splitting, and bolts screwed into the joint between the top of the brace and the jib which must have been earlier than a strap which reinforced the same joint. On the evidence of Clark's photographs, this strap dated from the 1930s restoration, but most of the others seemed to have been added since then.

The wheelhouse is a small building of four bays. It is built of oak, except for the two top plates which are of softwood. On the soffit of the southern top plate, there is the following inscription: LA WR 1799. In view of the tree-ring date obtained for the wheelhouse (see below), this could indicate that the top plates were replacements. Although much restored when moved to this site, the main features of the structure, and most of the timbers, seem to be original. The walls have mid rails, set at slightly different levels in each bay so that the mortices for them do not weaken the posts, and large diagonal
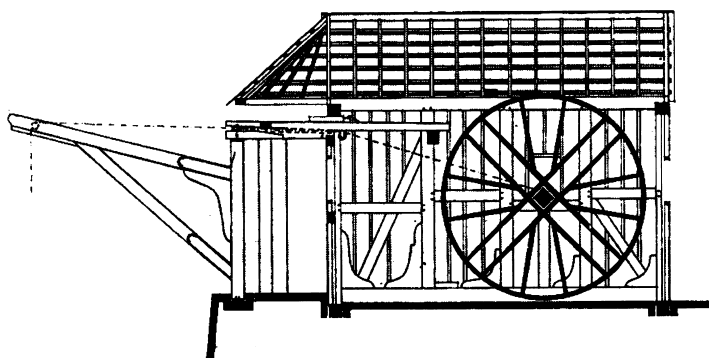

Fig. 13 Harwich, section through the treadwheel crane (after Clark 1933).

primary braces. In contrast with the large size of the posts, braces and mid rails, the studs are slender but made of new oak. A few have been replaced in softwood, and as has been mentioned, new lengths of softwood have been scarfed on to the bottoms of most of the posts, many of which have also been strengthened by the addition of inverted knees. On the south side, the posts and studs do not fit the mortices in the top plate, and there has clearly been some rejigging of the frame here. The end walls are built with massive cross braces rising from the sole plates almost to the top of the posts. The knees which strengthen the frame all seem to be later insertions, most of them reused from ships. The roof is covered with pantiles.

The treadwheels are located in the widest bay, the axle that links them and forms the windlass being set at mid-rail level and supported by bolted-on timbers which seem not to be original. The construction is a form of trestle and similar to that found in bellframes. The braces to the posts beneath the axle are later softwood additions, but mortices in the soffit of the rail show that there were originally timbers with this function. The two 5m diameter treadwheels that powered the crane are constructed with spokes set as chords to the wheel's circle, a form of construction identified by Hewett (1974, 69) as post c.1556. The straight spokes of the wheels are relatively new, perhaps dating from the time of the Great War as the wheels seem to have been moved to their new position intact, but the angled ones are older, some having chiselled and scribed carpenter's marks.

The robust construction of the timber frame was necessary because of the forces placed on it when raising heavy loads. The structure is well made of excellent timber, and no doubt the work of skilled naval carpenters. It shows none of the decadent characteristics of domestic post-medieval carpentry, and moreover there are several unusual joints not typical of house carpentry. The posts are jointed to the top plates with double tenons. The wall tops are made with reversed assembly, the top plates running over the tie-beams which are halved to receive them. The shoulders of the mid rails are housed on their inside face where they are jointed to the posts.

The 1999 restoration

Timber decay had caused the mast to deflect and the jib to sag downwards, even though it was supported by a large diagonal brace and a hanging knee. The objective of the 1999 restoration was to raise the jib up to its original angle of inclination once more, and to thoroughly repair the crane preserving as much as possible of the original fabric. Before and during the dismantling of the jib and mast, drawings were made, the antiquity of the component parts was assessed, and cores of those suitable timbers judged to be original were taken for tree-ring dating. On dismantlement, the condition of the crane proved to be worse than had been feared. So rotten was it that repair was deemed impracticable. A set of working drawings were prepared from the survey which had been made and from the individual components themselves, and a replica was constructed in new oak by Needhams of Ipswich.
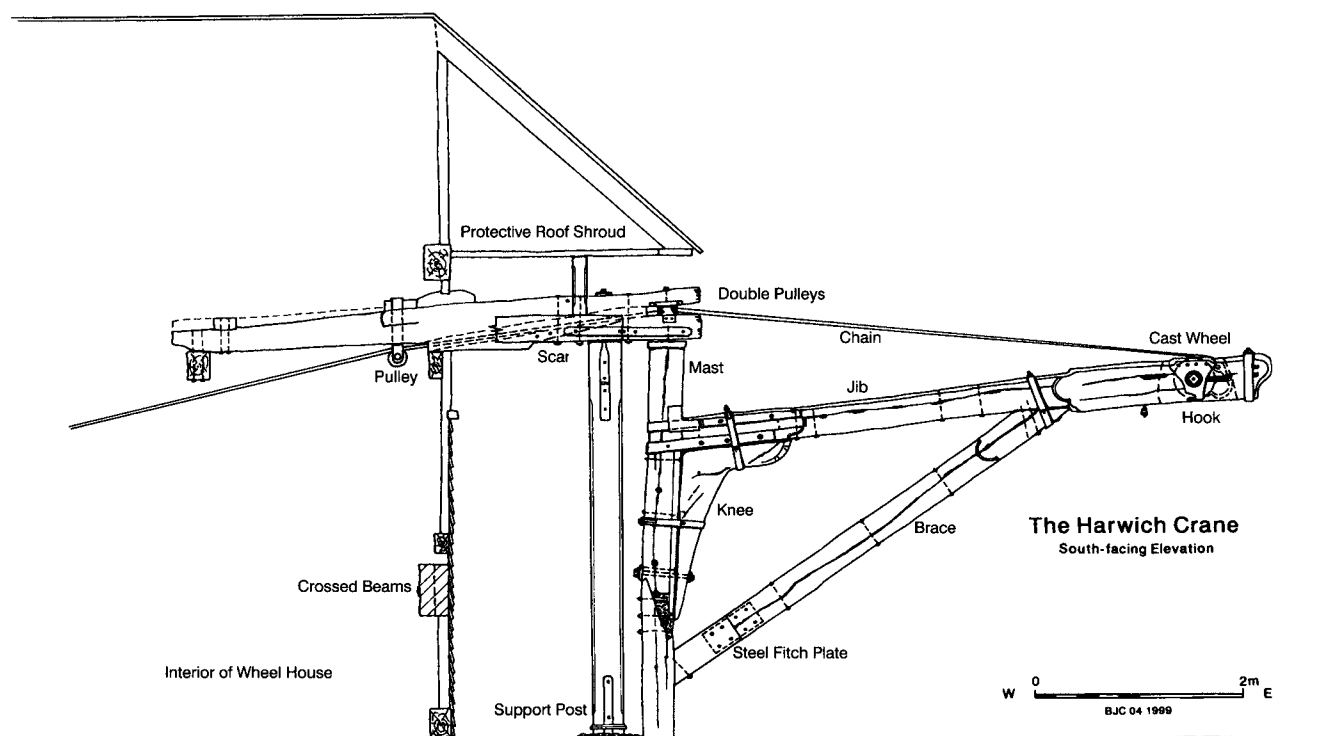

Fig. 14   Elevation of the Harwich crane surveyed before the 1999 restoration.

Tree-ring dating

Four cores were taken from the crane and seven from the wheelhouse by Martin Bridge (2000). It was possible to date only two of them: despite their large size, the timbers were from trees only about 60 years old. The crane and the wheelhouse proved to be of slightly different dates, the jib giving an estimated felling date of 1792-1824, and one of the main posts of the wheelhouse an estimated felling date of 1739-1769. The best cross-matches were with chronologies from the Hampshire basin and the Oxfordshire area, raising the possibility that the timbers had come from there.

Discussion

Much of the timber in the jib and mast of the crane was old, and apparently belonged to its original build. Repairs to the end of the chain beam and the top of the jib dated from 1933 or earlier, and the hanging knee may also have been replaced at that time. A softwood repair to the base of the mast, and in oak to its outer face, seemed to date from after 1933, as did most of the iron strapping on the jib and mast. This suggested that in its present position the condition of the jib and mast had deteriorated rapidly, probably because they were continually exposed to the weather, and the mast, being fixed to the ground, was subjected to stress from the wind.

Despite repeated assertions that it was constructed at the end of the 17th century, tree-ring dating has shown that the wheelhouse dates from the mid 18th century, and the crane from the late 18th or early 19th century. The date '1799' on the top plate of the wheelhouse probably indicates a repair as this is of softwood. The wheelhouse has been neglected in assessments of the crane: it has the appearance of a very well constructed post-medieval building, with unusual carpentry features that suggest it was the work of naval carpenters. It is largely intact, with relatively few replacement timbers.

Cranes operated by a treadwheel have existed since at least Roman times, as Clark demonstrated in his article on the Harwich crane. A crane very similar to that at Harwich is shown in a 14th-century manuscript reproduced by Salzman (1952, plate 17). Treadwheel cranes can be found in early printed views of towns where waterfronts are represented. The famous Three Cranes on London's Thames waterfront are shown in views by Hollar and Claes Jan Visscher (1616). A similar crane appears on Blaeu's 17th-century map of Exeter. These cranes had their winding mechanism fully enclosed in a wheelhouse which seems to be set on a central post, suggesting that it resembled, and could be turned in the same way as, a post mill. Cranes constructed in this way may have been what were termed 'house cranes', and it may therefore have been this type of crane which was ordered for Harwich after the Duke of York's visit. Later depictions of cranes of the late 18th and 19th centuries, such as Samuel Scott's views of the Thames and Rowlandson's watercolour of 'The imports of Great Britain from France', show a different type with a fixed wheelhouse and a jib attached to a swivelling mast as at Harwich. This type of crane must have been simpler to build and maintain, and seems to have superseded the post-mill type in the 17th and 18th centuries. These cranes were a common sight in ports and on waterfronts, but are rare today. As well as that at Harwich, others can be found at Guildford and Fordwich near Canterbury.

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Archaeology in Essex

edited by A. Bennett

ARCHAEOLOGY IN ESSEX 2000

edited by A. Bennett
This annual report, prepared at the request of the Advisory Committee for Archaeology in Essex, comprises summaries of archaeological fieldwork carried out during the year. The longevity of many projects often results in a lengthy post-excavation and publication process. The publication of these summaries therefore provides a useful guide to current archaeological research, and the opportunity to take an overview of significant advances.

Sites are listed alphabetically by parish; the directors of excavations, organisations involved and information regarding the location of archives, including finds, are listed where known. Projects continuing from previous years are indicated by reference to previous summaries in the relevant 'Archaeology in Essex'. Contributors are once more warmly thanked for providing information. The map is by Alison Bennett.

The original summaries, and any associated limited circulation reports, have been added to the Essex Heritage Conservation Record (EHCR, formerly SMR) held by the Heritage Conservation Group at Essex County Council, Planning Division, County Hall, Chelmsford CM1 1QH. Regarding sites in the London Boroughs of Barking and Dagenham, Havering, Newham, Redbridge, and Waltham Forest, enquirers should contact the Greater London SMR, English Heritage London Region, 23 Savile Row, London, W1X. For work on churches, historic buildings and World War 2 defences, see elsewhere in this volume.

Progress in Essex Archaeology 2000

Introduction
This year the total number of summaries reported here is 82, 28 less than last year. This is mainly due to all building recording summaries now being elsewhere in this journal. Also, this year, a few organisations did not submit summaries despite indicating that they would. One should therefore not view the comparisons to last year's summaries as accurate. Superficially, the number of evaluations

has risen this year from 25 to 27, but excavations have fallen from 24 to 14. This is a similar number of excavations to 1998. Three projects were a follow-on from an evaluation last year. Two local societies and one individual submitted summaries for their fieldwork. Only the most significant summaries are mentioned in the following period paragraphs.

Prehistoric
Environmental samples were taken from peat deposits and marine alluvium on a site at Beckton (4). Neolithic flint tools came from Fingringhoe (39). Features on the multi-period site at St Osyth (72) included Neolithic pits and Bronze Age cremations. Bronze Age and Iron Age field boundary ditches at Great Wakering (48) formed part of an extensive pre-Roman agricultural landscape. There was Early, Middle and Late Iron Age settlement at Rettenden (1). There were Middle Iron Age round houses at St Osyth (72). Late Iron Age cremation burials were found at Alresford (2) and Roxwell (71).

Roman
Urban Roman remains have come from Colchester and Great Chesterford. At Colchester, part of a Roman cemetery was revealed (18), a large Roman town house was discovered (22), and there was evidence for possible cremation pyres (25). Further geophysical survey has taken place at Gosbecks Archaeological Park, Stanway (76). At Great Chesterford (41) part of the fort ditch was revealed. Evidence from rural sites include suggested extra-mural settlement at Othona (5), a settlement site at Epping Upland (38), and an industrial area and small cremation cemetery at Great Wakering (48).

Saxon
Evidence of Saxon occupation has come from Great Wakering (48). Possible 9th-century activity is indicated at Colchester (23), and there is also a possible Saxon burial (21). Finds of pottery have come from Clavering (16) and Fingringhoe (39).

Medieval
In the historic towns burgage plots and structures were found at Brentwood (8), and in Chelmsford (15) there was evidence for medieval settlement adjacent

to the High Street. Two sites close to St Botolphs, Colchester (29, 30), show evidence of burials associated with the priory. A nearby ecclesiastical site is indicated at Hornchurch (53), where carved medieval stonework has been found reused in wall foundations. There is evidence for medieval settlement at West Hanningfield (1), and the remains of a 13th-century pottery kiln at North Weald Bassett (64).

Post-medieval

At Foulness (40), investigations have continued at Great Burwood Farm. The site of a 19th-century mansion has been excavated at Newport (62). There was evidence of a Tudor walled garden at Eastbury (37), and an 18th-century ha-ha has been recorded at South Weald Park (74). The site of a fair has been suggested at Saffron Walden (73). Different phases of farmyard activity have been recorded at Thremhall Priory Farm, Takeley (77).

1. A130 Bypass, Sandon-Rettendon (TL 742 034 to TQ 773 954)

R. Dale, S. Hickling and A. Robertson, E.C.C. (F.A.U.)

An intensive programme of archaeological work was carried out along the northern section of the A130 bypass from the A12 Chelmsford bypass to the Rettendon Turnpike. Archaeological sites were identified through survey and the evaluation of cleared areas after topsoil stripping. In some cases it was possible to preserve sites by making provision in the road design, but most sites were excavated.

Sandon, Sandon Brook (TL 748 024)
Trial trenching located Middle Iron Age features to the north of the brook, and medieval pits and a small number of prehistoric features to the south. Once the topsoil and alluvium had been stripped, several enclosures were recorded both to the north and south of the brook. At least one was possibly an animal pen, although it has affinities to Iron Age houses seen elsewhere, while another contained postholes and a hearth. The site will be better understood once the pottery has been dated.

West Hanningfield, Downhouse Farm (TL 747 013)
Selective excavation was carried out around the known Roman and Early Saxon settlement site excavated in 1994-5. Trenching and stripping of topsoil revealed several Roman features, and medieval pits and field boundaries. Features in the east of the site may represent the edge of a medieval farmstead, and these were mapped before being preserved under earthworks. A medieval building was uncovered to the north-east, separated from these features by an area heavily disturbed by ploughing. Over much of the site it was clear that

deep ploughing had seriously degraded many archaeological features uncovered in the 1994-5 excavation, particularly those of Saxon date. As a result, it is likely that the present excavation will not be able to add greatly to our understanding of the site.

East Hanningfield, Canon Barns (TQ 756 990)
Trenching identified field boundary ditches, and a follow-up excavation confirmed that these were the remains of a Roman field system.

Runwell, Hoe Lane (TQ 762 973)
Trenching identified Late Iron Age and Roman field boundary ditches, and a follow-up excavation confirmed that these were part of a Late Iron Age and Roman field system. Several large ditches formed part of an enclosure that almost certainly formed the boundary for a farmstead.

Rettendon, Curry Hill (TQ 768 956 to 773 954)
Trenching identified three sites, all of which were cleared for detailed excavation. In the south was a probable Early Iron Age settlement, consisting of scattered pits and gullies, with some evidence of fence lines and possibly buildings. Further north was a definite Middle Iron Age settlement consisting of three roundhouses with enclosure ditches and cremation burials, and a few Late Iron Age features as well. Further north, a low-lying boggy area at the bottom of Curry Hill had been reclaimed, and a Late Iron Age settlement established. This appears to have developed into a substantial farmstead with possible associated industrial activity in the early Roman period. The presence of imported building material possibly indicates a prosperous community to the east of the road corridor, alongside the Roman road from Chelmsford to Wickford.

Watching brief
A watching brief was maintained during topsoil stripping along the rest of the road scheme in areas where no major archaeological sites had been identified. Overall, 23 sites were identified during the topsoil strip, of which 8 were excavated, and a further 15 were small enough to be recorded as soon as they were uncovered. The sites recorded during the watching brief ranged between the Bronze Age and the medieval period, and included some very truncated Iron Age pit groups. Most of the sites investigated were relatively small and yielded only limited information. The exceptions to this were sites surrounding Curry Hill, Rettendon, which seemed to be related to the main excavations (above), and a site at Gorse Woods, Runwell, which was interpreted as part of a medieval industrial and settlement site.

Previous summaries: Bennett 2000, 211-2.
Archive: Ch.E.M.
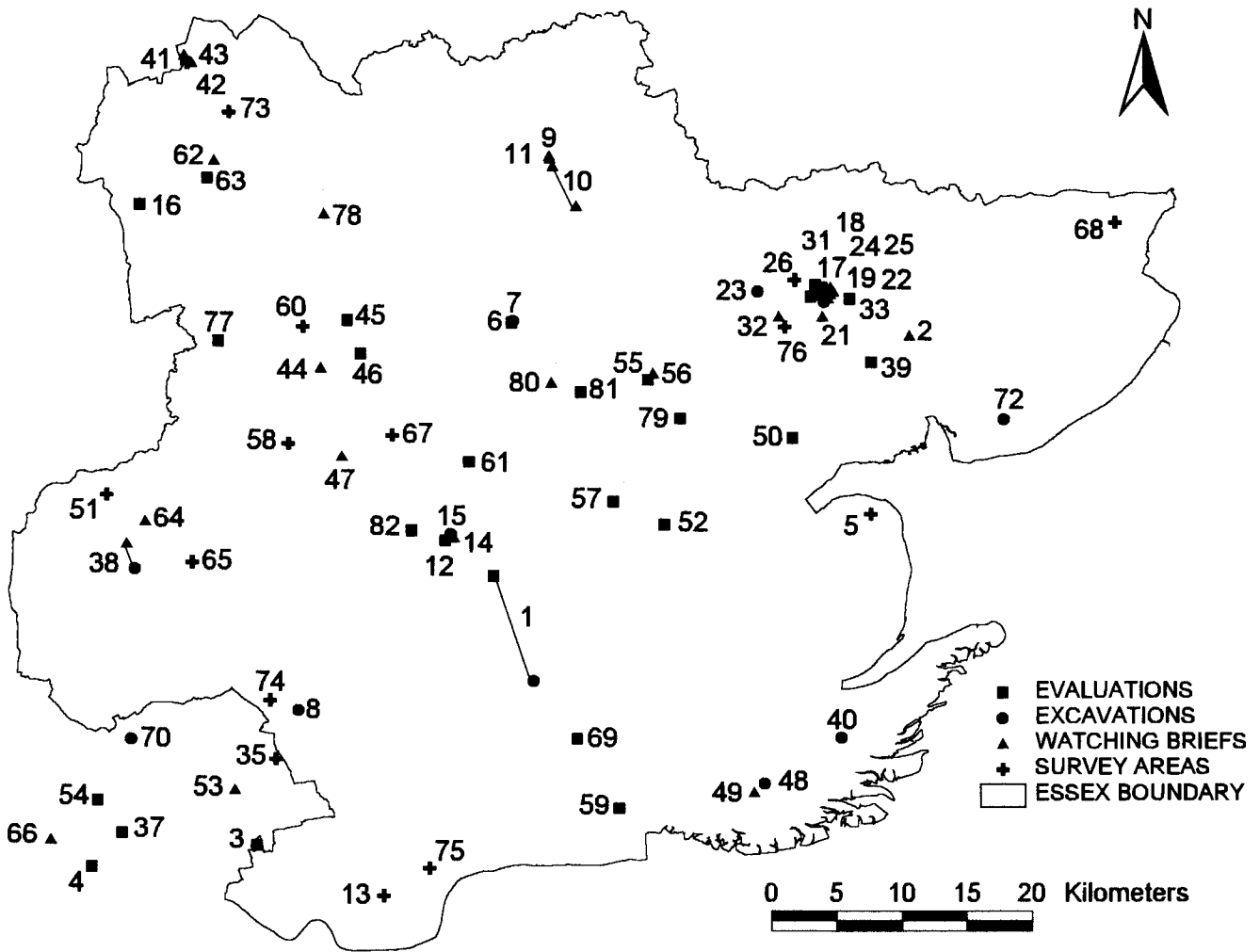
Fig. 1   Location of archaeological projects in Essex, 2000.

2. Alresford, Villa Farm Quarry (TM 0605 2184)

B. Barker, E.C.C. (F.A.U.)

A watching brief was carried out after topsoil stripping for Phases Va and Vb of this sand/gravel quarry. Although several cropmark sites are recorded in the surrounding area (EHCR 2361, 2589-90, 2605, 2608), monitoring of previous phases of stripping has not recorded any archaeological features. No archaeological features or finds were found in either of the stripped areas covered by the watching brief. A Late Iron Age cremation burial, contained in a *Cam* 234 flask, was reported by contractors during the construction of the haul road for the quarry.

Archive: C.M.

3. Aveley, Brett's Farm (TQ 560 828)

A. Robertson, E.C.C. (F.A.U.)

As part of the evaluation for the Thames Chase community forest, 23ha of farmland were fieldwalked. The study area is the site of a group of cropmarks (EHCR 5095), and is close to the multi-period settlement excavated at Hunt's Hill Farm (EHCR 5083). Although many finds of various periods were scattered over the area, no significant concentrations were recorded.

Archive: T.M.

4. Beckton, former East Ham Football Club, Pennyroyal Avenue (TQ 4340 8120)

J. Murray, H.A.T.

Ten archaeological test pits were excavated prior to residential development of the site, following a desk-based assessment of the site. These revealed a deep alluvial sequence (up to 4.8 m below the present ground surface) above floodplain gravels. No archaeological features or cultural material was found in association with these deposits. Peat deposits were present on the western part of the site, sealing a peat-filled tree bole, almost certainly of a yew. There was evidence for a deeper creek with

marine alluvium in the eastern part of the site. A programme of environmental sampling and assessment was undertaken, the results of which will be forthcoming shortly.

Archive: contact G.L.S.M.R. for location.

5. Bradwell-on-Sea, Othona Saxon Shore Fort (TM 0312 0818)

M. Germany and R. Wardill, E.C.C. (F.A.U.)

A fieldwalking survey of the fort, chapel and monastery of Othona discovered prehistoric, Roman, medieval and post-medieval finds. Prehistoric sites were possibly indicated by two sherds and a small concentration of burnt/fire-cracked flint. Extra-mural settlement was suggested by three concentrations of Roman brick and tile. Roman brick and tile and pottery were also discovered inside the Roman fort, although no zones or specific areas were identified. The exploitation of the area from the medieval period onwards was suggested by general scatters of medieval pottery and post-medieval pottery and tile. The Saxon chapel and monastery were possibly aceramic, as there was an absence of Saxon finds. Geophysical survey identified six areas of probable archaeological activity. Further investigation by magnetometry of two of these areas located probable archaeological features. Magnetometry on the fort provided data on its condition and the layout of internal structures.

Archive: C.M.

6. Braintree, The Builders Yard, St Michael's Road (TL 756 228)

M. Peachey, E.C.C. (F.A.U.)

An archaeological evaluation prior to a residential development at the High Street end of St Michael's Road uncovered a Roman cess pit of 3rd century date which would have been situated on the margins of the Roman town.

Archive: Bt.M.

7. Braintree, rear of 97-99 High Street (TL 757 229)

N. Crank, H.A.T.

In July 2000 an open area excavation was carried out to the rear of 97-99 High Street, Braintree. The majority of excavated evidence dated to the post-medieval and modern periods, but a very small number of heavily truncated Roman and medieval features were also revealed. The principal Roman features were the much truncated remains of a metalled surface, a partially robbed-out wall foundation, and a large rubbish pit. A single 12th- to 14th-century rubbish pit was present.

Archive: Bt.M.

8. Brentwood, Kings Road/Hart Street (TQ 592 932)

S. Hickling, E.C.C. (F.A.U.)

An excavation was carried out ahead of a commercial and residential development on a site on the south side of the medieval market place. Three probable burgage plots were found, with evidence of medieval structures on two of them. The third had a number of large medieval and later pits, one of which yielded a large amount of 13th- to 14th-century pottery. Two probable ovens were recorded, one possibly late medieval, the other brick-lined with finds dating from the first half of the 17th century. The foundations and internal floor surfaces of the site of 39 Hart Street were investigated, revealing several phases of walls and hearths/fireplaces. Settlement appears to have been sparse on this site in the medieval period, through to the 19th century. This is probably due to the position of the site on the outskirts of the medieval town. Several wide, shallow, greenish post-medieval pits may suggest tanning taking place. Modern drains and a cellar truncated large parts of the site.

Archive: Ch.E.M.

9. Castle Hedingham, Memorial Hall, Church Lane (TL 7843 3554)

R. Havis, E.C.C. (H.A.M.P.)

A watching brief on a small extension to the rear of the Memorial Hall identified a shallow wall foundation. This is probably associated with the original construction of the Hall in the 19th century. The new foundations were only cut to a depth of 0.3m.

10. Castle Hedingham (sourceworks) to Halstead (Doe's Corner) pipeline (TL 7871 3478 to TL 8048 3169)

H. Brooks, C.A.T.

A watching brief on the laying of a 4km long water pipe revealed a Roman ditch and pit at Castle Hedingham, close to the site previously excavated at the sourceworks in 1992. The ditch broadly followed the alignment of the 1992 features. There were other undated features, recent drain lines, and other features connected with the now demolished railway line. Loose surface finds included Roman, medieval and post-medieval pottery, and a few struck prehistoric flints. Although no subsoil features were seen, a large group of burnt flints and a quantity of Roman pottery were found in the ploughsoil at TL 7915 3421. This may be on the periphery of a prehistoric and Roman site lying up-slope of this spot.

Archive: Bt.M.

11. Castle Hedingham, Trinity Hall, Queen Street (TL 7845 3535)

R. Havis, E.C.C. (H.A.M.P.)
A watching brief on a small extension to the rear of Trinity Hall identified a single post-medieval or modern tile filled pit. The area lay beneath a present day patio which had reduced the depth of top soil to 10cm. Clean boulder clay above clean sand extended down to a depth of 1.2m.

12. Chelmsford, Marlborough Road (TL 7048 0610)

S. McKeand, E.C.C. (F.A.U.)
Two 28m long evaluation trenches were excavated on land proposed for residential development, located 75m west of the Roman road to Colchester. The trenches were approximately 1.2m in depth and cut through a great deal of rubble, slate, pipe, concrete, brick and other demolition debris. No archaeological features or deposits were identified in either trench, although four sherds of post-2nd century AD Roman pottery were recovered.
    Archive: Ch.E.M.

13. Chadwell St Mary, Mill House Farm (TQ 6580 7900)

N. Lavender, E.C.C. (F.A.U.)
A desk-based assessment was undertaken on the site of a proposed reservoir at Mill House Farm. The site lies at the centre of an area containing numerous cropmarks identified from aerial photographs. One of these (EHCR 1750) lies on the site of the proposed reservoir. Although unexcavated, the cropmarks making up EHCR 1750 appear to comprise a ring ditch, trackway and scattered pits. The cropmarks in the vicinity show extensive activity in the area from prehistory to the early medieval period. Cartographic sources show that the pattern of isolated farms and cottages in a predominantly agricultural environment had become established by the end of the medieval period. A windmill is shown on the site of the present farm on the Chapman and André map of 1777.

14. Chelmsford, 66A Baddow Road (TL 7116 0633)

P. Connell, E.C.C. (H.A.M.P.)
A watching brief on the foundations for a new building revealed the remnants of two heavily truncated pits cutting the natural gravel. These contained large amounts of oyster and smaller amounts of ceramic building material, bone and Romano-British greywares. A roughly circular deposit of mortar was noted by the machine driver lying c.1.5m below the modern ground surface, but had been excavated prior to inspection.

15. Chelmsford, 73-74 High Street (TL 7090 0660)

N. Lavender, E.C.C. (F.A.U.)
Excavation on the site of the former Bolingbroke and Wenley department store located evidence of medieval and post-medieval settlement adjacent to the High Street of the medieval town. Walls and structural concrete relating to the use of the site during the 19th and 20th centuries had, however, caused severe truncation, resulting in islands of surviving stratigraphy, which were difficult to interpret. The survival of medieval levelling and post-medieval occupation layers on this heavily truncated site suggests that better stratigraphic sequences may survive elsewhere in the High Street
    Archive: Ch.E.M.

16. Clavering, land to the west of the parish church (TL 4698 3180)

N. Crank, H.A.T.
Three trial trenches were excavated on the site, which lies adjacent to the existing churchyard of St Mary & St Clement. The evaluation revealed a number of archaeological features, principally ditches, dating to the medieval period (pottery suggests a 12th to 13th-century date for the majority of features, though Saxo-Norman wares were also present). The ditches almost certainly relate to early property boundaries, possibly pre-dating the boundaries of the Old Guildhall to the south.
    Archive: S.W.M.

17. Colchester, 41 Castle Road (TM 0003 2555)

S. Benfield, C.A.T.
Footings trenches for a new dwelling south of the existing house at 41 Castle Road revealed Roman stratigraphy at several points. One thick gravely layer was seen, but not in the correct place to be the Roman street dividing *insulae* 7 and 8 of the Roman town (which should run west of this property). It is presumably a yard or pathway. Other details included a possible clay floor, a posthole, and another metalled area. A few finds of Roman brick/tile and pottery were collected, but none were stratified.
    Archive: C.M. (Ref. 2000-33).
    Report: C.A.T. Report 67.

18. Colchester, Abbey Field Sports Pitch, Circular Road North, (TL 9954 2441)

C. Crossan, C.A.T.
An area of approximately 6,500m^2 was progressively stripped by machine to a predetermined formation depth for a new sports pitch, revealing part of a Roman cremation cemetery. Manual excavation

recovered evidence of 65 burials, most of which contained pots, but also four burials with wooden boxes were recorded. The majority of the graves lay to either side of a parallel pair of indistinct linear features, possibly ditches which may represent a north-south trackway. Other features included a small enclosure to the east of the trackway, and an intensely burnt area of indeterminate but possibly early date. Following the completion of the main excavation, an intensive watching brief was maintained on contractors' service trenches. A further eight graves were exposed, together with evidence for one or more mortared structures in the area of an adjacent football pitch. Among these graves was a well-preserved tile cist containing a lidded burial urn accompanied by two flagons and a clay oil lamp.

Archive: C.M. (Ref. 2000-1).

Report: C.A.T. Report series (in preparation).

19. Colchester, 4A East Hill (TL 0020 2523)

C. Crossan, C.A.T.

The property is situated 30m beyond the site of Colchester's East Gate. No early ground features were revealed by works for two new houses. The site frontage had been subject to extensive 19th-20th century ground disturbance. Unstratified human skull fragments were recovered from terracing at the rear and a structural record was made of a complex of freshly exposed post-medieval brickwork at the lower side of 5 East Hill.

Archive: C.M.

Report: C.A.T. Report 112.

20. Colchester, MOD DCTA, Flagstaff Road (TL 9983 2468)

A. Letch, E.C.C. (F.A.U.)

Three small test pits were observed in areas formerly occupied by post-war outbuildings but now grassed over. The area is on the site of the former St. John's Abbey (Scheduled Ancient Monument No. 26307) which after the Dissolution was bought up by the Fairfax family. After the Civil War it became a farm. Two trenches revealed modern landscaping, but in the third there appeared to be post-medieval landscaping over the natural subsoil

Archive C.M.

21. Colchester Garrison PFI (TL 994 233)

K. Orr, C.A.T.

This 304ha development area is located 1km to the south of the modern town centre. Among the sites contained within it are the Iron Age Berechurch dyke, cropmarks of features of probable Late Iron Age or Roman date, Iron Age and Roman cemeteries,

Roman kilns and a possible Roman road as well as the scheduled site of the medieval abbey of St John. The line of Civil War Siege defences are thought to run across the northern section of the site. Second World War sites can also be found within the development area. A watching brief was maintained on 58 of 72 geotechnical test-pits and 14 boreholes excavated by contractors over the entire PFI site as part of a land quality investigation.

The majority of the finds from the test-pits were post-medieval in date, with a notable lack of medieval artefacts. Roman material was retrieved from 8 of the test pits. This material was mixed in with post-medieval and modern material, indicating that archaeological remains had been disturbed. Fragments of a human skull found from a test-pit in Meanee Barracks are thought to be from an Anglo-Saxon burial, forming part of a Saxon cemetery in the Mersea Road area. Roman material from near Flagstaff House is the first evidence for Roman occupation in this area. No structural remains were found and the finds of Roman pottery, tile and animal bone are what would be expected from a Roman rubbish pit. However these finds were mixed in with medieval and later material, and so are thought to be residual. Fragments of bone found in the spoil heap from a test-pit on Abbey Field may possibly be human. Abbey Field forms part of a Roman cremation cemetery, part of which was excavated by C.A.T. this year (see 18 above).

Archive: C.M. (Ref. 2000-59).

Report: C.A.T. Report 110.

22. Colchester, former Post Office site, 29-39 Head Street (TL 9936 2508)

H. Brookes, C.A.T.

Archaeological excavations in advance of the construction of a muliplex cinema were carried out on the old Post Office site. In advance of the detailed analysis of the finds and stratigraphic sequences, the main categories of excavated remains are summarised here.

The fortress (circa AD 43-49) and colony (AD 49-60/61) Many floor layers of this period indicate intense use of the site at this time. The earliest phase of activity was represented by postholes and large pits. The postholes mark the boundaries of a large structure on the street frontage, and the pits may initially have been dug as sand quarries.

The Boudican destruction horizons (AD 60/61) Burnt floor horizons and two Boudican walls were identified. These were part of a Boudican period structure whose frontage occupied most of the south edge of an east-west gravel street. The faces of the walls were lifted by Colchester Museums. Intensive environmental sampling of the floors was undertaken. This should reveal much valuable

environmental information, and may give a clue as to the function of the building.

Post-Boudican rebuilding (AD 60/61-2nd century) One or more periods of house(s) with mortar and clay floors and painted clay walls were identified.

Roman town house (2nd or 3rd century) The excavated site coincided with the north-east corner of a large structure which continued beyond the excavated area to the south and west. This was a large Roman town house with masonry footings and plain red tessellated floors. There were sufficient loose tesserae to indicate a mosaic floor in one of the north rooms, possibly the same room which had a hypocaust system. An apsidal room of this period probably contained an external basin or pond on the north edge of an internal courtyard.

Saxon finds (5th-11th centuries) There were no Saxon features. A few residual Saxon sherds may emerge when the pottery has been examined.

Medieval (11th to 16th centuries) There was an extensive series of medieval robber trenches cutting across the site. These were dug generally in the 12th and 13th centuries to remove the stone from the Roman buildings. There was a large group of post-medieval pits on this site, though finds analysis may prove some of them to be medieval in date.

Post-medieval (16th-19th centuries) A large number of rubbish pits were cut in this period by the inhabitants of houses on Head Street. There were also a few brick structures including a cess pit, a cellar, and a soakaway. The Post Office structures of 1874, 1934 and 1984 were represented by various brick and concrete footings.

Archive: C.M. (Ref. 2000-48).

Report: C.A.T. Report series (in preparation).

23. Colchester, 22-24 High Street (TL 9445 2517)

H. Brooks, C.A.T.
The site lies centrally within the walled Roman town of Colchester and in the eastern part of the early Roman fortress. Previous discoveries from the same site include two medieval coin hoards. A small-scale excavation and watching brief during rebuilding of this shop unit (formerly John Menzies) revealed the following archaeological information: later 1st-century pitting was followed by three phases of masonry building spanning the 2nd and 3rd centuries; a series of pits were cut in the 3rd to 4th century. Although no Saxon structures were seen, residual Ipswich/Thetford ware indicates some activity here in perhaps the 9th century. The masonry walls were robbed in the medieval period, and in the 15th or 16th century a structure with clay floors and a rubble wall was erected. This was cut by a brick structure of the 17th century and of unknown use. There were many finds of Roman and later

pottery, brick and bone, but the most interesting find was an empty lead canister of the type which might have contained a coin hoard. A single coin of the 1969 hoard type was also found, leading to speculation that a medieval coin hoard has been removed from this site at some time in the past.

Archive: C.M. (Ref. 2000-5).

Report: C.A.T. Report 101.

24. Colchester, 9-11 Hythe Quay (TM 0146 2462)

H. Brooks, C.A.T.
The site lies on the frontage of the Hythe - the medieval port of Colchester. Two 7m long evaluation trenches were cut. Roman levels were revealed in both trenches, at 0.82m below present site level in the west trench (T1) and at 0.6m below site in the east trench (T2). In the case of T2, there was evidence of 15th- or 16th-century activity cutting the Roman levels. The Roman levels consisted of dumped material, perhaps intended to raise ground level above potentially wet ground. There were finds of Roman pottery and brick, and of post-medieval pottery and tile. There was one possible post-medieval wall line, and a gravely band which was perhaps a yard surface. There were a number of post-medieval and modern pits and drains.

Archive: C.M. (Ref. 2000-115).

Report: C.A.T. Report 100.

25. Colchester, Royal Grammar School, 6 Lexden Road (TL 9878 2487)

H. Brooks, C.A.T.
A watching brief on groundworks before construction of a new block east of the main school accommodation revealed a number of burnt patches. These 'burnt floors' have been reported before from the same site (Crittenden 1967), and their interpretation as cremation pyres seems a sensible one given the proximity of known Roman burials in this part of town. A second point of interest is the course of the Roman road running to Balkerne gate from somewhere near the Grammar School. The absence of any conclusive road material lends weight to Hawkes & Crummy's plan (1995, fig. 6.1) showing the road running to the south of this spot.

Previous summaries: Bennett 2000, 217, 223.

Archive: C.M. (Ref. 1999-144).

Report: C.A.T. archive report (forthcoming).

26. Colchester, Lexden Wood Golf Club, Westhouse Farm, Lexden (TL 727 2608)

H. Brooks, C.A.T.
A geophysical survey by P.J. Cott has confirmed the position of a rectangular cropmark site west of Westhouse Farm (now the Lexden Wood Golf Club).

A small trench was opened up within the footprint of the proposed new building inside the cropmark enclosure. This trench (covering less than 1% of the interior of the enclosure) failed to reveal any internal features, but finds of Middle Iron Age and Roman pottery confirm the general date range within which the cropmark site is likely to fall. As the proposed development lies within the cropmark enclosure, there is still the potential for prehistoric and/or Roman remains to be disturbed.

Archive: C.M. (Ref. 2000-6).

Report: C.A.T. Report 59.

27. Colchester, 36a North Hill (TL 9936 2548)

C. Crossan, C.A.T.

The site lies 40m from the Roman North Gate and is within the Roman walled town. A small evaluation trench in the rear yard of the property revealed a Roman tessellated pavement at a depth of 1.1m. The pavement extended beyond the limits of excavation to the south and east, and a short stretch of intact wall foundation marked its northern extent. The western part of the pavement was cut by a drainage channel constructed entirely of Roman building materials.

Archive: C.M. (Ref. 2000-89).

Report: C.A.T. Report 92.

28. Colchester, 63 North Hill (rear of) (TL 9937 2525)

H. Brooks, C.A.T.

An evaluation by a single trial trench has confirmed the expected survival of Roman deposits on this site which lies within insula 17b of the Roman town. The highest surviving significant archaeological deposit (a layer of Roman wall material robbed out in medieval times) was at 0.25m below modern surface. The bottom of the sequence of archaeological material (all Roman in date) was at 1.75m below modern surface. There were finds of Roman pottery and building debris, medieval peg tile and pottery, and a seventeenth century trader's token.

Archive: C.M. (ref. 2000-13).

Report: C.A.T. Report (forthcoming).

29. Colchester, St Botolph's priory grounds (TL 9999 2497)

C. Crossan, C.A.T.

Post-pits for a new gate and 190m of railings in the grounds of St Botolph's priory revealed residual human remains and light scatters of re-used early building materials. The majority of pits were no more than 70cm deep and did not penetrate beyond post-medieval levels.

Previous summaries: Bennett 2000, 213.

Archive: C.M. (Ref. 2000-35).

Report: C.A.T. Report 117.

30. Colchester, former St Botolph's parish hall, 1 Priory Street (TL 9998 2500)

H. Brooks, C.A.T.

Two human burials were exposed by foundation work for an extension at the rear of the former parish hall at 1 Priory Street. The burials were aligned east-west and are clearly associated with St Botolph's Priory, which lies immediately to the south.

Archive: C.M. (Ref. 2000-108).

Report: C.A.T. Report 96.

31. Colchester, Colchester Institute, Sheepen Road (TL 9883 2570)

C. Crossan, C.A.T.

The site lies to the eastern side of the late Iron Age and early Roman industrial centre at Sheepen (Essex Scheduled Ancient Monument 46). Two 10m x 1.5m evaluation trenches were dug by machine in advance of a proposed college extension, revealing pits and deposits which appear to be associated with the main period of activity at Sheepen, i.e. c.AD5-60.

Previous summaries: Bennett 1999, 223; 2000, 223.

Archive: C.M. (Ref. 2000-90).

Report: C.A.T. Report 103.

32. Colchester, Gryme's Dyke, Stanway Green (TL 963 233)

S. Benfield, C.A.T.

The site is located at the southern end of the Gryme's Dyke Middle earthwork (Scheduled Ancient Monument 10h). Four small contractor's trenches in the region of the rampart revealed extensive ground disturbance from existing cable trenches. However, on the western side of the site, subsoil deposits were noted which possibly represent remains of the earthwork bank.

Archive: C.M.

Report: C.A.T. Report 63.

33. Colchester, 26 West Lodge Road (TL 9848 2477)

C. Crossan, C.A.T.

A small evaluation trench on a plot to the south side of 26 West Lodge Road revealed a Roman cremation burial, probably of 1st-century date. The top of the grave had been disturbed by past activity, leaving the lowest 20cm intact. This consisted of an oval pit with a centrally placed pot, within which was found a quantity of cremated bone and a broken clay lamp. Four metres to the east of the grave was a posthole of indeterminate but possibly early date. The site lies 800m to the west of the walled town, within a Roman cemetery area from which many cremation

burials have been recovered in the last 150 years (Hull 1958, and Crummy 1993).

Archive: C.M. (Ref. 2000-40).

Report: C.A.T. Report 80.

34. Copford, Copford Hall Farm (TL 032 234)

P.J. Cott

Magnetometer survey took place after the discovery of a large tile scatter. An interim survey revealed a number of ditches in a field system and a small building. A large area remains to be surveyed in 2001.

35. Cranham, Hole Farm (TQ 5750 8950)

A. Robertson, E.C.C. (F.A.U.)

A fieldwalking survey was undertaken on 48ha of farmland, adjacent to the M25 and the A127 Southend Arterial Road. This is one of a number of sites selected for planting in the Thames Chase community forest. Burnt flint was recovered all across the study area, in quantities twice the average for Essex. Although the burnt flint is undated it is usually taken to indicate prehistoric activity. A small concentration of flint flakes was also discovered. Concentrations of medieval and post-medieval pottery were found in the vicinity of the medieval Beredens Manor (TQ 5770 8979), demolished during the construction of the M25. One field in the study area had not been ploughed at the time of the survey, and will be fieldwalked at a later date.

Archive: M.L.

36. Cressing Temple, Dovehouse Field (TL 8016 8620)

T. Ennis, E.C.C. (F.A.U.)

The training school excavations focused on a further area of the Late Iron Age and early Roman system of fields and enclosures between those excavated in the previous two seasons' work in Dovehouse Field. A sequence of field boundary ditches was excavated, along with other features such as post-built structures and rubbish pits. One feature of particular interest was a slightly sunken cobbled area separated off from the rest of the field by a rectangular gully, which may have been a threshing floor. Most of the features excavated date to the 1st century AD, and the range of pottery and other finds recovered will give an insight into life on a rural farmstead at about the time of the Roman conquest.

Previous summaries: Bennett 1999, 218-219.

Archive: E.C.C.

37. Eastbury, Eastbury Manor, Eastbury Square (TQ 457 838)

T. Ennis, E.C.C. (F.A.U.)

Excavation of a small trial trench to the north of the house revealed the base of the foundation of a robbed out north/south wall. Finds from the robber trench included fragments of Tudor brick. This wall probably formed the eastern side of a rectangular walled garden shown on an estate map of 1737.

Archive: N.T.

38. Epping Upland, Rye Hill to Fairfield water pipeline

M. Bennell

Monitoring and excavation took place in 1999, but was not reported on last year.

TL 4654 0468 A spread of pottery was collected from the stripped surface. These consisted mostly of medieval sherds of the mid-13th to 14th centuries. There were also a few Roman and post-medieval sherds, some ferruginous slag, nails, and a horseshoe toe of the early 13th to late 14th century.

TL 4640 0570 A scatter of 4 Roman sherds including one piece of Samian, and 9 sherds of post-medieval pottery, mainly 17th-century in date.

TL 4665 0397 Excavation of linear features showing on aerial photographs revealed evidence for a Roman road. This was partially ploughed out but up to 300m of gravel metalling remained on the agger. The road is *c.*8m wide with a side ditch on the east only. A 'setting out' ditch was situated on the west, 12m from the agger.

TL 4600 0594 A ditch and pit were found close to an area of previous finds. The pit contained 1 sherd of mid 13th- to 14th-century date. The ditch, which was irregular and presumed to be a field boundary, contained 36 sherds dating from the 12th to the 14th century.

TL 4625 0580 This Roman settlement site showed fragments of up to 10 curvilinear structures. There was evidence of a ditched and hedged land division running towards the line of a Roman road (EHCR 3829). There was also a roughly laid 'yard'. Utilised flint, Roman ceramic burnt material and pot indicate another structure, presumed to be close by. Large quantities of pot sherds date from the early to late 2nd century, and from the mid 3rd to the 4th century. Other finds were recorded. There was also a possible small cremation.

Archive: E.F.D.M.

39. Fingringhoe, land South of Fingringhoe Ballast Quarry (TM 0310 1980)

N. Crank, H.A.T.

Fieldwalking in advance of proposed new mineral extraction revealed a light scatter of prehistoric

flints in the central part of the site. The flints included a number of tool types of the early Neolithic to the Bronze Age. A number of cropmarks identified by aerial photography adjacent to the site may date from the prehistoric period. No evidence of a Saxon cemetery believed to lie adjacent to the site was encountered, though a single undiagnostic sherd of probable Saxon pottery was recorded. Post-medieval tile was evenly scattered across the site, probably derived from manuring rather than the presence of substantial structures such as barns.

Archive: C.M.

40. Foulness, Great Burwood Farm (TR 009 911)

R.W. Crump, F.C.A.S.

Excavation work has continued through 2000. The complete ground-floor layout of the original farmhouse has now been revealed. Anecdotal evidence indicates that this was a timber-framed and weatherboarded dwelling. The layout includes a large fireplace complex, which served two rooms; a baffle entry to the south; two outshots, one of which was used as a brewhouse, and the other probably a chaise house. The building fits into a well defined pattern from the late 17th century, and a comparable example survives at Tree Farm to the east. The stratigraphy of the site consists of 4 levels. Level I contains modern artefacts and materials from the demolition of the house in 1925. Level II contains the brick foundations and finds of the 17th and 18th centuries. Level III has produced pottery from the 14th/15th centuries, including Mill Green Ware, sandy orange ware, and slip-painted jugs or cisterns. Level IV consists of a light brown sandy clay which is the natural underlying soil for Foulness. The only features in this are post 1925 rubbish pits that penetrate to this depth.

Previous summaries: Bennett 1999, 229-230; 2000, 217-218.

Archive: F.C.A.S.

41. Great Chesterford, site of new village hall (TL 5035 4327)

A. Letch, E.C.C. (F.A.U.)

An archaeological watching brief on foundation and drainage trenches located the eastern side of the Roman fort ditch found in the evaluation. Two other features, both pits, were recorded inside the area of the fort.

Previous summaries: Bennett 1998, 213; 1999, 214.

Archive: S.W.M.

42. Great Chesterford, Bishop's House (TL 5056 4269)

R. Wardill, E.C.C. (F.A.U.)

A magnetometer survey carried out in the gardens of Bishop's House located some fragmentary magnetic anomalies characteristic of archaeological features, and a significant amount of disturbance caused by post-medieval and modern features. Previous surveys in Great Chesterford have produced good results and it is likely that localised conditions such as the modern disturbance or post-medieval and natural land build up had a detrimental effect on the ability of the equipment to detect archaeological anomalies. There was a common general alignment between some of the linear features although this trend should be viewed with caution.

Previous summaries: Bennett 2000, 218.

43. Great Chesterford, Timbers, Manor Lane (TL 5087 4273)

D. Hillelson, T.H.N.

Recording of groundwork in advance of the construction of an extension and small barn revealed 10 archaeological features. Five of these were rubbish pits of the mid-20th century, and two were post-medieval rubbish pits. One feature was a large deep pit, possibly a post-medieval quarry pit or farmyard pond.

Archive: S.W.M.

44. Great Dunmow, Brand's Farm, Ongar Road (TL 6085 1939)

T. Vaughan, H.A.T.

Observation and recording was undertaken during the conversion of a barn and associated drainage improvements. The barn had previously been the subject of an historic building survey by HAT in 1999. Brand's Farm is a late medieval cross-wing house within a partially filled moat. A single medieval feature was recorded in a foundation trench on the site, possibly associated with the moat which lay 10m to the south west. No other features were recorded on the site. Shallow topsoil directly overlay the natural clay on much of the site, suggesting widespread previous truncation.

Previous summaries: Bennett 2000, 229.

Archive: H.A.T., to go to S.W.M.

45. Great Dunmow, land west of the parish church, Church End (TL 629 230)

T. McDonald, H.A.T.

Eleven trial trenches were excavated on agricultural land adjacent to St Mary's church, in advance of redevelopment of the site. The church was rebuilt in the late 14th/15th centuries, and it is probable that

the church would have formed the focus for late Saxon and early medieval occupation in the area. Many late Iron Age and Roman finds are also known from the vicinity. A large natural hollow was revealed in Trenches 1 and 2; the base of a small post-medieval pit was found in Trench 2; and a small ditch, also post-medieval, was revealed in Trench 7. Sparse fragments of Roman tile were also recorded. No significant occupation was identified in the trial trenches.

Archive: S.W.M.

46. Great Dunmow, Site 16 A120 (TL 6395 2044)

O.A.U.

Fieldwalking revealed a small scatter of medieval pottery. Subsequent excavation of six trenches revealed several features: a ditch, a palaeochannel of uncertain date, a pit containing a dump of burnt material, and a cut containing a cremation deposit. The cremation was not associated with a vessel. An environmental sample taken from the cremation deposit yielded a large quantity of charcoal.

47. Great Dunmow, 50 Springfield (TL 625 126)

P. Connell, E.C.C. (H.A.M.P.)

A watching brief on an extension to this property revealed a pit at least 2m in diameter, cutting natural gravel. Dark humic fill produced a range of ceramics including a greyware rim, Nene valley and Hadham ware of probable 3rd- to 4th-century date, and also a small rim sherd of a Samian bowl (Dr. 18 or 31) of central or southern Gaulish origin. Additionally recovered from spoil were scraps of Cu-alloy and a Cu-alloy stud, daub with a probable skim of plaster, ceramic burnt material including pieces of imbrex, bone fragments, and a bone pin with an ovoid head and a probable date range (in Colchester) of AD 2000 to late 4th to early 5th century (Crummy's Type 3). (The finds were identified by Joyce Compton, E.C.C. Field Archaeology Unit).

48. Great Wakering, churchyard extension (TQ 9503 8755)

T. Vaughan, E.C.C. (F.A.U.)

An excavation funded by English Heritage was carried out in advance of extending the churchyard into the adjacent field to make space for new burial plots. A wide range of features was excavated, dating to the Bronze Age, Iron Age, Roman and Early to Middle Saxon periods. The Bronze Age and Iron Age field boundary ditches uncovered were part of an extensive agricultural landscape that developed before the Roman conquest. The site was on the edge of a Roman settlement, and a small cremation cemetery and an industrial area were excavated. The

cremated remains were not placed in urns, but were buried along with a wide range of pottery vessels that may have contained votive offerings and the remains of a box with metal fittings. The cremation cemetery was succeeded by a small number of inhumation burials. One unusual inhumation was of a small child that had been buried with an oyster shell deliberately placed on its chest, and a large deposit of oyster shells sealing the skeleton, creating a micro-environment in which the skeleton was very well preserved. Saxon pits and hearths were recorded within a ditched enclosure. This is interpreted as evidence for the precinct of the Middle Saxon Minster suggested by documentary evidence, which is thought to have preceded the present church. One of the enclosure ditches contained a fragment of carved stone depicting an interlaced serpent, and may have been part of a Late Saxon cross.

Previous summaries: Bennett 1999, 214.

Archive: S.M.

49. Great Wakering, Star Lane Brickworks (TQ 9420 8690)

Ben Barker

An archaeological watching brief was carried out on topsoil stripping for the extraction of brickearth over an area of approximately 0.4ha at Crouchmann's Farm, *c.*500m to the south of Great Wakering High Street. Two pits and a Bronze Age ditch terminus were recorded in the three machine strips monitored across the extraction area, although many more features were observed in the underlying London Clay.

Archive: S.M.

50. Great and Little Wigborough, Abbot's Hall Farm (TL 971 140)

H. Brooks and C. Crossan, C.A.T.

An area of 4.76 ha was fieldwalked in advance of the construction of a freshwater lake. There were a number of prehistoric and Roman finds, including a significant cluster of prehistoric burnt flints which represents a previously unknown prehistoric 'site'. The cluster of burnt flints was trial-trenched by means of three 1.5m wide trenches totalling 55m long. There were no features, apart from one intrusion of indeterminate origin.

Archive: C.M. (Ref. 2000-133).

Report: C.A.T. Reports 105 and 111.

51. Harlow, The High, Harlow New Town (TL 4450 0970)

E. Heppell, E.C.C. (F.A.U.)

A desk-based assessment was carried out on a proposed development at The High, Harlow. Although no sites of archaeological interest were

found in the study area, the town centre is of considerable importance as an example of a planned new town. In 1944 Harlow was proposed as the site of one of the new London satellite towns. Frederick Gibberd was appointed the architect of the project and presented the first of a series of plans to the Harlow Development Corporation in 1947. The High was central to this design as it was chosen as the site of the civic centre of the town. Gibberd's scheme was designed to complement the physical landscape, and although it was never fully completed, it remains as an example of the design philosophy of post-war town planning. The Town Hall, water gardens and the surrounding buildings were constructed in 1959-1960, with some changes to Gibberd's designs to reduce costs. The water gardens, to the south of the civic square, are also an area of historical interest and were Grade II listed in 1991, as well as appearing on the ICOMOS register of parks and garden of historic interest. It is understood that the gardens are to be retained as part of the proposed development.

52. Heybridge, land adjacent to St George's church, Basin Road (TL 8728 0730)

T. Vaughan, E.C.C. (F.A.U.)

An evaluation was carried out on the site of a residential development, to the south of a Neolithic/Late Bronze Age site excavated in 1985 (EHCR 8016-8). Nine trenches were excavated; no features were identified. Hollows and channels in the surface of the natural subsoil were determined to be natural erosion features and rivulets. The small number of finds recovered were all residual, indicating that the site is peripheral to the Neolithic/Late Bronze Age settlement to the north.

Archive: C.M.

53. Hornchurch, 233 High Street (TQ 5435 8712)

S. Hickling, E.C.C. (F.A.U.)

An archaeological watching brief carried out during building work on the former site of Hornchurch Hall recorded post-medieval garden features and ditches, possibly of medieval date. Carved medieval stone work was found reused in the foundations of a post-medieval wall; this wall is depicted on the 1849 Tithe Plan. The stone may have originated from an unlocated ecclesiastical building on the site or nearby, but no features were found to confirm the existence of the building.

Archive: M.L.

54. Ilford, Car park at Winston Way/Clements Road (TQ 4383 8630)

M. Beasley, P.C.A.

A single trench was excavated at the site. The basal deposit across the site was a layer of light yellow brown sand which was not excavated. Over this was a layer of mid-orange brown sandy silt clay brickearth found at 10.40m AOD and up to 0.23m deep. Two slots were excavated by hand into the surviving brickearth deposits to try and establish the presence of Palaeolithic ecofacts or artefacts but none were present. This evaluation showed truncation by large cuts, possibly brickearth quarrying and building activity during the 19th century at the eastern end of the site. This effectively removed the brickearth deposits from all but two localised areas.

Archive: M.o.L.A.S.

55. Kelvedon, The Grangewood Centre, High Street (TL 8605 1844)

S. McKeand, E.C.C. (F.A.U.)

An archaeological evaluation was carried out at the Grangewood Centre, on the site of a proposed residential care home and residential development. The proposed development lies adjacent to an area known to contain the remains of Iron Age, Roman and Early Saxon settlement, and within the later medieval town. Of the nine trenches excavated, only two had archaeology present: one uncovered a pit containing late medieval/post-medieval pottery and tile, while a second revealed a spread of gravel and cobbles on the presumed line of a Roman road. The cobble and gravel spread had suffered from recent disturbance and truncation, and the interpretation of the feature as a road is not certain.

Archive: Bt.M.

56. Kelvedon, Kingfisher Way (TL 8642 1895)

B. Barker, E.C.C. (F.A.U.)

An archaeological watching brief was carried out on a residential development south-east of High Street, on land formerly used as allotments. Previous archaeological excavations in the immediate vicinity had suggested that the defensive ditch of the Roman town, and possibly the London to Colchester road, crossed the development area. Two Roman pits and a recently backfilled ditch were recorded. The latter is thought to be a previously excavated segment of the north-eastern Roman town defences.

Archive: Bt.M.

57. Langford, Water Treatment Works (TL 8335 0910)

J. Smith, H.A.T.

Eighteen trial trenches were excavated on the site, revealing only a single post-medieval ditch and sparse residual struck flint flakes . Evidence of deep ploughing was also suggested.

Archive: H.A.T.

58. Leaden Roding, Leaden Hall Farm (TL 584 136)

P.J. Cott

Following resistivity survey last year, magnetometer survey took place to find features at this suspected Roman settlement where the Roman road between Abridge to Dunmow crosses the River Roding.

59. Leigh-on-Sea, Strand Wharf, High Street (TQ 8389 8565)

R. Wardill, E.C.C. (F.A.U.)

Excavation of an evaluation trench at Strand Wharf revealed a complex series of archaeological deposits indicative of the wharf's development from the late 18th through to the present day. These comprised at least three separate phases of timber structure possibly related to foreshore construction and many layers of natural and archaeological material deposited prior to the building of a brick wharf in the 19th century. Residual pottery was also recovered indicating 15th/16th century activity in the area. No evidence of the timber building known as Chester's house was located and it is probable that its remains lie further to the west of the evaluation trench.

Archive: S.M.

60. Little Easton, Little Easton Airfield (TL 595 225)

E. Heppell, E.C.C. (F.A.U.)

A desk-based assessment was carried out on the proposed site of a gravel extraction pit and associated haul road at Little Easton Airfield. The gravel extraction site lies within an area where there have been indications of prehistoric, Late Iron Age and Roman activity, although none fall within the study area. Roman remains have been found both to the south and west. In the Middle Ages the study area lay within the royal forest of Essex, although Essex north of Stane Street was bought out of the forest in 1204. Henry VIII had a small wooden lodge built, probably on the site of the current Easton Lodge. In 1590 Elizabeth I granted the estate to the Maynard family, who built a mansion on the site of the old lodge and established a deer park to the south. The study area lies within this park which was altered over the centuries. During World War 2 the estate was requisitioned and in 1942-3 the

United States Army Air Force constructed an airfield on the site. The airfield is alternatively referred to as Great Dunmow. This was equipped with three runways, a perimeter track, 50 loop dispersals and various dispersed sites, mainly for accommodation. The study area is located in the southern part of this airfield, and includes the site of the bomb store. The airfield was transferred to the RAF in 1944 and returned to private ownership in 1956. In the 1960s parts of the runways were broken up to provide hardcore for the construction of the A12.

61. Little Waltham, Belsteads Farm (TL 7230 1215)

T. Vaughan, E.C.C. (F.A.U.)

An evaluation was carried out on the site of a proposed agricultural reservoir. Archaeological finds from most periods are recorded in the vicinity of the site. Eighteen trenches were excavated; only one of these uncovered archaeological deposits. Three features were identified; two postholes and a ditch, containing a very small quantity of Early-Late Iron Age pottery, Roman tile, intrusive post-medieval tile and two struck flints. All of the finds were abraded. A very small number of unstratified finds were recovered during machining in trenches adjacent to the features. Plough marks were observed in the surface of the natural subsoil, which was often also disturbed by land drains. The area has been truncated by extensive ploughing, but there is no evidence of substantial activity on the site.

Archive: Ch.E.M.

62. Newport, Shortgrove Hall (TL 5265 3525)

N. Crank and J. Murray, H.A.T.

Monitoring and recording was undertaken on the construction of a new house on the site of the former 16th/17th-century and susequent 19th-century mansion. Vaulted cellars of 17th-century date partially survive on the site. Building rubble of successive demolition episodes was found to overly much of the site. An elaborate 19th century brick-lined drainage culvert was present in the southern part of the site. No evidence of the 17th-century house or any of its predecessors was revealed, apart from the vaulted cellars.

Archive: S.W.M.

63. Newport, The White House, High Street (TL 5210 3386)

N. Crank, H.A.T.

An archaeological evaluation was undertaken prior to redevelopment of the site for residential use. The site lies within the historic core of Newport, a town with late Saxon and medieval origins. Four

evaluation trenches were excavated, revealing a single large pit containing sparse 12th to 14th-century sherds. Other features revealed included a small undated post hole of probable post-medieval date and a large late post-medieval/modern pit.

Archive: S.W.M.

64. North Weald Bassett, A414 Dualling (TL 4745 0765)

A. Letch, E.C.C. (F.A.U.)
An archaeological watching brief was undertaken on stripping works in advance of the dualling of a section of the A414 close to Junction 7 of the M11, and adjacent to a known Metropolitan slipware kiln site. The watching brief recorded the ploughed-out remnants of kiln lining, pot sherds dating to the 13th and 17th centuries, and some 17th-century kiln furniture for the production of fine black glazed wares.

Archive: E.F.D.M.

65. North Weald Bassett, Ongar Park Radio Station (TL 510 045)

R. Wardill, E.C.C. (F.A.U.)
A geophysical survey combining large area magnetic susceptibility measurements with targeted magnetometer investigations was carried out on the site of a proposed golf course. The magnetic susceptibility survey identified five areas of possible archaeological activity and these, together with an area across the projected route of a Roman road and an area of interest identified during a previous fieldwalking survey, were investigated by magnetometry. The majority of anomalies located during these investigations were interpreted as field boundaries and no other archaeological activity was identified. The projected Roman road was not found suggesting possible degradation by ploughing.

66. Plaistow, Lord Raglan PH, 9a High Street (TQ 4024 8331)

F. Corrin, P.C.A.
Two test pits and the extension of the basement were monitored at the site. Natural was not observed. The watching brief showed evidence of 19th-century cellar backfill and an undated deposit of clay which was probably redeposited, and may represent the backfill of a palaeochannel or quarry pit.

Archive: M.L.

67. Pleshey, Pleshey Cricket Ground (TQ 6641 1422)

R. Wardill, E.C.C. (F.A.U.)
A magnetometer survey of Pleshey cricket ground, which is located to the south-west of the motte and bailey castle, was carried out to elucidate the findings from aerial photographs. The survey located a number of faint, fragmentary linear anomalies which were in alignment with the medieval defences identified from the aerial photographs. These anomalies indicated the presence of ditches but further characterisation was not possible.

68. Ramsey, proposed site of new school, Church Hill (TM 2188 3050)

E. Heppell and R. Wardill, E.C.C. (F.A.U.)
A desk-based assessment was carried out on the proposed site of a new school at Ramsey. The study area was located to the east of St. Michael's Church, and to the east of Ramsey village itself. The area is steeply sloping and is currently used as grazing land. Michaelstow Hall, built in 1903, is located to the north-east. Michaelstow is mentioned in the Domesday survey, and as such was in existence during the Saxon and early medieval periods. Although the site of the manorial centre at this time is uncertain, it is possible that it was located within the study area. The proximity of the medieval church means that the churchyard may once have extended into the study area. Cartographic evidence shows Michaelstow Hall at the southern end of the study area by 1777. Although the date of construction is unknown, it is possible that it may have medieval origins. This building was demolished between 1843 and 1876. Earthworks visible at the current time would indicate that the remains of this structure are present. In 1903 a new hall was built. This building, and the land around it was sold to Essex County Council in 1919. It became a special school, closing in 1985. The Hall is now a residential home. Since 1876 the study area has been used as either park or grazing land.

A magnetometer survey on this site located many anomalies characteristic of a range of archaeological features. An area of concentrated activity was found at the south end of the survey area and included ditches, pits and features probably representing building remains. These possibly represent remains associated with the demolished Michaelstow Hall. The site of a building is also suggested by a rubble spread towards the middle of the survey area. A further small complex of linear features was located to the north and this also contained convincing evidence for structural remains. It is probable that the archaeological remains located during this investigation extend beyond the limits of the survey area. This is most likely the case in land adjacent to the southern end of the site where the archaeological remains appear most extensive.

69. Rayleigh, land adjacent to Rayleigh Mill (TQ 8063 9096)

N. Crank, H.A.T.

An archaeological evaluation was undertaken on the site of a proposed educational centre. The site lies in the historic core of Rayleigh, within the assumed course of the outer bailey of the latter. The castle is one of the earliest motte-and-bailey castles in the country, mentioned in Domesday. It was altered and repaired in the later 12th century but probably became disused in the mid 13th century. Excavations in the immediate vicinity in the 1960s/70s suggested the presence of substantial medieval archaeological features, interpreted as deriving from the presence of a 12th-century barbican defence with a bridge. A single evaluation trench excavated on the line of the proposed new building revealed no archaeological features. The natural clay was encountered at shallow depth below modern overburden, before grading out to a clean sand deposit. No traces of the previous excavation trenches was located. All the evidence suggests substantial truncation over the last 30 years, probably when the current car park was constructed.

Archive: H.A.T., to go to S.M.

70. Redbridge, Fairlop Quarry (TQ 4643 9100)

S. Gibson, E.C.C. (F.A.U.)

A large cropmark site is being excavated in advance of gravel extraction in a series of stages as the quarry face advances. Previous work has recovered evidence of Bronze Age ring-ditches and cremations, Late Iron Age and Roman cremations, and a Roman field system with enclosures and an agricultural building used for crop processing. A single unurned cremation burial was excavated in Cell 5 during 2000.

Previous summaries: Bennett 1999, 220-1; 2000, 220.

Archive: M.L.

71. Roxwell Quarry (TL 672 922)

M. Peachey, E.C.C. (F.A.U.)

A further area of approximately 2ha was excavated in advance of quarrying. Features recorded consisted of a complex layout of Late Iron Age boundary ditches with several associated cremation burials, overlain by smaller pre-Flavian boundary ditches. In the southern part of the site a group of curvilinear ditches formed a penannular enclosure approximately 45m across. A small three-sided enclosure within the larger enclosure contained several unurned cremation burials. Further cremation burials were excavated in the northern part of the site, including one accompanied by three pottery vessels, copper-alloy items and unburnt animal bone. Romano-British activity on the site seems to end by the Flavian period. No trace of the

medieval trackway, recorded immediately to the south in 1998, was uncovered. The only post-Roman feature encountered was a recently removed hedgeline.

Previous summaries: Bennett 2000, 220.

Archive: Ch.E.M.

72. St Osyth, Lodge Farm (TM 1335 1545)

M. Germany, E.C.C. (F.A.U.)

Dense concentrations of prehistoric features have been uncovered by an archaeological excavation in advance of gravel extraction and the construction of a reservoir at Lodge Farm, St. Osyth. All prehistoric periods are represented, from the Neolithic to the Late Iron Age, although most features, including a large cluster of round-houses, are probably Middle Iron Age. Neolithic pits and Bronze Age cremations have also been found. Other features include trackways and ditches, and ring-ditches from ploughed-out barrows. A Roman rectilinear field system is also present. Some of the pits are distinguished by large assemblages of worked flint, including tools and arrowheads. Triangular loom-weights and large amounts of prehistoric pottery have also been found. One third of the site has so far been excavated. Future work will concentrate on the barrows and round-houses, and also on a relict stream channel, which will be trenched for environmental samples.

Previous summaries: Bennett 1999, 215.

Archive: C.M.

73. Saffron Walden, Football Pitch, Catons Lane (TL 5378 3892)

M. Medlycott, E.C.C. (H.A.M.P.)

Metal detecting survey by Mr Tony Carter following levelling work revealed a quantity of 16th- to 17th-century cloth seals, coins and trade tokens. The latter included tokens from Germany, London, Colchester, Newport, Ipswich, Cheshunt and Thaxted. Also found were studs and other leather fittings, and a large quantity of post-medieval lead pistol balls, possibly 18th-century. The finder suggests that this was the site of a fair. The pistol balls may be from local militia practice, post-dating Civil War activities in the town.

74. South Weald Country Park, The Ha-Ha. (TQ 570 940)

E. Heppell, E.C.C. (F.A.U.)

Archaeological recording work was carried out on a section of ha-ha wall at South Weald Country Park. The wall is a surviving part of an ambitious programme of planned improvements to the house and grounds dating to the 18th century. In 1738 Samuel Smith, the owner, commissioned a new

landscape plan for the estate, probably by a French designer, Bourginion. The ha-ha, running around the base of a belvedere mound, was part of this design, which was never fully realised. An 11m section of wall was recorded prior to stabilisation works. This section of wall had three distinct elements. The original wall was built using 'place' bricks, probably made at temporary brickfields close to the site, dating to the 18th century. Three buttresses had been added to support the wall, using bricks dating to 1899-1933. In addition there was a section of modern repair, using 19th to 20th-century wire cut bricks.

Previous summaries: Bennett & Gilman 1996, 272.

Archive: to be decided.

75. Stanford le Hope, Stanford Marshes (TQ 693 811)

E. Heppell, E.C.C. (F.A.U.)

A desk-based assessment was carried out on a proposed development area located to the north of Mucking Creek at Stanford Marshes, Wharf Road, Stanford le Hope. In addition, an archaeological watching brief was undertaken on the excavation of test pits within the area. The site lies within an area where prehistoric remains have been uncovered, although none are from the site itself. Peat deposits were encountered in the test pits. As such it is possible that prehistoric remains may be present on site, either within or below the alluvium. Iron Age and Roman remains have been recovered from the immediate vicinity of the development area. They consisted mainly of spot finds and may be the result of exploitation of the marshes in the Roman period. As such it is unlikely that significant remains of that date are present. There is no evidence for Saxon activity in the immediate vicinity of the site. There are also few references to medieval activity. Cartographic sources of the post medieval period show little change in the development area between 1777 and 1938. A large bank, which now marks the eastern limit of the site, was constructed after this date. In addition, the course of Mucking Creek was shifted as a result of tipping after this date. The sources show the importance of the creek for trade, with wharves present on both banks. In addition they show the increasing exploitation of the area as a source of aggregates. The area is currently partially under cultivation and partially covered by reed beds.

76. Stanway, Gosbecks (TL 965 225)

P.J. Cott

Both magnetometry at high density and radar have been used to resurvey the temple complex, in particular the central area and the entrance through the great ditch. This has resulted in better definition of previously recorded anomalies. It was also attempted to delineate the Roman theatre by magnetometry, in particular the entrances. This was not very successful and a resistivity survey will be carried out in 2001.

Previous summaries: Bennett 1997, 220-1; 1998, 206-7; 1999, 216; 2000, 221-2.

77. Takeley, Thremhall Priory Farm (TL 5300 2140)

T. Vaughan, E.C.C. (F.A.U.)

An evaluation consisting of two trenches was carried out ahead of the conversion and extension of redundant farm buildings. The site is adjacent to Thremhall Priory, a medieval moated site (EHCR 4599, 4600). The only medieval feature encountered was a ditch containing fragments of a 13th century coarseware. Elsewhere a number of post-medieval features were identified, including a posthole, two narrow flint-filled drainage gulleys and wall foundations. These relate to earlier phases of farmyard activity, particularly to a barn shown on the OS 1st edition survey. At no point was a subsoil encountered while the overburden contained extensive hardcore deposits, the result of levelling during farmyard activity.

Previous summaries: Bennett 2000, 215.

Archive: Bt.M.

78. Thaxted, Christopher Cottage, Margaret Street (TL 611 311)

R. Havis, E.C.C. (H.A.M.P.)

A watching brief on a rear extension identified archaeological deposits of probable medieval date. A single masonry wall was identified running at right angles to the present house. The top of the wall was approximately 0.7m below modern ground surface being at least 40cm deep, continuing lower than the depth of foundations. No dating was recovered. The owners also reported the discovery of considerable quantities of worked bone within the garden.

79. Tiptree, Villa Farm Quarry (TL 885 155)

P. Boyer, H.A.T.

An archaeological evaluation was undertaken in advance of proposals to extract minerals from the site. There are a number of post-medieval references to the presence of pottery kilns in the area. A geophysical survey suggested a number of anomalies that may have derived from the presence of kilns. Nine trial trenches were excavated on the site to examine these anomalies, but no archaeological features were identified. Shallow topsoil directly overlay the natural drift in this part of the site, suggesting that the geophysical anomalies were of geological origin.

Archive: H.A.T.

80. White Notley, Garden House, Church Hill (TL 7862 1825)

D.A.G. Gadd, E.C.C. (F.A.U.)
A substantial ditch was revealed in the footings for a new extension. It measured *c*.2.1m wide by 1m deep. It ran north-south and contained medieval pottery and one sherd of Roman tile.

81. Witham, Strutt and Parker Farms (TL 809 175)

S. Gibson, E.C.C. (F.A.U.)
Fieldwalking evaluation was carried out on the site of a proposed agricultural reservoir. Background scatters of material were present for most periods. Some form of on-site prehistoric activity was possibly indicated by a large spread of burnt or fire-cracked flint.

Archive: Bt.M.

82. Writtle, site of new nursery, Writtle College (TL 679 069)

T. Vaughan, H.A.T.
Two trial trenches were excavated on the site, which lies some 250m to the north-east of the site of a moated royal hunting lodge built for King John in 1211. Investigations at the Writtle College Agronomy Centre to the south had revealed medieval and post-medieval features associated with the site. The evaluation in 2000 revealed no archaeological features, though a small number of finds were found within the topsoil: struck flints, abraded prehistoric and Roman potsherds, a burnt flint, and fragments of slag and pegtile.

Archive: Ch.E.M.

Abbreviations

Bt.M.	Braintree Museum
C.A.T.	Colchester Archaeological Trust
C.M.	Colchester Museum (formerly Colchester and Essex Museum)
Ch.E.M.	Chelmsford and Essex Museum
E.C.C.	Essex County Council
E.C.C. (F.A.U.)	Essex County Council (Field Archaeology Unit)
E.C.C. (H.A.M.P.)	Essex County Council (Heritage Advice, Management and Promotion)
E.C.C. (H.I.R.)	Essex County Council (Heritage Information and Records)
E.F.D.M.	Epping Forest District Museum
E.S.A.H.	Essex Society for Archaeology and History
F.C.A.S.	Foulness Conservation and Archaeological Society
G.L.S.M.R.	Greater London Sites amd Monuments Record
H.A.T.	Hertfordshire Archaeological Trust
M.L.	Museum of London
M.o.L.A.S.	Museum of London Archaeology Service
N.T.	National Trust
O.A.U.	Oxford Archaeological Unit
P.C.A.	Pre-Construct Archaeology Ltd
S.M.	Southend Museum
S.W.M.	Saffron Walden Museum
T.H.N.	The Heritage Network Ltd
T.M.	Thurrock Museum

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Historic buildings notes and surveys
edited by D. D. Andrews

The buildings described here have been recorded either through private research, or else in the course of development control work within the framework of Planning Policy Guidance notes 15 and 16. We are grateful to the owners, agents and contractors whose help and co-operation has made this work possible.

The Essex Tree-ring Dating Project

D.D. Andrews

Funding for tree-ring research remains a problem, and once again new dates mainly arise from English Heritage commissions in the course of restoration, or else from offcuts salvaged during repairs. The failure at Clacton St. John (Table 1) is disappointing, as the relic belfry at the west end of the church is almost certainly one of the earliest in the county. The results at Saffron Walden St. Mary fit in with the documented rebuild of the church but identify some puzzling reused timber. The small Salcott barn is now one of our earliest dated barns: it has some archaic features but also one of the earliest known edge-halved and bridled scarf joints. At Hill Hall, the north-west wing has been shown to be about 100 years later than was previously thought. It is good to finally have a date for the Widdington barn, which is in English Heritage guardianship and was restored by them in 1977-83. Like the barns at Writtle and Netteswellbury, it was built around the middle of the 15th century.

Note: Ancient Monument Laboratory Reports are available from English Heritage, 23 Savile Row, London W1.

Two late medieval buildings for housing animals

Richard Shackle

Surviving timber-framed buildings which were used to house animals are quite rare in Essex. The following two buildings, both single storey and datable to the 15th or 16th century, were probably built as either stables or cattle byres, more probably as stables for horses.

Farm building at Beacon End Farm, Stanway

This building stood parallel to the road alongside the Beacon End farmhouse, a medieval house with two cross-wings (Wadhams 1979). It was demolished in

Table 1. Recently obtained tree-ring dates for Essex.

PARISH	BUILDING	DATE	TIMBERS	REPORT	ANALYST
East Mersea	No result	Nave rafters			M. Bridge
Great Clacton	St. John	No result	Nave rafters Belfry	AM Lab Rep 67/2000	M. Bridge
Saffron Walden	St. Mary's	1) 1406-33 2) 1440-72 3) 1475-1502 4)1789/90	South aisle roof, various	See Church Miscellany in this volume	M. Bridge
Salcott	Horn Farm Barn	1339 + 10-50	Arcade post	See report below in this volume	I. Tyers
Theydon Mount	Hill Hall	1) 1564-80 2) 1683-1701	1) N wing 2) NW wing roof	AM Lab Rep 55/1999	M. Bridge
Widdington	Prior's Hall Barn	1417-42	3 arcade posts, 1 aisle post	AM Lab Rep 29/2000	I. Tyers

1997 because it was in poor structural condition and has been replaced by a building of similar appearance and with the same footprint. At the time of its demolition, the building had four bays, three bays of the original building and an extra 19th-century bay to the east.

The original three-bay building comprised a large room of two bays with an open truss and a single bay room separated from the two-bay room by a closed truss (Fig. 1). There were two doors to the north facing into the farmyard. A wide door (4ft. 3ins, 1.29m) led into the two-bay room and a narrow door (2ft. 9ins, 0.84m) into the other room. There did not appear to be any windows in the large room, but there could have been small windows between adjacent studs or there could have been a window where the framing is missing on the south wall. The small room has a diamond mullion window looking south across the road.

The building was timber-framed in oak with close studding. Originally there was wattle and daub between the studs, as could be seen by the wattle notches on the flanks of the studs. The building was triangulated by tension braces, which run from stud to stud. The studs were of substantial scantling, being mostly 6 x 4.5ins. (150 x 115mm). The end elevation G-H had jowled posts and tension braces (Fig. 1). The other end elevation A-B was probably similar. Truss 2, section C-D, was an open truss with braces. These braces were partly set into the jowls to increase headroom. There were mortices on the top face of the tie-beam but they were unpegged and were probably later alterations, not part of the original roof structure. The third truss, section E-F, appears to have been a completely closed truss with pegged mortices both above and below the tie-beam. The north wall was close studded with a tension brace at the west end and probably at the east end also, but the evidence is missing. The top plate had a halved and bridled scarf joint. The evidence for doorways was very clear on the posts at C and G; both had mortices for doorheads and rebates for the doors to open into. The south wall was also close studded with tension braces at either end. Both the north and south top plates had an extra dovetail joint half way along the middle bay, which may have been for a later tie-beam to strengthen the structure. The diamond mullion window had its own window head set below the top plate with a rebate for a shutter runner.

The building in its final form had a modern side purlin roof but on top of the north and south top plates could be seen the original rafter feet. These are shown projected on Fig. as rafters. The end tie-beams appeared to have mortices on the top face, so the building probably had a gabled roof. The intermediate tie-beams did not have central pegged mortices on their upper faces, so the building could not have had a crown-post roof: it must have had

either a side-purlin roof or a rafter-couple roof. The building had a brick floor, strongly suggesting that it had always housed animals.

In one of its later phases the building was given two extra elm tie-beams to help stabilise it and some of the arch braces to the tie-beams were replaced by knees. The walls were weatherboarded and the wattle and daub removed. In the south wall bricks were placed between the studs.

The building was probably constructed in either the 15th or 16th century. The evidence for this is the large scantling of the studs and the halved and bridled scarf joint in the top plate.

Outbuilding at 6 East Street, Coggeshall

6 East Street, Coggeshall, is a complex of buildings running away southwards from the street. The buildings, which are all contiguous, are in order, a medieval hall house, a medieval shop, an early kitchen, a public building and finally a building which was probably a stable.

The latter is three bays long and about 22ft. (6.7m) wide (Fig. 2). As originally built it consisted of one large room with two open trusses. At the north end it butts up against and shares the end wall of the public building. On the east side, at the north end, facing the yard, is a doorway 2ft. 6ins. (760mm) wide. This formerly had a separate doorhead about six inches below the top plate. There may have been another door opposite it in the back wall, next to post G. This is puzzling, as such a door would appear to give access to the next property. All the studs, except in wall A-B, appear to have been replaced so we cannot tell if there were any windows or more doors. The latter point is important as the door for which there is surviving evidence is too narrow for all but perhaps a small riding horse.

The building is framed in oak with close studding. The posts and studs surviving in elevation A-B are of substantial scantling. The studs are at least 4.5ins. (115mm) thick. Wattle notches on the flanks of the studs and posts indicate that the building originally had an infill of wattle and daub. There are tension braces in elevation A-B, running from stud to sill, and there may have been similar braces in the side walls. The two main trusses C-D and E-F are both braced from post to tie-beam, although all the original braces are missing except on post C. The top plates of the side walls have halved and bridled scarf joints.

The building has a crown-post roof which is plain but substantial. The crown post in the end gable (Fig. 2) is braced to the tie-beam and probably to the collar purlin as well, but it is difficult to be sure as the purlin has been repaired at this point. The crown post in truss C-D (Fig. 2) was only braced to the collar purlin, but the original braces are missing and have been replaced with crude repairs. The crown
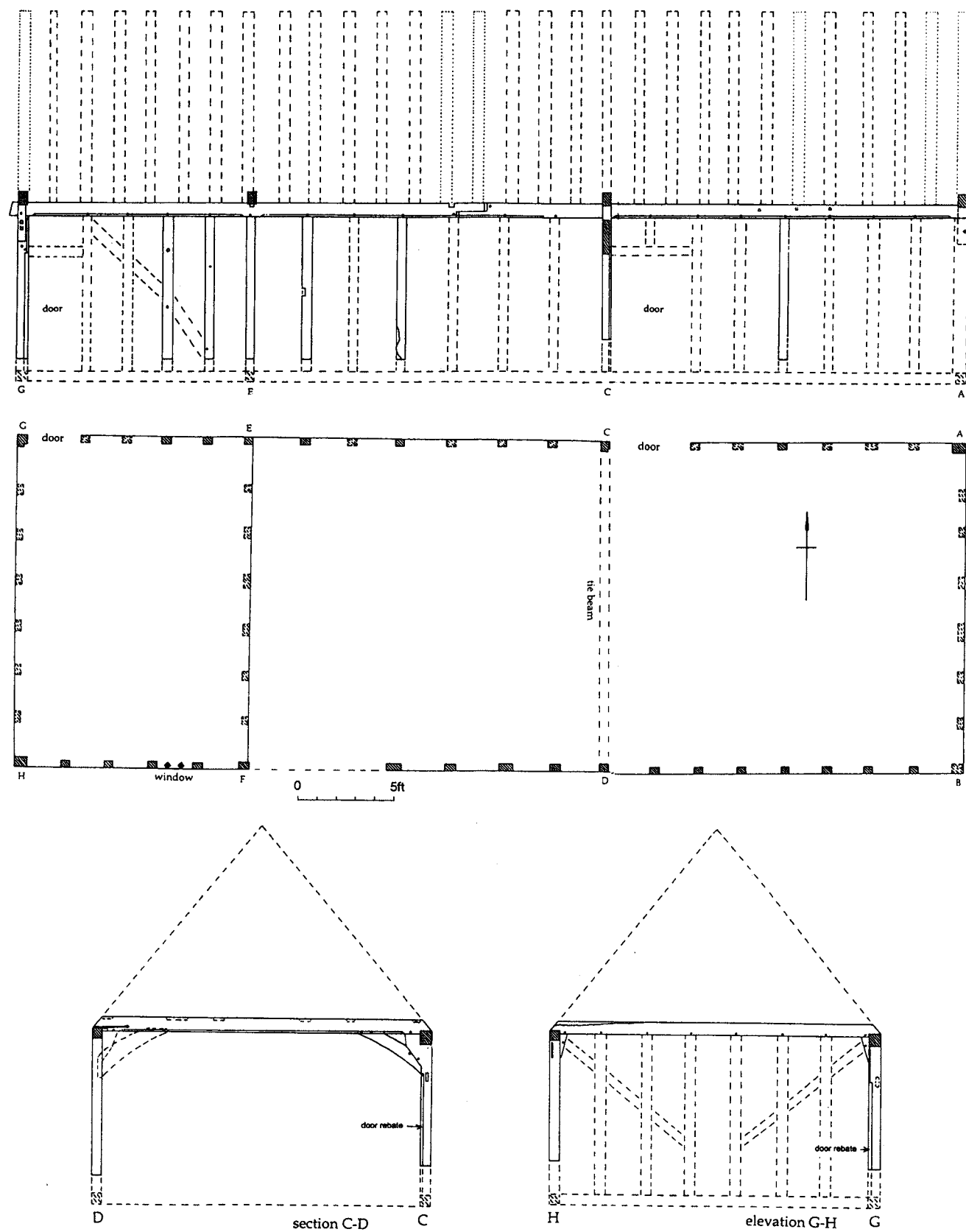
Fig. 1   Stanway, Beacon End farmhouse, probable stable building, now demolished.
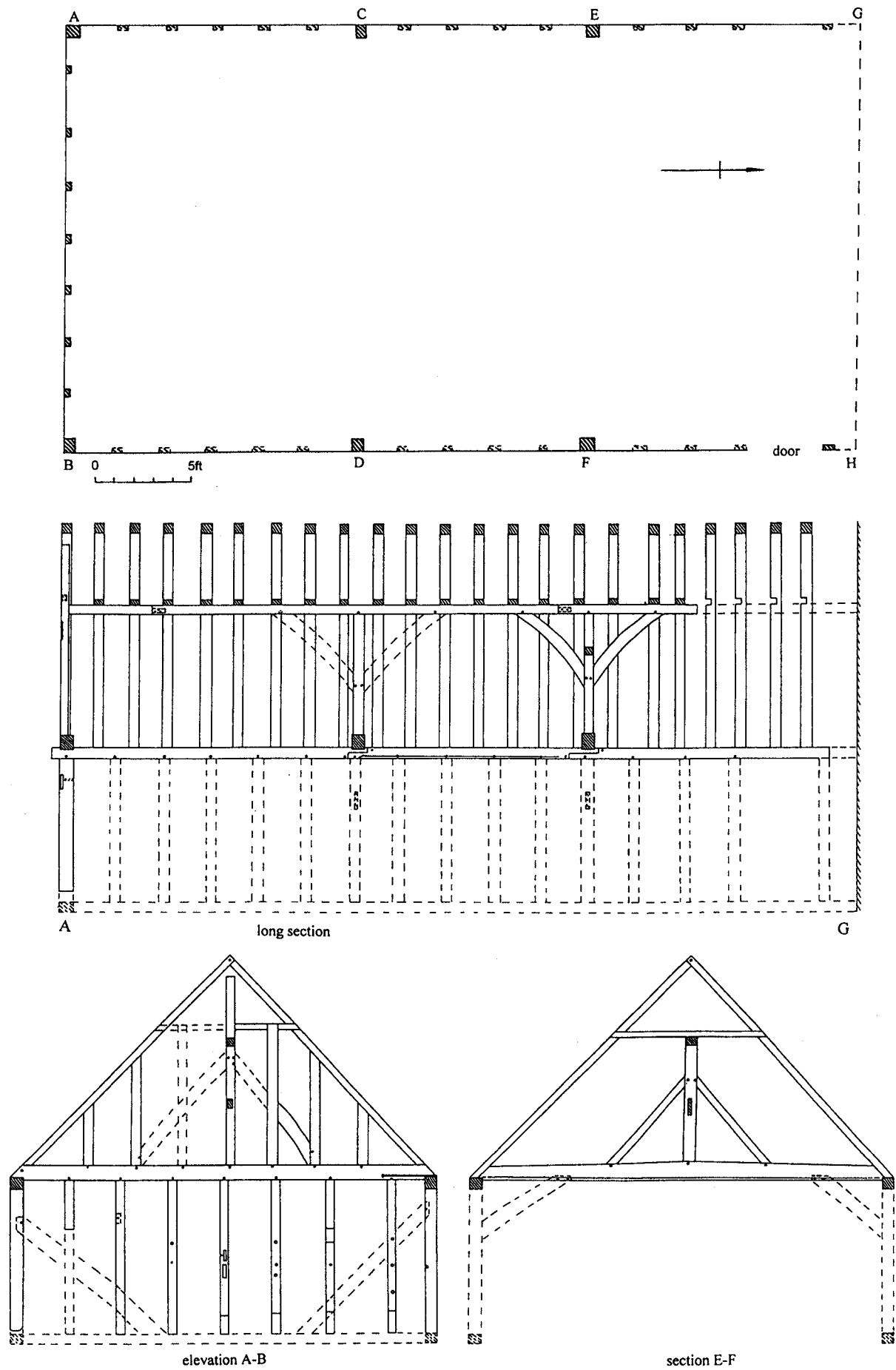
Fig. 2   Coggeshall, 6 East Street, probable stable building.

post in truss E-F is braced two ways, to the tie-beam and to the collar purlin. This suggests that the point under this crown post was an important part of the room. The collar purlin has two joints in it, where one piece of purlin is tenoned into the next.

The building gradually evolved over time. A large chimney was built between posts G and H to heat the public building next door. The wattle and daub was replaced by weather boarding. In recent times the building was given a corrugated iron roof. In the 19th and 20th centuries up to about 1990, the whole complex was used by a butcher and this building was used as a slaughter house with various pulleys and iron tracking systems for moving the carcasses about. Like the building at Stanway it had a brick floor which suggests it was used to house animals.

The building was probably built in the 15th or 16th century, the evidence for this being the crown-post roof and the halved and bridled scarf joints.

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A 14th-century building at Bocking Hall, Bocking

D. D. Andrews

Introduction
On the track leading to Bocking Hall, the manor house of Bocking, which was formerly an estate of Christ Church, Canterbury, there is a small building which at one end has in its roof the base of a cone for a drying kiln for a malthouse. This kiln is an insertion, probably of the 17th or 18th century. It represents at least the third use to which the building has been put. The building is very much older: it is a hybrid structure, with a mixture of archaic and late medieval carpentry, and can be assigned to the 14th century. As originally built, it defies definition: it was of about four bays, and had an aisle or outshot down one side. In 2000, it was converted for residential use, floors being inserted and the ground floor being dug out by about 300mm to provide adequate headroom. This operation made it possible to record the timber frame, and to trace the evolution of the building at different periods.

The original building
Today, the timber-framed building, which is aligned approximately east-west, is of three bays and measures 12.5m long and 5m wide. On its north side, however, truncated passing braces indicate that there was an aisle, whilst empty mortices show there was at least one further bay to the west (Figs. 3 and 4). The passing braces terminated at the tie-beam, but clearly continued across the faces of the posts into an aisle on the north side. Peg holes in the posts

indicate the position of aisle ties on this side, where the aisle can be reconstructed as having been about 1.2m wide. To the east, the building has been lengthened. However, trenches in the top plates above the braces to the arcade posts reveal that originally there were angle ties at this end. The top plates have been truncated to form a crude scarf joint for the extension just above the arcade post braces, but the position of the angle ties was so close to the main truss that there must have been a cantilevered end. This would have been a half bay with a tie-beam unsupported by posts, except probably for a central post beneath it, and the aisle continued round the end for a hipped roof. This reconstruction is confirmed by the presence of two collars on the truss above the tie-beam at the east end of the building, the upper collar being chamfered in the middle with three peg holes for the attachment of the hipped rafters.

The south side is unlike the north: there was no aisle, but instead a fully framed wall, with a mid rail and arched braces to the top plate. The mid rail is set high up the wall, only about 1.3m below the top plate. This curious proportion probably results from the rail being located at about the same level as the top plate of the aisle. If this reconstruction is correct, there was probably normal assembly at the eaves of the aisle. Below the mid rail, virtually none of the frame has survived, but there is sufficient evidence in the western bay to see that here too there was arched bracing and in this bay a gap in the studwork, probably for a door. On this side of the building, there are two braces from the storey posts to the tie-beams. This reproduces the pattern of bracing on the north side and creates a visual symmetry with it, but none of these braces could have been passing braces and there is no evidence of the existence of an aisle.

At the west end of the building, there was a closed truss. This is evident from wattling grooves in the top of the tie-beam and the soffit of the collar, the survival of three apparently original studs between the collar and the tie-beam, mortices for a binding joist (later superseded by the slightly lower existing joist), and mortices in the tie-beam for studs between it and this joist.

The roof is of crown-post construction. The central surviving truss has up-braces from the tie-beam to the crown post, and braces from the crown post to the collar purlin. At the east and west ends of the building, there are no such braces on the outer faces of the crown posts, which implies that both ends were cantilevered and only a half bay has been lost to the west. However, no evidence for a second collar for a hipped roof was noted in the western truss.

The carpentry of the building exhibits a strange split personality, combining a mixture of features characteristic of archaic buildings such as the great
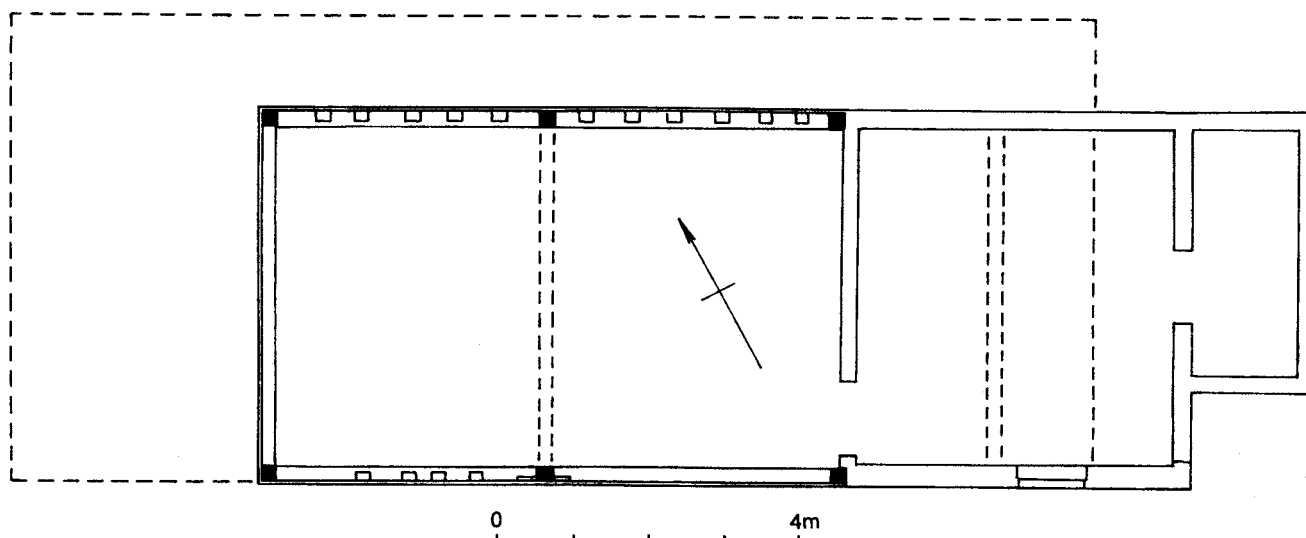
Fig. 3   Plan of outbuilding at Bocking Hall. The probable ground plan as originally built in indicated with a single dashed line.

barns at Cressing, and others typical of the late medieval buildings of the area. The former include straight braces, passing braces, compression bracing, the absence of jowls, and splayed scarf joints. The braces to the tie-beams are straight, whereas those in the south wall are curved and where they cross the studs, both members have been halved at the intersection. The arcade posts on the north side are jowled, whereas those on the south are not. There are splayed scarf joints in the top plates, but the collar purlin had edge-halved (but not bladed) scarf joints where it protrudes into the cantilevered ends. The studs are widely spaced, with gaps about 600-700mm between them. There is nothing however to indicate that these features represent more than one phase of construction or are not original to the building. It might be doubted whether the crown post roof is authentic, but in the

Fig. 4   Reconstruction of the Bocking Hall outbuilding in its first phase.

central truss, the surface of the tie-beam is cut so that it rises to the base of the crown post, leaving no doubt that they are contemporary. The timber throughout is also consistently of somewhat slight scantling, made from trees no larger than was required which were precisely converted to a square section. All the evidence points to a 14th-century date for the building, though it is more debatable where it should be placed in that century.

The 16th-century conversion

The aisle was removed from the north side, the space between the arcade posts was infilled with studwork, and a floor inserted in the two middle bays. On the north side, girts were inserted between the posts using double-pegged mortices with slip tenons. The studs are more narrowly spaced, with gaps of about 450mm between them. Three and four-light diamond mullion windows were inserted at the ground and first floors (Fig. 5). At the east end, the top plates were cut through above the ends of the braces to the arcade posts and new lengths of plate crudely attached and jointed to new storey posts. If this represented an eastward extension of the building, it was a very small one, and it may have been prompted more by a failure of the cantilevered end or the desire to be rid of the central supporting post. The roof was rebuilt with a gable rather than a hip: of this, there can be no doubt because the roof truss over the end tie-beam has surviving original studs and between them there are regular patterns of six dowel holes for the hazel rods of the wattle and daub infill.

A binding joist which, at a slightly lower level, replaced the girt in the closed truss at the west end of the building shows that a floor was inserted into it at this time. There is a mortice in it for a bridging joist; the common joists would have been lodged on the girts.
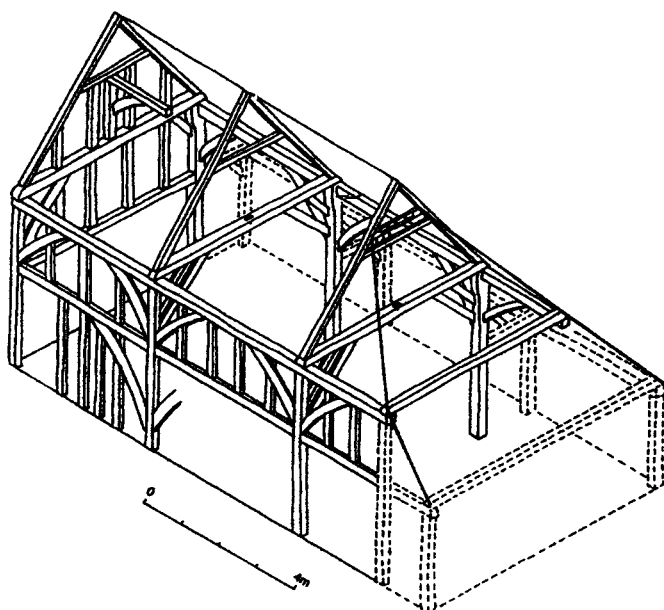
It is unclear whether the west end was remodelled in the same way as the east, or whether it was truncated as it is today. There is little that is very diagnostic for dating this rebuild, except for the mortice for a soffit tenon with a diminished haunch in the binding joist which points to the later 16th century.

The kiln

At the east end, the building was subsequently extended by about 1.5m, and a small cone-shaped kiln was built into the roof. A new collar was inserted into the gable at the end of the 16th-century building, and another into a truss 1.8m to the west of it. Purlins were run between these collars, forming a base on which were set curved boards to form the conical part of the kiln. Rafter-like struts running between the collars and the tie-beams to the east and west formed, with the rafters on the north and south sides, the lower part of the kiln. The collars, purlins and boards were all in elm. The walls of this eastern end of the building have been largely rebuilt in brickwork, the material which was

normally preferred for that end of a timber malthouse which housed the kiln. Later reconstruction has seen the removal of the original structure at the base of the kiln, and the building houses no other features that relate to the malthouse phase, though the first floor and the windows provided in the 16th century would certainly have equipped it for such a use. The indifferent carpentry of this end of the building, characterised by reused timber, primary bracing, studs which are not pegged and in some cases nailed, indicates a date in the later 17th or 18th centuries. The brickwork of the south wall is different to that elsewhere; originally it extended into at least the east wall, but there was renewed in the 19th century. It consists of small, regular, well made bricks measuring 230 x 112 x 50mm which were typical of the end of the 17th century and the early 18th century.

The 19th-century alterations

With the exception of the south wall described above, the walls of the kiln had been rebuilt in 19th-century brickwork, no doubt because of wear and tear. A small lean-to was added in brick at the east end.
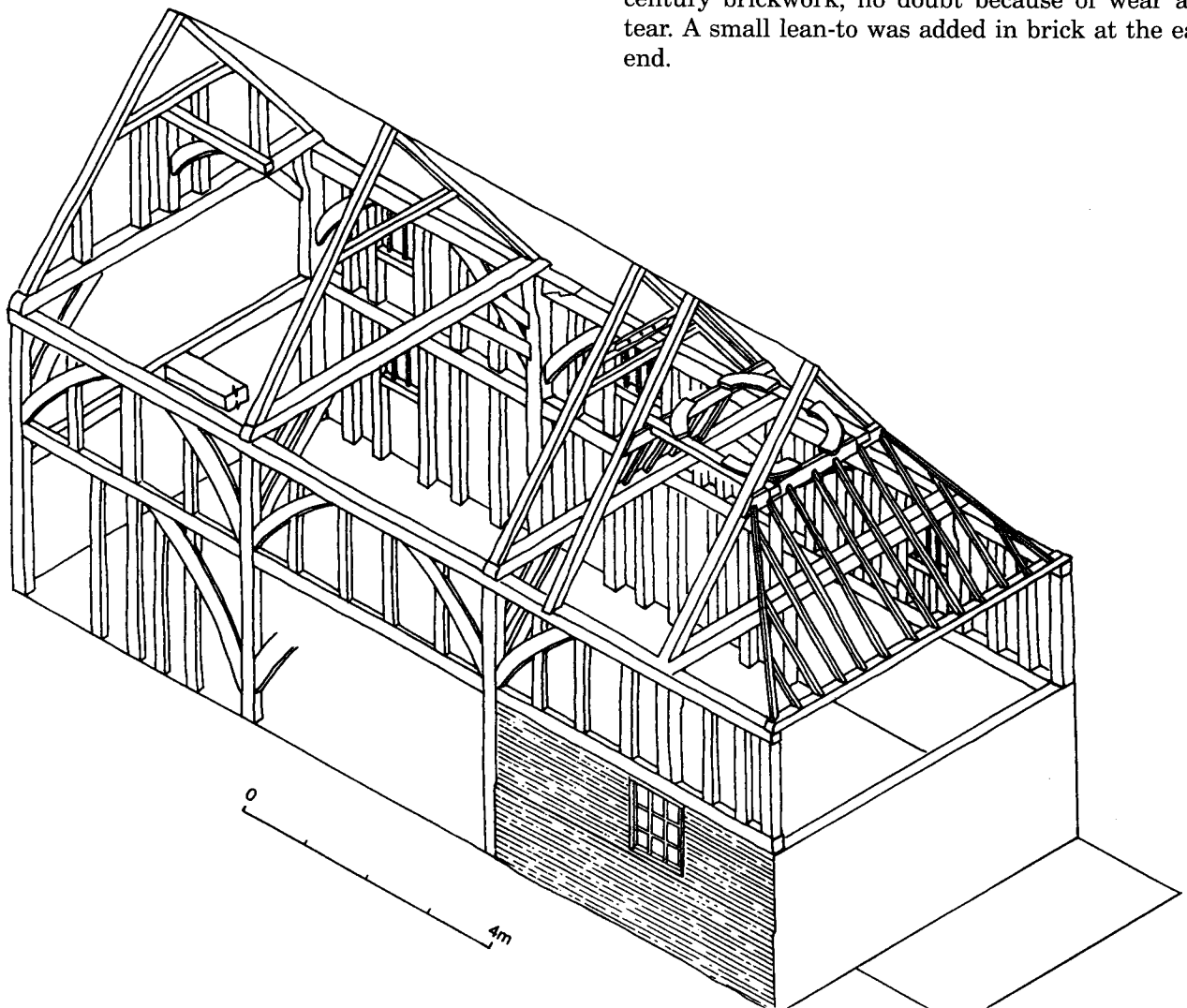

Fig. 5   The Bocking Hall outbuilding, showing the 15th-century framing of the north wall and the conversion of the east end for use as a malting.

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Discussion

The original building can be reconstructed as comprising two bays open to the roof, with cantilevered ends forming extra half bays to each side, and an aisle on the north which was carried round the ends. The western half bay was separated by a closed truss and may have been storeyed. The eastern half bay was separated at the gable but not apparently below that. The probable position of a door in the south wall can be identified, but no other internal features can. There is no trace of sooting in the roof. The building seems to be unique and it is difficult to suggest a convincing use for it, though it may have been for stock with storage for hay and even sleeping accommodation. It was clearly ancillary to Bocking Hall, but occupies an ambiguous site between the Hall itself and the main farmyard to the east which implies that it was was detached from the main work of the farm. It is tempting to claim its unusual carpentry is Kentish in style, the result of the manor belonging to Canterbury. However, it does not share the most distinctive feature of Kentish barns, that is 'passing' or 'Kentish' shores which rise across the aisle tie to brace the arcade posts (Rigold 1966). The truncated passing brace, which terminates at the tie-beam, is not found in the barns discussed by Rigold, though it is to be found in barns at Bocking Hall (Andrews 1992), at Wanborough (Surrey), at Sandonbury (Herts.), at Church Hall Farm, Kelvedon, at Abbess Warley Hall, Great Warley (Stenning 1993), and at Hassobury (Farnham, Essex). These braces seem to be a feature of older (i.e., 14th century) barns belonging to monastic or wealthy owners. Cantilevered ends can be found in some Kentish barns, but also some Essex ones: like the truncated passing braces, the point about them seems to be that they occur in older (i.e., 13th- and 14th-century) buildings.

The removal of the aisle and the insertion of a floor clearly betokens a change in the use of the building. Yet, because of the current lack of understanding of outbuildings and farm buildings other than barns, it is difficult to say what this might have been beyond suggesting that it was a granary. It is only the third use of the building when it became a malthouse that is at all clear, though even this would not have been recognised had the base of the cone not been preserved in the roof.

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16 St. James's Street, Castle Hedingham

Brenda Watkin

No. 16 is a timber-framed, two-storey hall range that has been built with an open frame against an earlier cross-wing. In its present form it consists of three bays, a stack bay against the cross-wing, the hall and a cross passage with a single chamber over (Fig 6). The service end appears to have been demolished and replaced by a new brick house at the end of the 19th century. However the current access to the rear gardens of these properties still reflects the position of the former cross entry.

At ground floor level only remnants of the framing survived, but the empty mortises in the underside of the transverse bridging joist marked the position of the fully studded wall dividing the hall from the passage. The position of the door could not be determined but given the possibility of a framed lower head to the doorway, no evidence would have been left after the removal of the studs. The floor joists were flat section and jointed into the axial bridging joist with soffit tenons and diminished haunches. The chamfers on the axial joist are finished with lamb's tongue stops against the transverse bridging joist of the cross passage, but there were no stops against the stack bay. The jamb of the cooking hearth was positioned against the front wall of the stack bay.

At first floor level more of the frame survived and the fully pegged studs were set at 1ft. 10in. (560mm) centres on the rear wall and 1ft. 3in. (380mm) centres on the front elevation giving a greater importance to the facade. A tension brace was trenched into the internal face of the studs framing the front wall over the cross passage. The infill panels, where they survived, were daubed onto vertical hazel rods and the daub keyed with horizontal pecks for a plaster coat. There were no divisions or braces to the main bays marked by the jowled storey posts. The only open bay with braces was that built against the earlier cross-wing. An original diamond mullioned window survived in the rear wall adjacent to the stack bay with a shutter rebate cut into the wallplate. This had been blocked at a later date and a glazed window inserted next to it. The mullions of this window had ogee mouldings to the inside edges, and intermediate rods to restrain the leaded light panels. A gap in the pegging for studs to the front frame marked the position of another window to the chamber. There were many layers of wallpaper to the ground and first floor walls including remnants of Victorian paper using the typical bright blue hue in the pattern. The

earliest wallpaper, the bottom layer on the front and stack wall at first floor, was made in lengths of 2ft. 3in. (685mm) and on removal a Georgian paper tax stamp was found on the back of one of the pieces.

The roof was of side purlin construction, with curved wind braces symmetrically placed over the hall, but only to the outer principal truss over the cross-passage. The paired principal rafters were positioned so that they did not coincide with the bay divisions. All of the common rafters were reused smoke blackened rafters from a medieval hall, possibly from the open hall that this building replaced.

18th-century and later documents held by the owners appear to relate to both the hall and the cross-wing that were then as now two separate properties. The properties were named as Pitmans and Lovedays, but were formerly called by the name and the sign of The Swan and held by copy of the court roll and the yearly rent of one shilling each. The gardens were formerly 'a yard and hop grounds'. The position given is adjoining the messuage or tenement called The Bell to the west and the garden of The Bell to the south. The tenement to the east was occupied by James Rogers and the brewhouse next to The Bell had been sold to Moses Cooke.

The earliest dated document is 21 December 1778 when John Rogers was admitted to the property at court baron. His son George Rogers, saddler, was admitted at the court baron held on 29 January 1811, although the will of John Rogers left the property divided equally between the three sons John, Isaac and George. On the death of George Rogers the properties were left to his daughter Sarah Adams of Woodham Walter, and were at that time occupied by a Miss Eley and Mrs Bell. The property continued to be owned by the descendants of John Rogers until it was sold in 1906 for £131, but it was not until 1935 that the 'extinguishment of the manorial incidents' were granted by the then lords of the manor, Francis Jervoise and Richard Houblon on the payment of £46 7s. 6d.

Earlier reference is made to the property in the court rolls of Hedingham Borough when James Baldwine was admitted to two cottages in ye Burrow abutting on a tenement of Thomas Mayhew on one part and on ye Swan on the other part, and abutting on a tenement of William Travells and Robert Briant (8 December 1587). On 25 October 1592 James Baldwine held by court roll one tenement and garden, orchard and hop-ground between the messuage called ye Bell and free land of Roger Robertson to the east and a tenement called ye Swan

Roof: principal rafter trusses with collars and clasped side purlins. Curved wind braces. Common rafters are sooted and reused from a paired rafter & collar roof originally over an open hall.

Floor joists: flat section housed with soffit tenon & diminished haunch. Bridging joists chamfered with lambs tongue stops.

2 storey hall range built against earlier cross wing.

First floor hall chamber extends from stack bay to closed end truss.
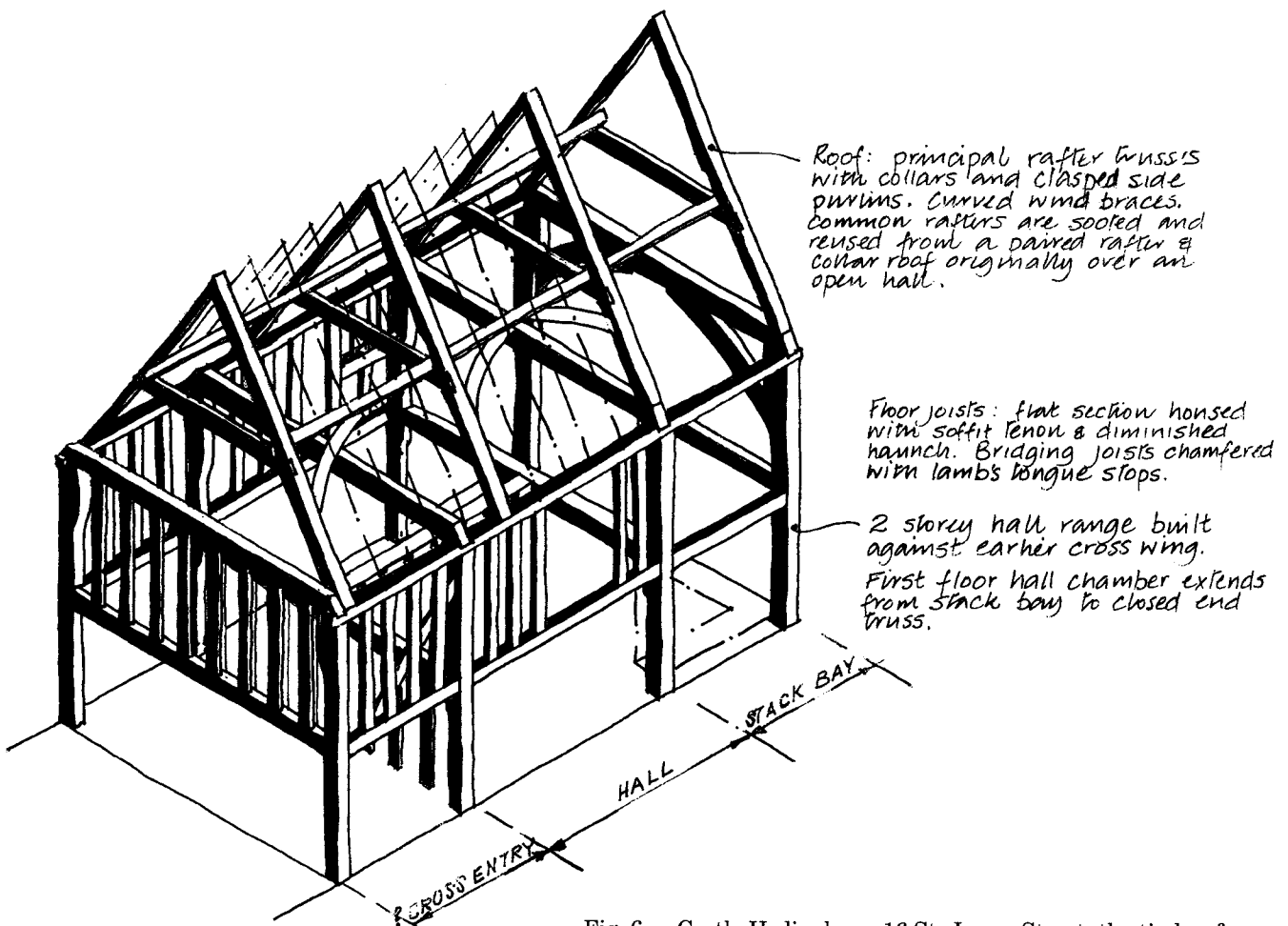
STACK BAY

HALL

CROSS ENTRY

Fig. 6   Castle Hedingham, 16 St. James Street, the timber frame.

in part and a tenement in the tenure of [?] Osbourne in the other part to the west.

The limited dating features point to the last quarter of the 16th century when flat section joists, lamb's tongue stops and unglazed windows would have all been in use. This is also a period of considerable change that would concur with the replacement of the open hall for a two-storey hall with a brick stack.

Acknowledgements

I am indebted to Owen Day for the opportunity to record the building and for the chance to see the accompanying documents; and also to Pat Ryan for her help in dating the numerous layers of wallpaper.

Marconi School of Wireless and Communication, Arbour Lane, Chelmsford

Adam Garwood and Shane Gould

Identified during the survey of the radio electronics industry of Chelmsford, a detailed record was made of the site in advance of its demolition and redevelopment (EHCR 15732). A boarding school (the former Chelmsford College) was acquired by Marconi in 1921 and equipped with the latest technological equipment. In 1935 a new two-storey college block was erected in an Art Deco style to plans prepared by William Walter Wood FRIBA (Plate 1); the building contained experimental laboratories, a lecture theatre, common room,

Plate 1 The Marconi School of Wireless and Communication, Chelmsford.

library, photographic room, workshop and administration offices. Further expansion took place in 1953 with the addition of a new purpose-built teaching block and the conversion of the 1935 range into 30 single flats.

The founding of the Marconi School of Wireless and Communications reflects the foresight and success of the company in the early years of the 20th century. Specialist training was provided not only for its own graduates, but also for those from the forces, commercial broadcasting companies and overseas organisations. The industrial recession of the 1970s together the end of the Cold War led to a reduction in defence spending which led to the closure of the college in the late 1990s.

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Clacton-on-Sea, Reckitts Convalescents Home (TM 1866 1572)

Adam Garwood

Purpose-built convalescent homes were first established during the mid 19th century, to accommodate convalescents, who upon returning to unsanitary often over-crowded conditions quickly relapsed. It was recognised that hospitals set apart from these conditions would not only aid a quicker return to health, but would relieve pressure on bed space by enabling earlier discharge. The Reckitts Convalescent Hospital was erected in 1909 to plans prepared by Mr H. Edmund Matthews FRIBA of the firm of Messrs. J. Douglass Matthews & Son, London. Built in a typical municipal Edwardian 'Wrenaissance' style and at a cost of c.£5000, the land and funds to build and furnish the hospital were presented to the Great Northern and Central Hospital, Holloway Road, London, by a local philanthropic benefactor Mr Francis Reckitt J.P., from whom the hospital took its name. In 2000 an application to demolish and redevelop the entire site was approved by the local planning authority.

Archive: Essex Record Office

Coggeshall, 14 Stoneham Street

D.F. Stenning

This house on the east side of Stoneham Street is a high quality four-bay 'high end' cross-wing with a complex internal layout, dating probably from the early 15th century (Fig. 7). A garden has taken the place of the former open hall on the south side. The front two bays of the ground floor represent a relatively conventional parlour, originally accessed directly from the open hall. In the north flank of the second parlour bay, there is a wide framed opening running the full height of the building. This was clearly the side of a contemporary chimney stack, perhaps with fireplaces at both levels. Deliberate

gaps of this kind have been noted in the framing of numerous 15th-century cross-wings, and were presumably related to stacks of unknown form made of materials other than brick.

The first-floor solar is of three bays overlying, to the rear, a kind of unlit annex to the front parlour. Here, in the southern flank, to the rear of the former open hall, there is a wide opening which provided access to the solar. This clearly involved a staircase, part in and part outside the wing, and presumably covered by a pentice roof.

The rear fourth bay contains a small room of unknown purpose on each floor of the cross-wing. On the first floor, there was access only from the solar, but the ground floor could only be entered from the exterior. The roof space of this fourth bay is separated by a partition and floored to form a loft. This was lit by a two-light gable window which appears to be contemporary, in that the framing of the gable is asymmetrical, with a single tension brace on the other flank of the crown stud. Such a purpose made loft at such an early date is unique in my experience. It would clearly be interesting to know the true function of these ancillary spaces, for which there are very few clues. There are interesting similarities between this cross-wing and that at 17

Fig. 7   The timber frame of 14 Stoneham Street, Coggeshall.

South Street, Rochford (The Old House, now the District Council offices), which dates from the 14th century and also had a stair to the solar rising through the side of the building.

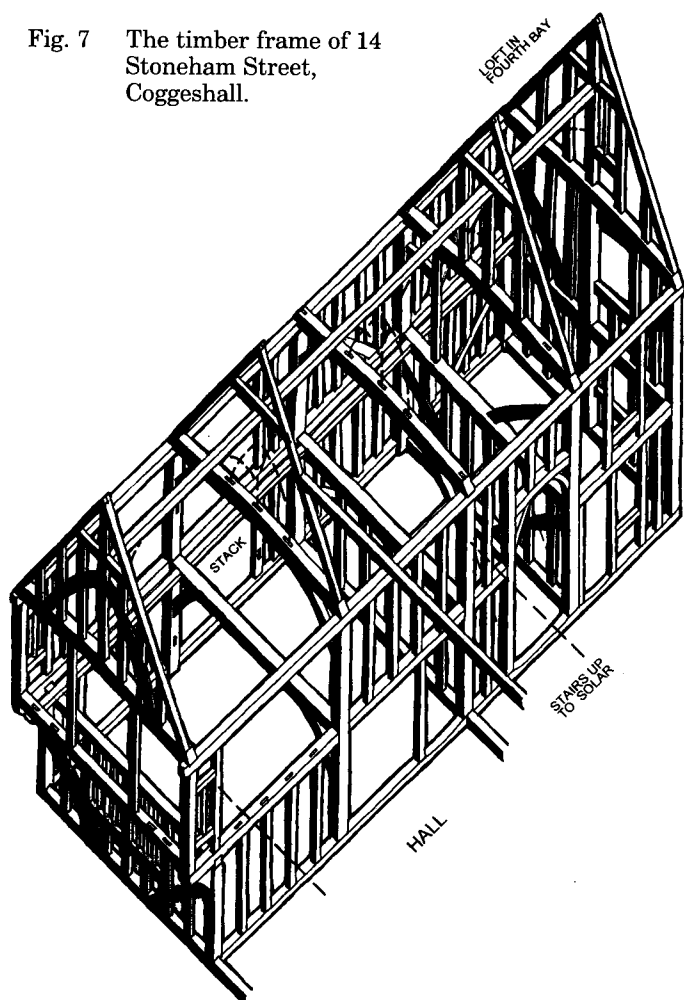## No. 2 Highgates, Church Road, Gosfield

Brenda Watkin

No. 2 Highgates is the central hall section of a now divided open hall house with low and high end cross-wings. The house is listed grade II* and its important features noted in the listed description. It had therefore already been recorded that the roof to the hall had a crown post of cross-quadrate section, and that the roof timbers retained the soot blackening from the hearth in the open hall.

The dispersal of smoke from the fire set on the hearth, on the floor of the open hall, could be partly regulated by the control of window shutters. The opposing unglazed hall windows were shuttered to exclude most of the inclement weather and by the opening or closing of the shutters, according to the prevailing wind, some control of the smoke that filled the room could be obtained. The slow seepage of the smoke through the tiles and thatch could also be hastened by the introduction of smoke holes, earthenware pots or moveable cowls. These are just a few methods cited by Salzman (1952, 219-222) and based on documentary evidence. Barnwell and Adams (1994, 126-129), writing on smoke dispersal in the RCHM survey of medieval houses in Kent, describe surviving evidence of framing of rafters for louvres and also the possible use of a barrel up-ended onto a vertical framed timber. Salzman also quotes documentary evidence for the use of barrels with the ends removed that effectively formed a crude chimney and a definite improvement on a mere hole in the roof.

The open gablets at the ends of hipped roofs have long been associated with the egress of smoke, although Barnwell and Adams put their primary use as structural in that the bottom horizontal timber framed into the rafters acted as a housing for the central hip rafters. However there are examples of in-line hall houses in Essex where smoke blackening occurs throughout the roof and this is reinforced by the discoveries in Suffolk by Leigh Alston (1998). In these examples, the gablet openings were covered by a 'bonnet' or hood that would serve to prevent the ingress of the more inclement elements of the weather. The construction can vary but essentially the protective hood is formed on horizontal timbers that are tenoned or housed into the last complete rafters. Remnants of this type of hood are also recorded at Stanton's Farm, Black Notley, a c.1300 aisled hall (Wood 1965, 315).

At Highgates, the owners were taking down the plasterboard between the rafters and under the

ROOF PLAN

Crosswing

Crosswing

later bay window

central truss

framed louvre opening

later bay window in position of original hall window.

feet

metres

high end — low end

open hall & cross entry

SECTION A-A

louvre supports cut back to ridge

louvre opening

crown post morticed & tenoned into collar purlin

2, HIGHGATES
CHURCH ROAD
GOSFIELD   26·11·99

feet

metres

SECTION B-B

support cut back to ridge line

louvre collar morticed and tenoned.

crown post collars halved over rafters.

storey posts unjowled

Fig. 8   Gosfield, 2 Highgates, Church Road, details of the roof showing the construction of the louvre.

collar purlin prior to replastering in lime when they uncovered some puzzling features. Above the collars to the paired rafters, over the crown post and the braces to the collar purlin, was an opening in the plane of the roof made by framing across two of the rafters. Each end of the opening was defined by a high collar framed into the rafters and into which was morticed and tenoned a vertical timber now cut back to the level of the ridge. What the owners had found when stripping away the plasterboard was the remnants of the louvre frame that allowed the smoke to escape from the fire of the floor hearth in the open hall (Fig. 8).

The form of the louvre at Highgates (Fig. 9) is similar to that used at Bromsgrove Open Air Museum in their reconstruction of the Merchant's House and the conjectural reconstruction of the evidence found at Friary Court and Old Friary, Southfleet, Kent (Barnwell and Adams 1994, 129). The vertical posts at the end of the opening would support the higher structure, set above, but at a similar slope to the roof and covered in tiles. This would allow the smoke to escape between the inclined planes of the two roofs, which may have been enclosed by louvred sides, and thus also able to afford protection from the rain and snow. Unlike the evidence for the louvre at Tiptofts, Wimbish (Wood 1965, 315), which is completely contained within the upper bay of the hall, that at Highgates spans the central truss with the greater part of the opening positioned towards the low end of the hall. In this position it gains structural support from the central truss rather than relying just on the strength of the paired rafters. Barnwell and Adams make comment on the limited surviving evidence for smoke dispersal and question this. The evidence in Kent suggested that the hearth was positioned in the upper bay of the hall and the louvre in the lower bay. Their suggestion that any evidence would then be
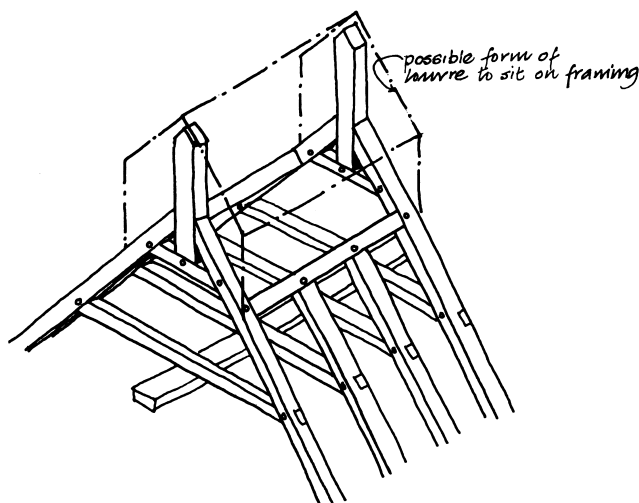
destroyed by the insertion of the stack would clearly not apply to the example found at Gosfield.

The maps of the Walkers of Hanningfield have been closely studied in the research carried out by Edwards and Newton (1984, xxx). Although they have made comparisons between brick and timber stacks, there has not been any comment on the possibility of the depiction of louvres. The map of High Easter, 1622, shows a number of houses with the traditionally drawn brick stacks terminating with a strong horizontal bar. The small tenements, in the ownership of John Gilbert and Will. Carder, are shown with tile coloured boxes on the roof, but these are not finished with the usual strong horizontal bar. Are these representations of louvres?

Acknowledgements.
I am indebted to Emma Ruthin and Paul Short for their notification of the discovery and indulgence during the investigation and recording; and to John Walker for his help in recording, and also bringing other examples to my attention that I hope will be the subject of another article.

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Maldon Friary. The boundary wall

D.D. Andrews
The land occupied by the two large early 19th-century brick houses which stand on the site of Maldon's Carmelite Friary is enclosed on its north and east side by a venerable wall built in its lower half of stone and in its upper half of brick. The stone is predominantly Kentish Rag. The brickwork presents a general pattern of a band of Tudor type brick, with 19th-century brick at the top of the wall. There has long been speculation about the date of this wall. The notion that it might be the precinct boundary is untenable: it incorporates reused stone

poss*ible form of louvre to sit on framing*

Fig. 9   Gosfield, 2 Highgates, Church Road, conjectural reconstruction of the louvre.

which must come from the demolition of the Friary. This stone suggested rather that the wall was built after the dissolution of the Friary when a house was built on the site by Vincent Harris (Simpson 1986). Little is known about this house. It seems to have been built by 1570. It was large enough for Harris' son Thomas to offer hospitality to Queen Elizabeth in 1579 (Simpson 1986). The Hearth Taxes of 1662 and 1671 record it as having twelve hearths (ERO Q/RTh 1 and 5), which suggests that it was a relatively modest property (cf. Andrews and Ryan 1999, 42). This is to some extent confirmed by the 1777 Chapman and André map which, although at a very small scale, indicates a T-shaped house, consisting of one wing at right angles to another (cf. Simpson 1986).

A spontaneous collapse of the wall on the east side of the V-shaped garden to the north of Friary East (the easternmost of the two 19th-century houses) where a footpath runs alongside it down to Tenterfield Road has shed light on its history. The middle of the wall – the top of the stone part and some of the Tudor brickwork above it – fell away, the hole being bridged by the brickwork above it. The tumbled stones, all rebuilt into the wall, included several blocks of moulded Reigate, and some window fragments in a cream limestone, probably Caen. The Reigate included a block with a rebate, and two fragments with an identical moulding, one of them at least 600mm long. These looked like jamb stones, possibly from the Friary rather than the Tudor mansion.
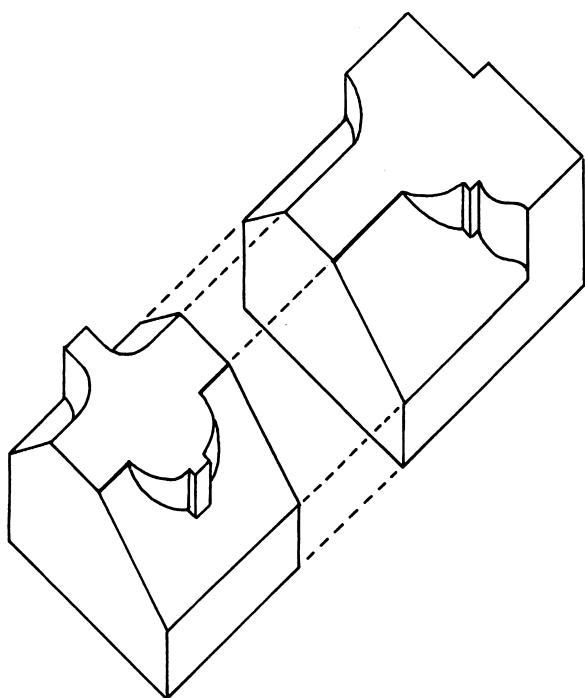

Fig. 10 Maldon Friary: axonometric of cill stones, reconstructed, on the assumption that one stone is missing, to form an aperture 300mm wide. (Scale 1:8).

The window fragments included four cill stones with the stooling for ovolo mullions, and a half-round and ogee moulding on the external face of the jamb (Fig. 10). Two stones with a hollow chamfer were probably from a hood-mould. These stones are significant because mullions of this pattern are typically late 16th or 17th century in date. Similar mullions were to be found, for instance, at Copped Hall, Epping, built by Sir Thomas Heneage (Andrews 1998). They are not associated with the Friary and must therefore come from the Harries mansion. Their presence in the wall indicates that it must be of 19th-century date, being constructed when the mansion was the demolished and the brick houses built. This is consistent with the evidence of the Chapman and André map, which does not represent the V-shaped enclosure of the garden. In addition to the worked stone, at least five mould made brown bottle bases were also present amongst the debris from the wall. Registration numbers stamped on the bottom of these indicate manufacturing dates of 1884 and 1886. Since the wall, and the curious long V-shaped garden which it encloses at this point, are shown on the 1st edition OS map of 1875, presumably these bottles indicate that it had been rebuilt on the same alignment some time after the map was surveyed.

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Mistley, No. 1 Maltings (TM 1180 3180)

Adam Garwood

The survey of No.1 Maltings Mistley, a vast multi-storeyed complex overlooking the Stour Estuary, was undertaken in response to the conversion of part of the existing malthouse, including the grain stores and barley kilns, into distinct residential and commercial units. Erected in 1896 to plans prepared by Robert Free, one of the foremost innovators in the malt industry, the eight storey No. 1 malting forms one of a group of seven malthouses that Robert Free, founder member of Free, Rodwell & Co. Ltd., established in Mistley from 1896 (No.1) to 1904 (No.7). Robert Free died in 1902, followed by his son in 1928. After the Second World War, Free, Rodwell & Co. Ltd. were purchased by Allbrew Malsters, a

subsidiary company, of the Allied Breweries Group. No.1 ceased malting in the 1970s and now stands redundant. Of the other maltings, the majority lie derelict or severely fire damaged. Today only one of Frees' malthouses (No. 2, owned by EDME) continues in use, producing malt extract and barley syrup.

Archive: Essex Record Office

Rayleigh, The Mill Club, Bellingham Lane (TQ 8062 9091)

L. Prosser & N. Crank,
Hertfordshire Archaeological Trust
Prior to its demolition, a record was made of the Mill Club, Bellingham Lane, Rayleigh. The oldest part of the building dates to the late 19th/early 20th century, and was possibly related to the working of the nearby windmill. Most historic features within the building were removed/obscured during the 1970s and 1980s. After the building was demolished, observation of superficial ground reduction revealed no archaeological features. A sterile dark reddish brown sandy clay underlay recent demolition debris.

Romford, Wykeham Hall, Market Place (TQ 5120 8895)

Ellen Heppell
An archaeological desk-based assessment was carried out on the site of Wykeham Hall, Romford. It is planned to refurbish the Hall, which was built in 1909. The aim of this assessment was to prepare a synthesis of all readily available documentary and cartographic sources relating to the study area. In addition it aimed to define the limits of the adjacent churchyard. Wykeham Hall lies on the northern side of Romford Market, which received its charter in 1247, and is adjacent to the church of St Edward the Confessor. Church House, a 15th-century structure, lies immediately to the south. In 1410 Romford was granted permission to found a new chapel of ease and churchyard and the site chosen was that of the current church. Between 1485-1509, Church House became a chantry chapel, endowed by Avery Cornburgh of Gosehays. On its dissolution in 1547 the chantry chapel reverted to secular use,becoming a coaching inn, 'The Cock and Bell', and outbuildings were constructed to the rear. Wykeham Hall lies partially on the site of these outbuildings. Wykeham Hall also lies partially within the churchyard of St. Edward the Confessor. Records of burial between the 17th and 19th centuries show a high density given its small size in relation to the population of the town. It is thought unlikely that these were cleared prior to the construction of the Hall. Watching briefs carried out during the regeneration of Romford market have uncovered burials and grave stones.

Salcott, Horn Farm barn

D.F. Stenning and D.D. Andrews
This three-bay aisled barn is aligned north-south, its northern end facing on the village street. In 1999, it was converted to a dwelling. It is a relatively small barn, about 15m (45ft.) long and 5.1m (16ft. 9in.) wide between arcade posts. Its carpentry is a mixture of archaic and typical late medieval features (Fig. 11). The former are represented by passing braces, arched bracing in the end walls, and reversed assembly in the aisles; and the latter by jowl posts, soffit jowls on the aisle ties, and edge-halved and bridled scarf joints in the arcade plates. The studs are at 800mm centres and the walls made with wattle and daub. A curious feature are dovetails on the aisle top plates at each end. They are not for angle ties. The crown posts and collar purlin are later additions intended no doubt to strengthen the roof. The braces are very thin. A midstrey has been added on the east side.

The bottom of the south-west arcade post was retrieved after being cut off for a repair and dated by Ian Tyers of the Sheffield University Dendrochronology Laboratory to 1339 + 10-50 years. This is quite an early date, making it the oldest barn yet dated in the county after those at Cressing, Belchamp St. Paul and Coggeshall, but is quite consistent with the transitional character of its carpentry. This also makes the edge-halved and bridled scarf joints probably the oldest yet to have been dated.

Horn Farm which stands immediately to the east preserves a timber-framed cross-wing of the 15th century. This is of four bays. The three doors on its east side (where there is now a 19th-century brick building) must have communicated with a wide hall which must have been aisled and could therefore have been contemporary with the barn.

Edishes Farm, Delvin End, Sible Hedingham

Brenda Watkin

Introduction
The opportunity to record this building occurred during 2000 when an extension and renovation works were undertaken. Edishes Farm is situated to the west of the Colne valley and the settlement around the church of Sible Hedingham. The house is set back from the line of the present road and approached by a drive with the house to the west and the farmstead to the east. The position of the farmstead relates to the normal hierarchy with the farm buildings being to the service or lower end of the house. The main orientation of the house is east to west.

There are two main phases of build represented in the frontage range. To the rear a much altered and
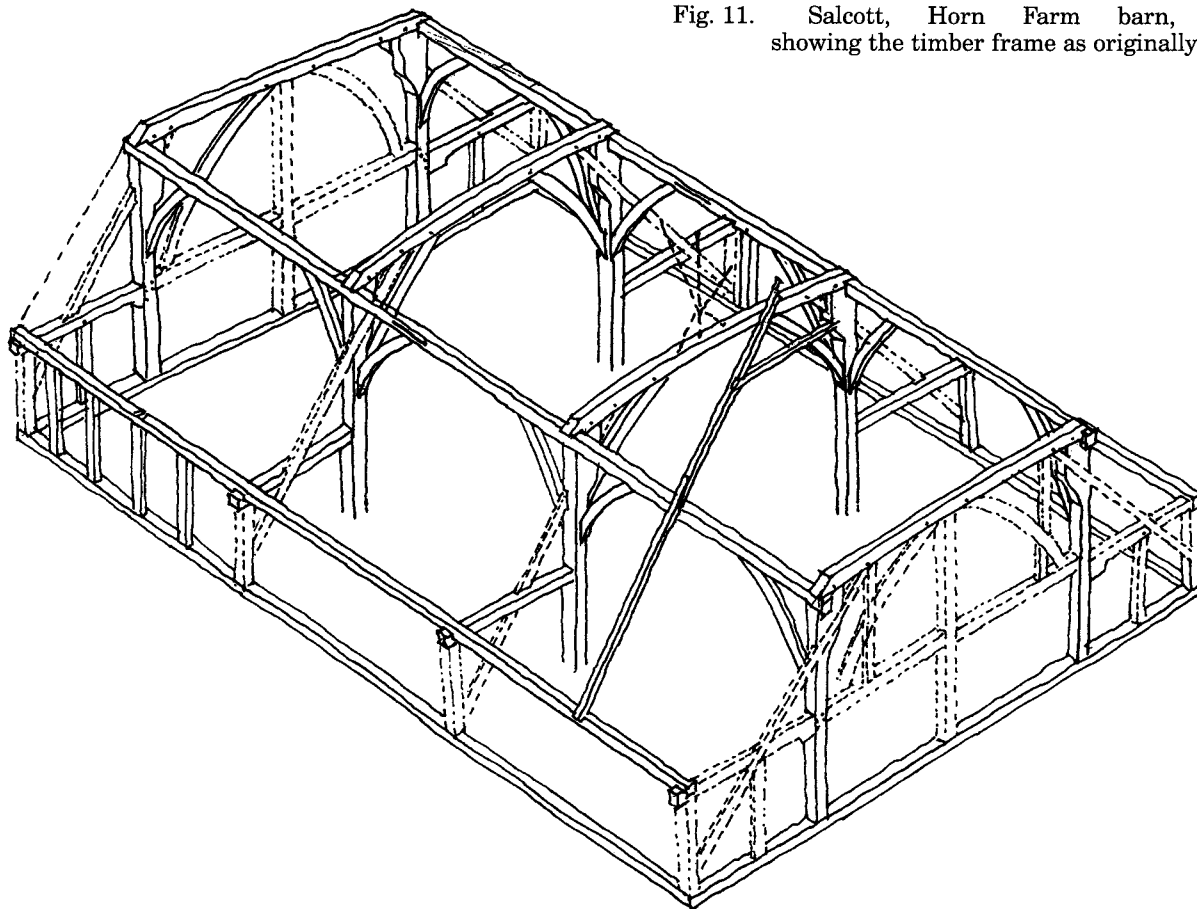
structurally weak Victorian single storey brick wing, modified to incorporate a later outshot, has now been demolished and replaced by a modern two storey extension.

The house as originally built

The house is timber-framed and was of three bays with a two cell plan, now with an extra bay to the west (Fig. 12). The timber had been converted to the maximum size to avoid any waste of material and also to minimise on labour input. The infill between the studs is a chalky boulder clay daub onto heavy vertical oak staves that are tied to horizontal oak wattles with strips of bark and then rendered externally with lime plaster. At first floor level there is a considerable amount of this render trapped by the extension and it has a random pargetted pattern executed with a four-tine comb. Where the sole plate survives at ground floor level it is proud of the external face of the studs and storey posts, and it is suggested that the external face of the building was always fully rendered with lime plaster. The roof is set at a very steep pitch and the covering was most probably thatch.

Although the house was built from the start as two storey, and with a stack, it provided minimum accommodation in that there was no separate parlour or parlour chamber until the addition of the later extension. The only heating was from the large cooking hearth in the hall although a later

modification was made to the stack to provide a first floor hearth. Access was gained from the hall to the service room through an opening by the side of the stack and the stairs to the first floor were contained within the area, now defined by the stair trap, against the rear wall of the service room. Evidence survives to suggest that the stairs were enclosed by a door and partition, as there is an empty mortise in the stud adjacent to the floor trimmer for a door head, and at the other end of the trimmer there is a dovetail cut into the underside of the floor joist for a vertical post.

The studs of the frame are spaced at 1ft. 8in. (508mm) centres and fully pegged, with the windows, where evidence survives, being unglazed diamond mullions with shutters set into a shutter groove in the mid rail or wall plate. In the south wall, between the hall storey post and the brick jamb of the stack, there is a section of mid rail without any evidence for pegged studs. There was no evidence of pegging for a window cill and an alternative position for a door opening could not be determined due to the loss of the underside of the mid rail between the hall storey post and the original external end wall. Although it would appear to be an awkward position for a door immediately in front of the hearth a similar example has been recorded at Oak Farm, Pebmarsh by Richard Shackle (unpublished survey). Here the door opening is positioned to the front of the end stack and the house would appear to be of a

Fig. 12   Edishes Farm, Sible Hedingham, ground and first floor plans.

similar date to Edishes as it is not shown on the 1600 map of the parish of Pebmarsh (ERO D/Du 760/114)

Joists are square section in the hall and jointed into the transverse bridging joist by housed barefaced soffit tenons. The bridging joist is tenoned into the storey posts that are jowled to give additional support but at first floor level these are unjowled and do not support a tie-beam. The stops to the chamfered bridging joist are of lamb's tongue profile. Inscriptions made with a heated poker survive on the mantel beam and the underside of the joists numbered 1-3 and 5 on the plan (Fig. 12). The date '1764' and the initials 'MW' are on the mantel beam. Joist 1 has the inscription 'E+P+durter' and

'E Parr 1765'. On joist 2, there is 'I Daxby and C Parr 1765', on joist 3 'E Daxby', whilst joist 4 is blank and 5 only has a 'C' on the soffit.

At the first floor, arched braces are trenched into the internal face of the studs, rising from the jowled storey posts to the wall plates. Each corner has two braces with the exception of the north-east corner where there is no brace to the north wall although this is the section of walling where a face halved and bladed scarf joint occurs in the wall plate. The jowls of the posts average 4ft. 6in. (1370mm) deep, at least 2ft. (610mm) deeper than the norm. Access between the two chambers is again framed against the stack and the stairs. Diamond mullioned windows are

extension to create
parlour & parlour chamber

original house containing
hall & hall chamber over—
Service room & chamber over.

Fig. 13   Edishes Farm, Sible Hedingham, frame drawing to show development of the building.

present in the end elevations with the hall chamber having an additional window on the rear (south) wall. The hipped roof with gablets is constructed from coupled rafters, with the apex joint halved (Fig. 13). Chiselled carpenters marks number the collars for the clasped purlins which are of an unusual rectangular section (7in. x 3in., 178 x 76mm). The presence of sapwood in the original conversion is now very evident in the waney nature of the bottom edge of the purlin. It is suggested that these have been sawn from the side or sides of the converted section of the storey posts (Fig. 14).

Dating of the relevant carpentry features points to the construction of the original building in the early 1600s.

The extension
The extension, added to the western elevation of the house, provided the additional accommodation of parlour and parlour chamber and was accessed by the removal of a stud, at ground and first floor, from the original flank wall. Floor levels remained constant and this was achieved by the use of a low mid rail to support the axial bridging joist. This joist is partly sawn and, as the timber runs out, is then axe converted. The common joists are of narrow

vertical section, being of quartered conversion. They have soffit tenons having diminished haunches.

The framing technique adopted is similar to the original build although the section of the timber is reduced and primary braces are used on the end (west) elevation in contrast to the front and rear frames that have internal trenched arch braces at first floor level. The corner storey posts are jowled and moulded at the bottom. Window openings are framed but there is no evidence of mullion housings. Although there has been an attempt to match the original style of carpentry, it is suggested that the extension dates to the late 1600s or approximately 50 years later than the original build.

Discussion
In the social hierarchy, this house with only four rooms would be classified as a home of the poor under the criteria used by Dr. N. W. Alcock in his book *People at Home* (1993). Regardless of its social status, Edishes represents a very good example of a house newly built to a budget but with every attempt made to obtain the most out of the timber available and to keep the cost of conversion to the minimum. There was not the opportunity to compare the conversion and the section of the purlin with that of
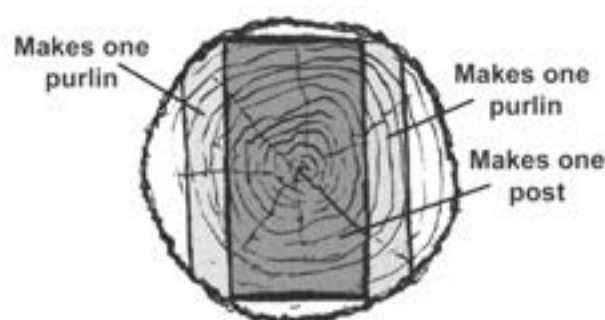
Fig. 14 Edishes Farm, Sible Hedingham, suggested timber conversion.

the storey posts, but there does not appear to be another logical explanation for the unusual section of the purlin. The deep jowls are also consistent with the concept of minimal working and loss of timber in the conversion process.

The hall of this house would have been the centre for cooking, eating and family activities, with the service room providing the space for the storage of provisions and preparation. The chambers over the ground floor could have contained both beds and stored goods. The fact that there was entry to the hall chamber only from the lower end may account for the enclosure of the stairs in order to provide at least some privacy. However, if there were only a small land holding with the property it would have been the family who in the main managed and ran the house and the farm.

The addition of the parlour would have changed the way that the original house worked. As shown in Matthew Johnson's book Housing Culture (1993), the closed house of the 1680s showed both continuity and change from its transitional counterpart. The hall continued to function in a similar manner as did the service room but their relation with other rooms changed. Some of the major changes quantified by Johnson were the decreasing number of parlours containing a bed together with the increase of possessions and the change from multifunctional spaces, as seen in the original hall, to uni-functional rooms.

Acknowledgements

I am indebted to Owen Day and his builders who allowed access to the house while renovation works were being undertaken.

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Stansted Mountfitchet, Burton Bower, Burton End (TM 5275 2402)

Adam Garwood

During the mid to late 19th century, many local farmsteads were affected by the industrialisation of farming consequent upon the agricultural revolution and the development of Victorian 'High Farming'. This revolution produced a distinct architectural response in the form of reorganised farm layouts to produce an articulated and more efficient working system. Generally these buildings improved farm conditions by enabling greater management and handling of stock, and improved methods of segregation by category. Adopting the courtyard plan, Burton Bower Farm is typical of many small mid-late Victorian planned farms. Built with an imposing red brick barn to the rear, single-storey ranges, including cowsheds, loose boxes and stabling, flank a central stockyard, originally divided by a spinal feeding pen. A large contemporary farmhouse (not part of the scheme) lay close by. In 1999 proposals were approved to convert the farm buildings into residential units.

Archive: Essex Record Office

Tendring, Tendring Hall Farm (TM 1430 2430)

Adam Garwood

Building recording was undertaken prior to the conversion of the central area of the farm to office use. The buildings in this part of the site were Victorian in origin, elements of a modest model farm complex based around two large stockyards. Another building to the east of the complex, the former granary, appeared to be a remnant from an earlier farm complex, possibly a converted dwelling.

Archive: Essex Record Office

Witham, Mill House, Chipping Hill (TL 8151 1536)

Andy Letch

A watching brief, following a desk-based study and evaluation, recorded structural remains of the water mill together with burnt deposits associated with its destruction in 1882. The timber-framed and weatherboarded mill was built onto brick foundations independent of the mill reach, which it probably crossed on heavy load-bearing timbers. A partial brick floor, dated to the 17th century, was probably reused from the earlier mill. Underneath this lay remnants from an earlier fire that destroyed this mill in 1775. Analysis of the mill reach prior to conservation work showed that the mill was of the undershot type, with a brick-floored mill race and timber-floored wheel pit and by-pass channel. The similarity of brick in both mill reach and mill foundations suggests that they were built at the same time, presumably soon after the destruction of the former mill.

Archive: Braintree Museum

Church Miscellany

edited by D. D. Andrews

These reports summarise discoveries made at churches in Essex in the course of building works and excavations. Fuller information can be found in the Essex Historic Conservation Record at County Hall, and in the case of excavations in the appropriate collecting museum. We should like to thank the incumbents, Parochial Church Councils, architects and contractors whose assistance and co-operation has made this work possible.

Barling, All Saints

D.D. Andrews

The church, which is mainly 15th-century and later, underwent masonry repairs and redecoration in 2001. The north-east buttress on the chancel was found to make a straight joint against the east wall, trapping lime-washed plaster behind it. Thus the buttress is modern, and the Ragstone rubble of which the church is built was plastered, further evidence that the masonry of our medieval churches was not exposed to view. A crack at the top of the corner of the east wall has different coloured mortar either side of it and probably represents a major rebuild in this area. Repointing revealed an earlier Ragstone cill to the window in the south wall of the nave, east of the porch, set immediately below the existing cill.

Inside the chancel, the pew platforms were reduced in height by 60mm to bring them down to the level of the tiled alley. This revealed a hard pale brown trampled earth surface with darker brown patches and abundant chalk or lime inclusions. This was probably laid down at the time of the construction of the pew platforms; it seems to butt the cill walls for the pew platforms which were made of frogged stock bricks. It sounded hollow in places on the south side where an east-west wall at least three courses deep, which predated the pew platforms, was probably associated with a vault. At the north-west corner of the pew platforms, where the base of the easternmost pier of the arcade was exposed, it was noted that the pier has rubble footings which are not offset, the junction between the ashlar and the foundation being at the level of the pew platform. Examination of the pier bases in the nave shows that in places they are made good

with mortar, indicating that the floor level has probably been slightly lowered in the 19th or early 20th centuries. The distinctive octagonal Ragstone piers with concave faces can be paralleled at Rettendon.

Belchamp Walter, St. Mary

D.D. Andrews

The church combines a 13th-century chancel with a 14th-century nave and 15th-century west tower (RCHM Essex 1916, 18). Drainage trenches were excavated round the north side of the nave (avoiding the site of a former chapel on this side) and round the tower as far as the south porch. The church stands on a gently sloping valley side, and the difference between internal and external ground level at the west end is considerable. The nave was found to have a mortared offset foundation 550mm deep, below which it continued to an undetermined depth but was not bonded with mortar. At one point on the north side, the foundation had been refaced or underpinned in 18th-century brick. At the junction of the nave and tower, it was possible to confirm that the angle buttresses are original to the nave, and that the tower is later than the nave.

The tower foundations were shown to be at least 1.3m deep. They cut two burials (which were left *in situ*) and on the north side cut a pit containing building debris. On a layer of orange-brown sandy silt in this pit, there were three fragmentary bricks lying flat. They measured 230 x 135 x 35mm, and belong to a type of small early brick that seems most characteristic of the 14th and early 15th century. Their presence, and the fact that the pit was cut by the tower, suggests that it was contemporary with the construction of the nave. A few similar bricks can be recognised in the nave walls, though it is difficult distinguishing them from the Roman brick which occurs in them. At least one Coggeshall-type brick is also be found in the nave walls.

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Bocking, St. Mary

D.D. Andrews and B.J. Crouch

The north aisle roof

This church is spanned throughout by low, almost flat roofs of the sort generally termed 'camber-beam.' Such roofs avoided the lofty dark spaces of the traditional steeply pitched medieval roof, sat neatly below crenellated parapets, and may have been seen as an economical and less structurally ambitious alternative to vaults. Unlike a vault, and indeed a traditional roof, they place little outward thrust on the walls, and so were particularly suitable for high clerestoreys. They resemble in appearance and construction a floor, and like the floors of wealthy houses they are generally richly carved. This carving, the need for timber of large scantling, and for lead as an outer covering, make such roofs expensive. They are found in the churches of prosperous villages and towns, and they were in favour for a relatively brief period of time which coincides fairly exactly with the Tudor period.

Of those Essex churches which preserve camber-beam roofs, which may be about twenty in number, one of the best is unquestionably Bocking St. Mary. It is more richly carved than Thaxted or Saffron Walden, but not excessively so like, for instance, the south aisle of Steeple Bumpstead which is in almost questionable taste. The north aisle roof was examined on the occasion of repairs carried out in 2000. A leaking gutter had caused parts of the roof to become saturated, with consequent beetle infestation and an outbreak of dry rot.

The aisle is of four bays, there being a tie-beam at each with a bracket and wall piece beneath it (Fig. 1). The bays are then sub-divided into four 'panels' by intermediate tie-beams and longitudinal or east-west bridging beams, there being a carved boss at the intersection of these main timbers. In each panel, there are generally five rafters.

The eaves construction was made with a composite wall plate (Fig. 2). A lower plate, a wide flat timber about 150 x 230mm, ran the length of the inside face of the clerestorey wall. A slight ridge in the mortar on the bottom of the gutter behind the
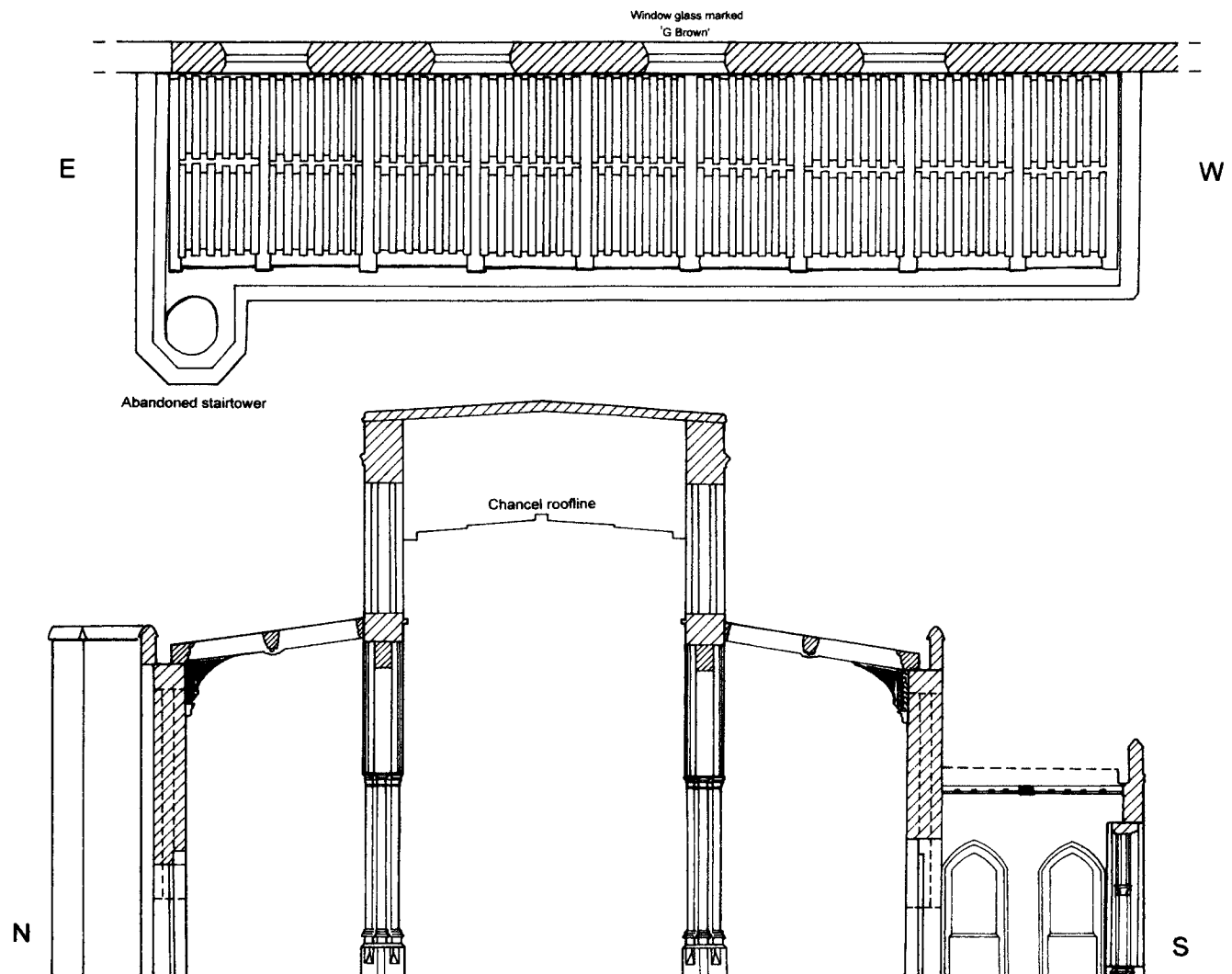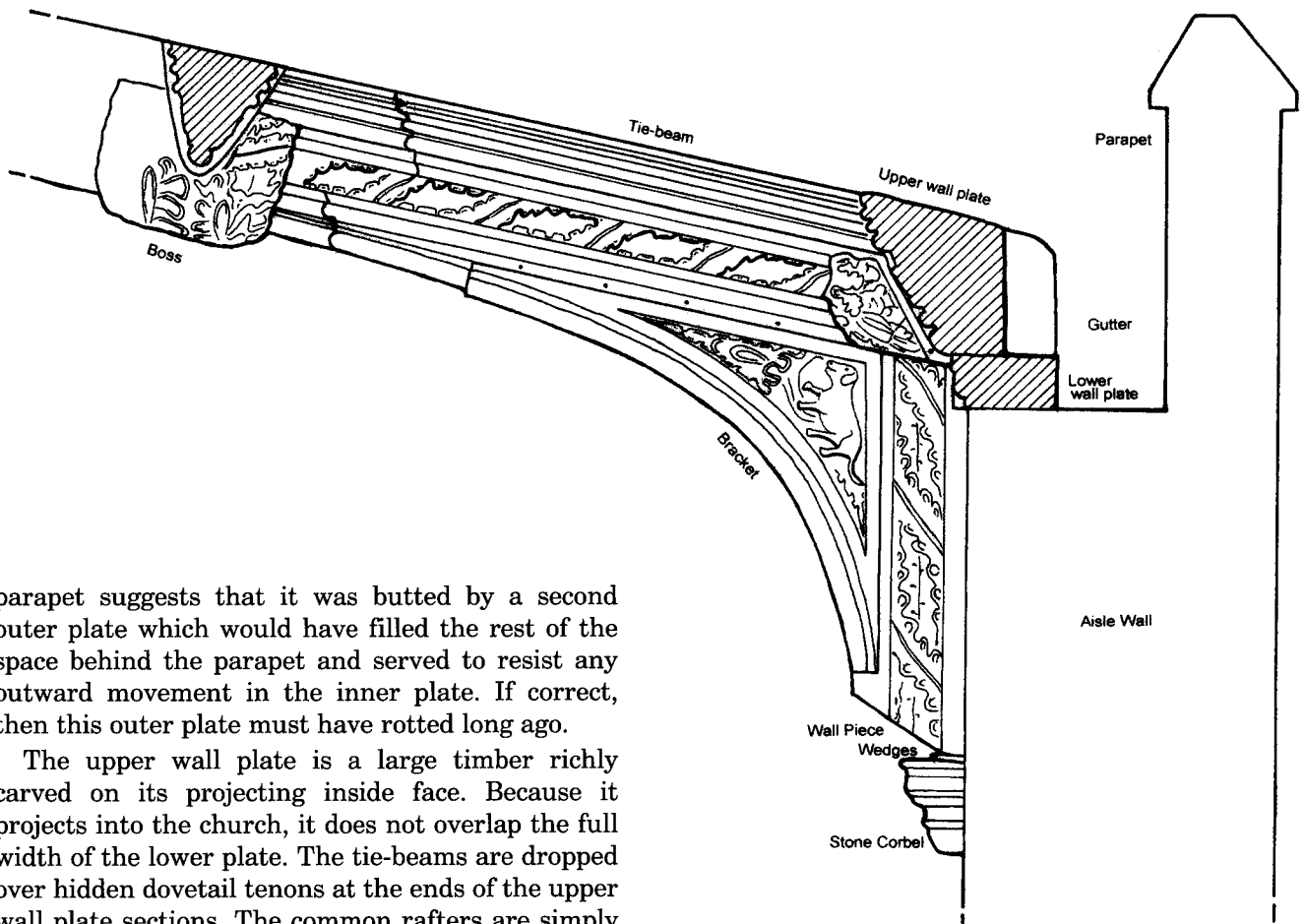

Fig. 1   Bocking St. Mary, north-south section through the church and plan of the north aisle roof from above (B. J. Crouch).

Fig. 2   Bocking St. Mary, detail of the construction of the north aisle roof.

parapet suggests that it was butted by a second outer plate which would have filled the rest of the space behind the parapet and served to resist any outward movement in the inner plate. If correct, then this outer plate must have rotted long ago.

The upper wall plate is a large timber richly carved on its projecting inside face. Because it projects into the church, it does not overlap the full width of the lower plate. The tie-beams are dropped over hidden dovetail tenons at the ends of the upper wall plate sections. The common rafters are simply lodged, without the assistance of any joint or pegs, into the housings cut out for them in the wall plate. To a large extent, the roof construction is reliant on gravity and the weight of the timbers to hold it together.

The wall pieces and the brackets are tenoned into the tie-beams. The brackets may seem to support the tie-beams, but they are in fact more ornamental than structural. That this is so is indicated by the existence of packing (oak slips or peg tiles), which seems to be original, between the wall pieces and the stone corbels beneath them. The bases of the wall pieces are oblique and present a somewhat rough surface. It may be that they terminated in heads of angels or saints, which were cut off at the Reformation.

In a roof of this quality, it would be usual to expect to find it covered with boards set in rebates between the common rafters. However the covering was of sawn oak boards laid east-west, most of which were original, as was clear from their considerable width and the used of rose-headed nails, though some localised repairs had been carried out, particularly at the west end of the roof.

A roof of this type must have been very expensive. It was profligate of timber. The upper wall plate and the intermediate ties were all timbers about 1 foot

(300mm) square. The main tie-beams were larger still. The bosses at the intersections with the intermediate ties are not separate elements fixed with pegs but cut out of the solid, an extraordinarily extravagant way of making them which required the beams to be of the order of 16-20 inches (400-500mm) square. Nevertheless, this was not large enough: the top half of them has been increased in width to almost 2 feet (600mm) through the addition of moulded fascias.

In addition, all the surfaces of the timbers are moulded or carved. The rafters are generally V-shaped in profile, reducing in thickness with a series of rolls to a single roll at the point of the V. The principal and intermediate tie-beams, the wall plates, and the wall pieces, are carved with leaf scrolls. Although there are repeats, the patterns are normally different on each member in each bay, and on each side of the same timber. The majority of the carving on the bosses and the brackets is foliate. Often it excels more in technical competence and confidence than in design: it can be difficult to trace the clear outline, or identify the character, of the elements of which it is composed. One of the more common and recognisable motifs is the stylised pomegranate. Two bosses are carved with heads, one severe and one grotesque, both within an interlace

pattern. Most of the brackets have heraldic elements on one side of them. From east to west, these comprise: a shield bearing a cross (?Bocking); a mitre (for Canterbury); a molet for De Vere; and pomegranates (?marking the dynastic alliance with the house of Aragon). In addition, a boss bears an angel with a shield, and another is carved with a knot, which could be a crude attempt at portraying the Bourchier badge but which may not be heraldic.

The dry rot had eroded the lower wall plate so that for much of its length it was reduced to little more than a veneer. At one point in the second bay from the east, it was totally destroyed. This was an area with a long history of water penetration, as part of the lower plate here had been replaced in lime and hair plaster datable to the 18th or 19th century. The wall plate was repaired throughout its length by reinforcement with steel joists set on a concrete beam cast behind the parapet. Damage by death watch beetle had hollowed out the ends of the tie-beams. One these, the first from the east wall, was strengthened through the insertion of a steel joist. A rather similar repair with a flitch plate had been carried out on one of the beams towards the west, probably in the 1980s.

The porch
Plaster was removed from parts of the interior of the porch, including the south wall of the church, in May 1999. To the east of the south door, two features were exposed: a blocked arch and, above it, a large formerly projecting ashlar block beneath a plastered recess.

The arch seems to be two-centred, the top of it just below the queen's head which forms the stop of the hood mould round the south door. It is made of Reigate stone, and is about 460mm wide, its original height being probably about 600mm. There seems no reason to doubt that the arch is not an original feature of the wall, although insufficient of the masonry has been exposed to be certain on this point. The interior of the arch, including the voussoirs, was plastered. The blocking includes floor tiles about 40mm thick, and bricks 50-55mm thick, bonded in a yellow to orange brown mortar. The blocking occupies an area which seems larger than that of the recess enclosed by the arch, possibly because moulded stone beneath it has been prised out of the wall. The bricks in the blocking are Tudor, possibly 17th-century, and there can be little doubt that this feature, which must have been a holy water stoup, was removed at some time during or after the Reformation.

About 2.6m up the wall, there is a large block of Reigate stone which must once have projected from the face of the wall, but which has been trimmed back flush with it. Above this stone is a slightly recessed rectangle of plaster 300mm wide and about 410mm high. The projecting stone and recess must

have held a statue which must have also been removed at the Reformation.

The question of whether the stoup is original to the south wall of the aisle raises questions about the date of the wall itself. The RCHM (Essex 1916, 30) says the wall may be 14th century in origin but was raised in height or rebuilt in the 15th. Although repointed in late 19th or early 20th century ash mortar, a change can be seen from the well coursed flintwork of the lower part of the wall to less regular stonework at the top. The RCHM also says that the masonry of the south door has been renewed. Today, this is limewashed, but the stones do not look modern. The mouldings of the door arch suggest a 13th-14th century date. It is possible that the lower part of the wall, the doorway, and the stoup, are all of that date.

The Coggeshall-type bricks
The renewal of the north aisle roof in 1999 made it possible to examine the clerestorey masonry, which includes material reused from earlier phases of the church, notably:

1. Coggeshall-type bricks in a sandy fabric, with reduced cores, measuring 13 x 2 inches (330 x 50mm).
2. ferricrete or indurated ferruginous conglomerate.
3. tabular pieces of coarse oolite.

The Coggeshall-type bricks are the earliest known bricks used in England after the Roman era, occurring in buildings dated to c.1150-1225 at Coggeshall Abbey. They, and probably the ferricrete and oolite too, must therefore come from the 12th or 13th-century church at Bocking.

A Coggeshall-type brick was subsequently discovered on the ground by the porch (Fig. 3). It is presumed that it was found in the north aisle repairs. It measures 12 $\frac{1}{2}$ x 6 $\frac{5}{8}$ x 2 inches (320 x 170 x 50mm). It is particularly interesting because one of the header ends bears evidence of two phases of painted decoration. The earlier is in red applied to a white limewash coat. The later, represented by an

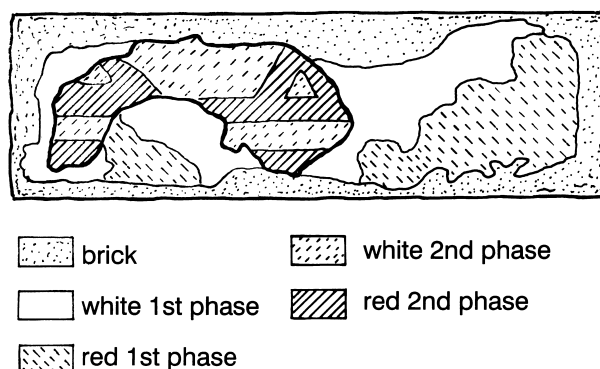| brick | white 2nd phase |
| white 1st phase | red 2nd phase |
| red 1st phase | |

Fig. 3   Bocking St. Mary, painted Coggeshall-type brick.

overlying layer about 1mm thick, has a geometric pattern in red on a pale reddish buff ground. The brick was probably part of the surround to a window or door. It affords some idea of the brightly painted interior of the 12th and 13th-century church.

The buttress at the south-east corner of St. Katharine's chapel and the Maysent tomb

This buttress, which was moving away from the chapel wall against which it made a straight joint, was rebuilt in 2001. The flint masonry and dressings were a facing on a core of bricks which measured 225 x 105 x 50mm, indicating that the buttress was probably added in the 17th-century. The handsome railings of the adjacent 18th century Maysent tomb were restored. This was a table tomb, but it has been dismantled and the slab laid on top of the vault. Removal of a brick from the top of the vault gave a glimpse inside: no coffins were visible and it seems to have been cleared, though possibly they are sealed beneath stone slabs which form the floor. The Maysents were prosperous clothiers who had a large house in Bradford Street.

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The chapel of St. Thomas à Becket, Brentwood

Rob Butler and D.D. Andrews

In January 1997, a watching brief was carried out at the chapel of St. Thomas à Becket, Brentwood, in response to an improvement scheme initiated by Brentwood District Council (EHCR 528). The chapel was founded in c.1221 when Brentwood was already a small town, being first documented in 1176 (Round 1924). The chapel was dependent on the church of South Weald, in the parish of which Brentwood was situated. In plan, it consists of a late 14th-century chancel and nave with a tower in its north-west corner, and a porch on the north side opening into the High Street. The building served as a chapel until 1835 and as a boys' school until 1869 when it was largely dismantled, only the north-west tower and the west end of the nave surviving as a ruin which is a Scheduled Ancient Monument

Archaeological recording was confined to the north end of the site within the improvement area, on the north side of the chapel, between it and the High Street. Here 300-400mm of deposits had previously been disturbed by successive pedestrianisation schemes. Consolidated hardcore had had been laid over the majority of the site

preventing investigation except where two pits approximately 1m square were to be dug for a ceremonial tree and the town's Christmas tree anchor point. Archaeological deposits in these pits were carefully excavated and recorded.

A superficial layer 100-200mm deep of dark grey sandy clay loam with flint pebbles overlay a similar lighter coloured layer 550mm deep. Both layers contained abundant post-medieval finds, including brick, tile, 18th-century clay pipe, black-glazed and slip-painted wares, an 18th-century English stoneware tankard, and lead waste probably from the manufacture of window cames, as well as some rather earlier material such as a sherd of Frechen stoneware and a Nuremburg token of c.1600.

In pit A, a well preserved burial was found at a depth of 1.4m. Traces of a coffin were evident, with iron screws still *in situ*. This had cut an earlier burial, an adult in good condition with a copper stain on the clavicle, possibly caused by a shroud pin. Nails indicated that there had been a coffin. Two further burials were identified lying immediately north and south, one of which was clearly in a coffin. In pit B, located 10m west of A, two intercut coffin burials were found, at a depth of 0.95m and 1.1m below pavement level.

The chapel was dependent on South Weald church, and did not have burial or baptism rights as these would have diverted revenue away from the mother church, the priest being required to take an oath to that effect (Larkin 1906). However, the excavation revealed that the area north of the chapel had been intensively used for burial. The remains of the coffins found in the two holes suggested an 18th- to 19th-century date for the burials. That two of the coffins had been constructed with screws points to the 19th century, probably not long before the chapel ceased to be officiated in 1835. These late burials to the north side of the chapel probably indicate that the south side was already full.

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Colchester St. James. Drainage investigation

D.D. Andrews

To investigate the drains, a hole was excavated against the south side of the nave by the Colchester Archaeological Trust (CAT Report 72), and then further holes were dug at the east end of the nave and at the south-east corner of the chancel. The perforated stone drain covers set in the gutter at the

edge of the York stone paving which flanks the south side of the church were found to be connected with a tubular terracotta pipe 5 inches in diameter which runs eastwards parallel to the wall of the church. The paving and the drainage probably date from restoration carried out in the 1870s. The pipe was blocked, and had been superseded by a modern stoneware drain set at a higher level.

The trial hole at the south-east corner of the chancel proved to be of particular interest. It uncovered the stoneware drain running to the east of the chancel. The older redundant terracotta pipe was found to dive vertically to a destination unknown. Whether it went to the Roman town wall which borders the east side of the churchyard, or turned and went to the road, is uncertain. At the northern edge of the hole, adjacent to the York stone paving, there was an east-west aligned structure. It was at least 300mm thick, and 600mm long, running from the west edge of the hole but having been cut through to the east, no doubt by a grave though no discrete cut was observed. The top of the structure was 550mm below ground level, and it continued downwards for at least 600mm, beyond the limit of excavation. It was built of fragmentary thin bricks laid roughly to courses in an abundant yellow-brown mortar. One of the bricks which could be examined was 32mm thick, slightly sandy and reduced in section. The bricks were presumably Roman. Whereas the section on the east side of the hole comprised relatively loose fill, on the west there were more compact deposits which exhibited stratification. A fairly deep layer of slightly reddish brown loam containing peg tile, and probably also mortar from the wall, was overlain by a yellowish sandy deposit, in turn covered by a layer of hoggin. These layers seemed to have run up against the wall, but had been cut by the 19th-century drain pipe. The wall was clearly earlier than the drain. It looked from its position earlier than the chancel buttress, though no relationship with this was observed. The following interpretations may be proposed for the wall.

1. it is Roman and associated with the town wall.

2. it belonged to an ecclesiastical building that preceded the existing church, which would suggest a late Roman or 11th-century date.

3. it is the side of a medieval vault of, say, the 13th or 14th century. If this is the case, then it might be expected to have been located inside the church, raising the possibility that there was once a chapel here extending right to the east end of the church.

In the south-east corner of the hole, there was 18th or 19th-century brickwork probably associated with a tomb or vault. Much building debris was removed from the hole, including moulded stone (a mullion like that in the north chancel window, a chamfered reveal, several string course stones like those in the east end of the south chapel, in Caen or a similar stone), and a number of well made cream flooring bricks probably of 19th-century date, material which must have come from the restoration of the church.

Debden, St. Mary and All Saints Church. The construction of the extension

Trevor Ennis and D.D. Andrews

The arcades of this church date back to the 13th century, but the south aisle was rebuilt in the 14th century and the north aisle in the 15th century. The collapse of a central tower led to a rebuild of the chancel on two occasions (RCHM Essex 1916, 75). The existence of this tower has led to the speculation that there were once transepts. If the RCHM is correct in saying that the eastern arch of the south arcade has been rebuilt and strengthened, then it may be that the tower fell in that direction. The tower was not rebuilt. A small and apparently inadequate chancel erected in 1733 is represented in a watercolour in the Essex Record Office (Mint Binder). The existing chancel was constructed in the gothic style to a design by John Carter for R.M.T. Chiswell in 1792. It has a raised sanctuary beneath which is the Chiswell vault. In 2000, an extension was constructed on the north side of the chancel, being preceded by an evaluation and accompanied by a watching brief (Germany 1999; Ennis 2000).

The work for the extension involved the demolition of a 19th-century vestry and the insertion of a door into the west wall of the north aisle to give access between the church and the new building. The west wall was found to have a foundation of flints and small stones set in a dark brown clay matrix. This survived above the level of the floor in the north aisle, which to judge from the exposed foundation stones at the base of the arcade columns has been lowered by as much as 400mm. Above the clay-bonded foundation, the lower 650mm of the wall is made with an orange-brown mortar and may date from the 13th century, whilst the upper part is bonded with a pale yellow-brown mortar which is characteristically late medieval. These observations seem to confirm the rebuilding of the west end of the north aisle recognised by the RCHM. On the east side of the west wall, there was a layer of external render (probably 18th- or 19th-century) which pre-dated the construction of the 19th-century vestry.

Observation of trial holes dug adjacent to the vestry did not reveal evidence of any previous structural phase of the church, though it did show that the chancel is terraced into the chalky clay of the valley side on which the church is situated. A trial trench 7m long at right angles to the vestry similarly failed to uncover any evidence for previous

phases of the church, and it seems that the church never had a transept on this side. Eight grave cuts were found, in which two phases of burial could be recognised. In the course of the watching brief, the positions of approximately a further 30 graves were recorded. Few finds were recovered but the dating evidence points to a 19th-century date for at least three of the burials. Several other graves are probably of 18th- or 19th-century date, given the dates on the gravestones lined up along the northern graveyard wall. A number of the burials appear to have been made without coffins, a fact which could be indicative of an earlier date. Four of these had circular cut-outs for the heads; these were clearly not laid in coffins, and by analogy with graves found elsewhere (e.g., on the site of St. John's church, Colchester, Crummy 1993, 213-18) were probably Saxo-Norman in date. However, at least one coffin-less grave was dated by finds to the 19th century, and it is therefore possible that others are contemporary.

Possible structural evidence was found in the form of two undated north-south orientated features. These did not appear to extend as far south as the present day church and therefore do not appear to be part of an attached northern transept. Finds included a single Roman sherd datable to the mid 2nd-4th century, and a fragment of Early Medieval Ware datable to the 10th-13th centuries.

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The roofs of Saint Edmund King and Martyr, East Mersea

Elphin Watkin

The church, situated in the south-east of the island, forms part of a church/manor complex. It dates back to the 12/13th centuries with a north arcade and general rebuild in the late 15th century (RCHM Essex 1922, 93). The roofs are all ceiled, but a re-

tiling in 2000 made possible an examination of the timber structures beneath. The roofs are all of oak. The earliest is possibly the chancel which is datable to the mid 15th century. A feature of all the roofs is that the gable walls greatly reduce in thickness above collar level.

The chancel roof is of simple collar rafter construction with soulaces (Fig. 4). It has ashlar pieces and sole plates with a single moulded wall-plate. The south wall is thicker and appears to be slightly lower than the north wall, suggesting that it may be earlier. This makes the roof asymmetrical in construction. The timber is all good quality oak from fast grown trees of various sizes, with roof members made from whole, half or quartered trees. The conversion was initially with the axe, the smaller sections being sawn. This plain roof is well made with consecutive carpenters' assembly marks from west to east, but has few datable features. The timber itself suggests a period in the 15th century. The boarding on the underside of the roof could date to 1882 when repairs were carried out, as is indicated by a replacement rafter inscribed with the date 8th June 1882.

The nave roof is similar to the chancel in timber and construction, and is possibly of similar date. In this case a moulded wall plate, embattled with a hollow chamfer and a bowtell, only exists on the north side. The south side rafters run straight to the parapet wall. Many years of water ingress to this side and the north valley have taken a heavy toll. The roof has settled and been built up to the ridge line by at least two earlier repairs, and has now been repaired again. This repair has reset the roof trusses to their original alignment but only with the assistance of much new timber and steel. The nave roof could be that referred to in a visitation of 1707 with an order *'for the roof to be tiled where it is now thatch'* (ERO D/P/77/28/12).

The north aisle and north chapel roof is one continuous structure of a later date. The original, almost flat, lead roof, which was probably similar in
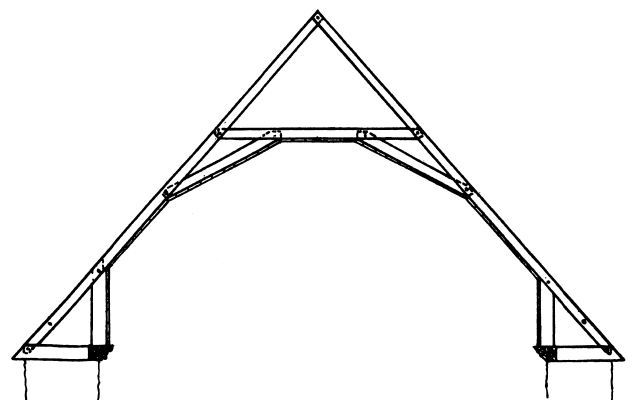

Fig. 4   East Mersea, St Edmund, typical chancel roof truss, looking west.
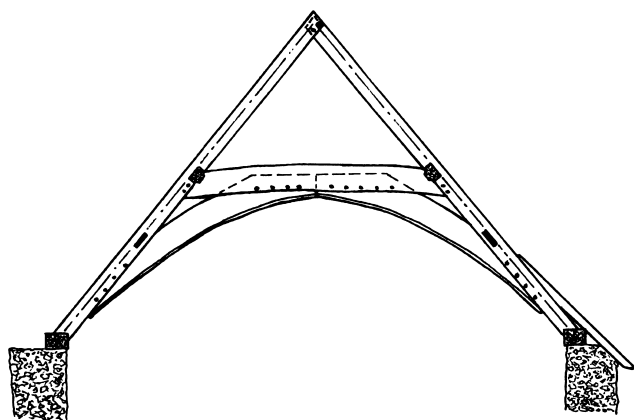
Fig. 5   East Mersea, St Edmund, typical north aisle roof, looking west.

date to the nave and chancel roofs, was removed along with the parapet to build a pitched roof at some time around 1600. This long roof covers the chapel and aisle with a butt-purlin, wind-braced roof, having cambered collars with arch braces at each bay division (Fig. 5). The chapel is only distinguished by the purlins which for its two bays have roll mouldings with hollow chamfers, whilst in the rest of the roof they only have hollow chamfers. The north side rafters finish on an inner wall-plate with long sprockets projecting over the wall. The top of this wall suggests it once had a parapet which has been removed to allow the tiled roof to cover the wall. This was a good decision as it is the only side of the nave or aisle roofs that has survived relatively intact. An ill-maintained parapet gutter would have caused the rafter ends to rot. This roof, although now covered on the inside with plaster, was originally designed to be open to the ridge, the collars and braces being chamfered.

From the investigation of these roofs it would seem that the church has had major structural problems over many centuries. Some of the church records point to early repairs. In 1854, £91 6s. 9d. was paid, part of which was for extra work (ERO D/P/286/5/1). The chancel roof, as already mentioned, had major repairs in 1882. The earthquake in 1884 seems to have mainly caused damage to the tower (ERO D/P/245/28/13). The church accounts show extra cleaning bills which suggest that the church could still be used (ERO D/P/277/29/1). The Mansion House Relief Fund granted £125 (ERO D/P/77/28/12) which, with a letter to the Essex Standard suggesting that the tower repairs would cost £300 (ERO D/P/245/28/12), seems to confirm this.

Visitation records suggest a church with little money for repairs. Some examples illustrate this: 1596 - Church in great ruin; 1608 - Church and steeple in decaye; 1707 - as before mentioned (ERO D/P/77/28/12). And in May 1922 the PCC meeting

initiated a fund for the restoration of the church roof (ERO D/P/286/5/1). The inadequacy of that and previous repairs has finally been made good.

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Fobbing St. Michael
D.D. Andrews

Repairs to the 15th-century Ragstone tower have seen the renewal of the original crenellated parapet. This has elegant merlons, outlined by a rounded moulding. The string course beneath the parapet has projecting grotesque heads, now very eroded. The Ragstone masonry of the tower is characterised by the use of small stones or flints (i.e., galletting) to fill the joints between the larger blocks. The church has also been provided with rainwater goods for the first time in its history. The drains and soakaways revealed more evidence of grave digging on the south than the north side. On the north side, the natural was an orange silty clay with some sand; on the south, in contrast, it seemed to be a compact brown sandy silt with rounded pebbles. An undated feature in one of the soakaways on the north side may not have been a grave. The same soakaway produced the rim of a Roman tazza or incense burner (identification by Scott Martin).

Helions Bumpstead, St. Andrew. Renewal of internal plaster
D.D. Andrews

The Royal Commission on Historical Monuments (Essex 1916, 155) is cautious about dating the nave of this church, though declaring it to be the oldest part of the building. The chancel is 13th-century, having large lancet windows. The south arcade and aisle were added in the 14th century, and about 1400, a west tower was added, this being the date of the tower arch. The RCHM speculates that the south aisle was demolished and walled up, being then rebuilt in the 16th century. This was no doubt based on the observation that most of the aisle is in 19th-century red brick, except for the west end (from west of just the east side of the porch) and the east wall where externally there is what looks like a masonry buttress built (in the absence of the aisle) to brace the chancel arch. The tower fell and was rebuilt in brick, the keystone of the west door bearing the date 1812. It was probably about this time that the south aisle was rebuilt. The three south aisle windows are described by the RCHM as being 16th century and reset (which is why they dated the rebuild of the

south aisle to the 16th century). However, the windows today have wooden Y-tracery and there is nothing about them evidently earlier than the 19th century apart possibly from their keystones.

In 1999, the plaster was removed from the bottom 6 feet of the north wall of the church, the west wall, and the south wall of the south aisle. The nave wall is built of flint and some field stones which externally have a tendency to be laid herringbone-wise to courses. This is also evident inside, though less marked. The stones are bonded with a pale brown silty mortar. One piece of Roman brick was noted at the west end of the wall. The general character of this wall is Saxo-Norman, and there can be little doubt that the RCHM was correct in thinking it to be the oldest part of the church. Whether the wall can be assigned to the 11th or 12th century is a moot point

The north door, now blocked, has a surround made of clunch which has been inserted into the wall. The RCHM dates it to the 16th century. The windows have also been inserted, there being a paler, whiter mortar used around their surrounds. Between the pulpit and the organ, there is a patch about 6-7 feet up from the floor dubbed out with what look like cream-coloured pegtiles (?underfired tile rejects), possibly making good an area where there had been a monument. Behind the organ, there is shallow plastered recess about 300mm wide and 150m deep, the bottom of it 1m up from the floor. This feature is poorly defined (i.e., lacks clear sides, top etc.) and is difficult to examine. It may have been a recess formed above a shelf for a statue. There may be a change in the character of the masonry at this end of the nave wall, but space behind the organ is too cramped to assess it properly. There was, curiously, no evidence of an entrance to the rood stair, the turret for which projects from the angle between the nave and chancel.

Although there was no evident join between the west and north wall, the masonry of the west wall is different, being made of more tightly packed stones. A brick in this wall may be evidence of it being 15th-century in date, suggesting that it was all rebuilt when the tower arch was inserted.

Plaster was removed from only the north wall of the chancel. The stonework here is much more tightly packed than in the nave, and is bonded with a yellower silty mortar also containing much unburnt lime. The chancel can be securely dated to the 13th century because of the large lancet windows in its walls. Curiously, there was no evidence of blocked windows in the north wall, which has only one in contrast with the three in the south wall.

Immediately east of the chancel arch, a vertical row of ashlars was evident, perhaps laid that way when the arch was built or perhaps indicative of a rebuild. About 2m from the east wall, a niche was
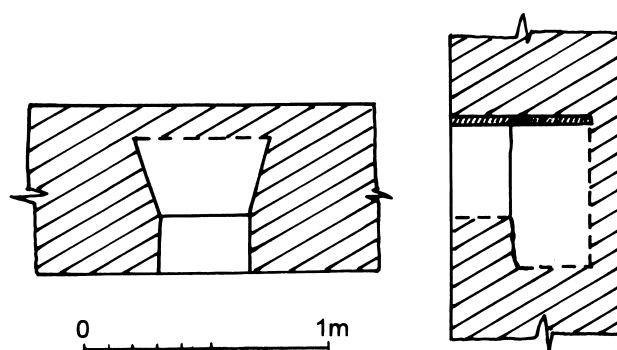

Fig. 6   Helions Bumpstead St. Andrew, reconstructed plan and section of probable aumbry.

found. This was 400mm wide, widening to 550mm at its full depth of about 560mm, i.e., it had a splay the reverse of what is normal with a window. It had had a lintel made of an oak board about 25mm thick, but this had almost totally rotted. The sides were plastered. No bottom edge to the feature was evident because of damage in this area. When the blocking was removed, it became evident that at the bottom of the niche there was a raised lip or cill. Behind this lip, the niche was about 580mm high (Fig. 6). This feature was variously identified as a squint, an aumbry, and a piscina. None of these explanations are entirely convincing, though a squint can be excluded because it did not penetrate the full wall thickness. On balance, it seems most likely that it was an aumbry, though the reverse splay, raised cill, and absence of doors, means that this interpretation is not irrefutable.

East of the niche, there is a scatter of clunch blocks in the wall, the masonry of which looks rather different, being bonded with a harder mortar. In other words, it seems that this end of the wall has been rebuilt, probably in the 14th or 15th century, and that it was provided with the niche at that time. It is assumed, in the absence of dating evidence, that the niche was blocked in the 16th or 17th century, i.e., as a result of the events of the Reformation.

In the south aisle, much of the plaster was removed. The south wall is stone built as far as a point just east of the porch, beyond which it has been rebuilt in brick in the 19th century. This stonework was not very well cleaned up, and was difficult to assess. A crack between the south and west walls suggests that they are not bonded and hence of different dates. The Hodgson monument to the west of the south door is set in the blocked embrasure of a rectangular-headed window. Whilst the aisle dates from the 14th century, it is possible that the south wall was rebuilt in the 16th century, the date of the south door and the clerestorey windows.

The eastern part of the south aisle has been rebuilt in brick (220 x 105 x 65mm) with penny-struck pointing. In the east wall of the south aisle,

the brickwork abuts a former buttress built to help take the thrust of the chancel arch. The materials of which the former buttress is made include Tudor brick, quoins in a hard greyish stone and pegtile bonded with whitish lime rich mortar, suggestive of a 17th- to 18th-century date. This indicates that much of the aisle had collapsed, in which case its eastern end must have been blocked off, though there is no evidence of this in the masonry of the arcade.

At the Quarter Sessions in 1796, the parish made representations to the effect that 'the steeple some time since fell down; that the body of the church and the side Ile thereof are greatly out of repair and very ruinous' (ERO Q/SBb 362). The repairs were estimated at £1087 8s. 3d. The Lord Chancellor was petitioned for a Letter Patent to enable the parish to seek charitable contributions nationally. The keystone of the west door in the tower bears the date 1812. The tower brickwork (225-230 x 100-105 x 60-65mm, bonded with lime rich gritty mortar with struck joints) is rather different to the south aisle, but it is unclear which was rebuilt first.

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Hempstead St. Andrew. The chancel

D. D. Andrews
The concrete gutter on the south and east sides of the chancel was removed to create an evaporation zone to alleviate the damp on the interior of the walls. A test hole was dug at the south end of the east wall to assess what depth of earth could safely be removed.

The nave of the church is dated to c.1350, and the chancel to the 15th century, with a 16th-century rebuild at its east end in brick (RCHM Essex 1916, 157). The north chapel and vestry date from the 17th century, and the tower (which had fallen) and the aisles were substantially rebuilt in a restoration of 1887. The chancel brickwork is complicated. The east window is an insertion in typical Tudor brick of probable 16th-century date in the rebuilt east end which is made of unusually thin Tudor bricks. These measure 210-220 x 95-105 x 40-45mm, and are characterised by diagonal pressure marks and diaper work. They are probably datable to the early or mid 15th century. This would imply that the chancel is older than the RCHM suggests.

On the south side of the chancel, removal of the gutter revealed that the base of the wall has been repaired - or had a slight plinth created - with four

courses of 19th or 20th-century bricks. Below this brickwork, there is a flint foundation which seemed to be about 200mm deep. A stone foundation on the west side of the brick diagonal buttress at the south-east corner of the chancel seemed to be the remains of an earlier buttress about 900mm square in line with the east wall.

The test hole against the east wall, just by the south-east buttress, revealed an offset foundation at least 250mm deep made of well coursed flints bonded with a dark yellow brown silty mortar. Above this, there are two courses of large (150-200mm) flints which are the foundation of the 15th-century brickwork at the end of the chancel. Similar large flints occur at the base of the south-east buttress forming a platform round it on its east side and probably a foundation for it.

The difference between the foundation for the brickwork phase and the earlier foundation beneath it is distinct. It seems therefore that the brickwork represents a rebuild of an earlier square east end in the same position as the existing one. It is likely that this is earlier than the 15th century date proposed for it by the RCHM (on the evidence of the very rebuilt windows in the south wall). The foundation below the east wall is unlike that below the south wall and they may indicate two separate building phases. It is possible, for instance, that the south wall foundation belonged to a chancel with an apse which was then squared off with an east wall with buttresses in the 13th or 14th centuries, but this is no more than speculation.

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High Roding, All Saints

Trevor Ennis and David Andrews
All Saints is small rural church comprising chancel, nave and porch, and dating from the 13th century on the evidence of the lancet windows and door in the north wall of the nave. Three pieces of work were monitored in 2000: the excavation of drain runs from the north-east corners of the vestry and the chancel to a new soakaway on the north side; the reduction of ground level against the north wall of the chancel and the east wall of the vestry; and the dismantlement and rebuilding of the buttress at the south-east corner of the nave (Ennis 2000).

The natural is chalky Boulder Clay. A minimum of four inter-cutting graves were present in the soakaway. No dating evidence was associated with them, but peg tile and abraded medieval pottery were recovered from the mixed upper fills, perhaps indicating a post-medieval date. At the east end of

the chancel, there is a stretch of mortared masonry 1.6m long and projecting 0.2m from the base of the north wall. It is bonded with a buff yellow mortar, in contrast with the orange brown mortar in the wall to either side of the projection. This feature might represent an earlier foundation or a localised underpinning, but it seems most probable that it is the remains of a buttress added to the north-east corner of the chancel. (Today, the chancel has a diagonal buttress dating from the 19th century when the east wall was rebuilt).

The buttress at the south-east corner of the nave was cracked and falling away from the building. As it appears today, the buttress is a rebuild of the 19th century when the church walls seem to have been extensively refaced. Trial trenching around the base of it revealed masonry bonded with light orange yellow mortar which clearly represented the foundation of an earlier larger buttress at right angles to the nave wall. A straight joint showed that it was a later addition to the nave wall, which was bonded with a sandier and darker orange brown mortar.

A further inspection was carried out when the buttress had been dismantled. The nave wall continues down to a depth of at least 700m below ground level. At the south-east corner, there is a large sarsen with two ashlar quoins above it. Since this masonry at the base of the wall is bonded with an orange brown mortar whereas the upper part of the wall has a buff mortar, it seems to represent an earlier phase above which there is a rebuild. If so, then the base of the wall should predate the main 13th-century build. In the case of small churches like All Saints which were rebuilt in the 13th or 14th centuries without being appreciably enlarged, there should be evidence for an earlier building phases in their foundations (unless the earlier buildings were of timber). The buttress was probably contemporary with the rebuild, or possibly an addition to it. It had been much larger: its full extent was marked by a stain of sand and gravel on the bottom of the hole which indicated it was about 0.9m wide and at least 1.3m long. Such large buttresses are a typical feature of the 13th and early 14th centuries.

Investigation of the buttress half way along the south wall of the chancel showed that this is 19th century in date, with a stepped brick foundation at least 1.1m deep.

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Rickling All Saints

D.D. Andrews

The plan of this church suggests it has pre-Conquest origins, the chancel not being quite aligned with the nave which is short and wide. The earliest surviving part of the building is a 13th-century lancet in the west wall of the nave, now blocked by the tower. The main part of the church (chancel, south aisle, and tower) were constructed in the mid 14th century (RCHM Essex 1916, 221). Prior to the excavation of dry areas and drains round the church, five test pits were excavated by the Heritage Network to check for archaeological remains and to ascertain the depth of the foundations (Bray 2000). These uncovered unusually well preserved archaeological deposits which produced some interesting insights into the history of the church.

In the test pit against the west side of the tower, an earlier foundation at least 500mm wide and bonded with a weak orange-brown mortar was found apparently running north-south. This had been cut by the foundation trench for the tower. In so small an area, the foundation is difficult to interpret, but it must have been for a stone building, presumably an earlier phase of the tower or an earlier west wall. In either case, it must have predated the lancet in the existing west wall.

The test pit against the west wall of the church was located at the junction of the south aisle and nave. Here a light sandy deposit present only against the aisle represented the fill of the foundation trench for the aisle which had been added to the nave. Two sherds of Early Medieval Ware (identified by Helen Walker) datable to the 10th-13th centuries were present in the clay layers cut by the foundation trench. These could be interpreted as supporting a Saxo-Norman date for the nave.

The foundations of the porch were shown to be of Tudor brick, which indicates that the porch was first built in the 15th or 16th century, and is not a 19th-century addition as proposed by the RCHM. A spread of stones with some nails in the test pit against the south chancel wall was interpreted as residual material from a phase of construction or repair.

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Saffron Walden St. Mary. The south aisle roof

D.D. Andrews
Relatively few Essex churches are documented by church wardens' accounts. Saffron Walden is an exception. In 1485, the churchwardens contracted with Simon Clerk and John Wastell to rebuild the church. This was a total reconstruction over a period of about 20 years. John Wastell was one of the leading master masons of his time, being responsible, *inter alia*, for the fan vaults of King's College, Cambridge (Harvey 1987).

This roof was inspected in the course of re-leading. It is a low-pitched roof of camber beam type and butt purlin construction with a ridge piece. The tie-beams and rafters are moulded. The roof has been extensively repaired. There was apparently a major repair c.1959. To this can be attributed the chipboard between the common rafters (which are rebated to receive oak boards), the renewal of some of the tie-beams, and the remodelling of the eaves construction such that its original form is unclear. In the eaves along the south parapet, there are several reused blocks of oak with the same distinctive moulded profile. This moulding resembles that on the tie-beams in the aisle and the timbers probably come from roof beams removed in the c.1959 restoration.

Sampling for tree-ring dating was commissioned by the Revd J. Russell Smith and carried out by Martin Bridge (Bridge 2000). Two of the moulded timbers reused as wedges in the eaves construction gave a felling date of 1475-1502, indicating that work on the new church proceeded apace, the aisle being rebuilt by 1502. A date of 1772-1804 was obtained for the easternmost tie-beam, located against the east wall of the aisle and therefore vulnerable to damp, and of 1789-90 for a principal rafter from the same truss, indicating that this truss was renewed in 1789-90.

The fifth tie-beam from the west, a common rafter from the fourteenth bay, and a moulded timber used as a wedge in the eaves construction, all gave a felling date of 1406-33, whilst another wedge yielded a dated of 1440-1472. These results are difficult to interpret. The southern end of this timber, where it was seen behind the parapet, has two grooves (20mm wide and 20mm deep) at the outer edges of its upper surface, and mortices in its sides. These features seem unrelated to its present use and are difficult to reconstruct. It is conceivable that the grooves were for the boards of a tympanum screen above a rood beam, the mortice being for a wall plate or fascia. They do suggest that the beam is reused. Reused timber is not unknown in late medieval church roofs. The common rafters of the mid 16th-century roof of Thaxted church are reused from an earlier roof. It seems improbable, however, that a

moulded tie-beam could be a reused timber, though a large plain timber could be carved at a later date. Another problem with the reuse of this tie-beam is the great width (7.6m) of the existing aisle; it is unlikely to have come from an earlier aisle but be from the nave. These earlier timbers could, of course, have come from anywhere and have been introduced at any time, but if reused from the church, they point to two building phases in the 15th century about which we know nothing and which are therefore of great interest.

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Wicken Bonhunt, St. Margaret

D.D. Andrews
Renewal of most of the pew platforms in the nave, and limited plaster repairs, showed that the nave, which was rebuilt by the Revd J.H. Sperling in 1858-59, is faced internally with gault bricks. However, some medieval flint walling survives at the east end of the north wall of the nave, and flintwork was also evident at the base of the walls. At the base of the north wall, the flints were unmortared and seemed to be a trench-built foundation which had been exposed when the sub-floor void was created in the 19th century. If correct, this observation implies that the restoration work saw the removal of old floor levels. The flintwork at the base of the south wall is mortared and probably represents a later medieval rebuild.

Writtle, All Saints Church (TL 6775 0614)

Stuart Gibson
Observation of the lifting of three floor tiles at the western end of the nave and the subsequent excavation of a 0.3m deep hole in which to place a time capsule found only make-up associated with the current floor.

Archive: Chelmsford Museum

The work of the Essex County Council Archaeology Service 2000

edited by S. Gale

This annual report reviews project-based work undertaken by members of the Essex County Council Heritage Conservation Branch (which subsequent to internal re-structuring includes the various sections of the former Archaeological Service). Full details of all sites can be found in the Essex Heritage Conservation Record (EHCR). The illustrations have been prepared by Roger Massey Ryan, Debbie Knopp and David Strachan.

Aerial Survey 2000

Sue Tyler

The twin objectives this year had originally been the recording of cropmark and soilmark sites and coastal survey; however, the exceptionally wet weather precluded the formation of cropmarks during the summer months which meant that cropmark recording was virtually abandoned. English Heritage (EH) provided funds for survey in both Essex and Suffolk, while some survey over Hertfordshire was funded by the Archaeology Section of Hertfordshire County Council. Copies of all prints are to be deposited both with the relevant Sites and Monuments Record, and with the National Monuments Record Centre, Swindon.

Approximately ten hours of reconnaissance were carried out in seven flights over the region. The very wet weather during the summer meant that little survey was undertaken during June and July (one flight to record coastal sites); August was slightly drier and at least provided the opportunity to get airborne, although very little was showing by way of cropmarks. A few cropmarks appeared in later ripening crops; of particular interest amongst the new features recorded is a series of enclosures and ditches at Pease Hall Farm, Springfield (CP/00/21/15 and 22/1-11, EHCR 5743) showing in borage which included an enclosure of unusual hexagonal shape. An early August flight along the Stour River valley recorded a number of cropmark sites showing as linear and circular ditches in sugar beet (CP/00/13/8-9, EHCR 2763; and 14/4-12, EHCR 9270 and 9191-2) at Langham, Wormingford, Little Horkesley and Bures; most of these, however, proved to be previously recorded and already on the EHCR.

The persistent rain meant that many water-filled features showed well from the air and the opportunity was taken to record some of these. These included the moated site at South Ockendon Hall, Thurrock (CP/00/8/5-10, EHCR 1863-4) and that at Old Wincelow Hall, Hempstead (CP/00/17/15, EHCR 1427-9).

In October attention was turned to coastal survey with two flights carried out specifically to record sites along the Essex coast. Red hills (salt production sites) were showing particularly well as reddish soilmarks and many were photographed in Peldon (CP/00/29/4-6, EHCR 16284-97, 12585, 2203; 2223) and on Mersea Island (CP/00/29/8-10, EHCR 2196, 2138, 19366), some of which proved to be previously unrecorded. A few red hills still survive as fairly complex earthworks and these were recorded in some detail, including a particularly well-preserved example at West Mersea (CP/0029/7, EHCR 2137) (Plate 1). Oyster pits, the remains of another ancient Essex coastal industry, were also recorded, in particular those being eroded away by tidal action at Old Hall Marshes (CP/00/37/1-4, EHCR 16705, 16714, 16282) (Plate 2). The timber remains of the hulks of several sailing barges were also photographed including the wreck of 'The Unity' (EHCR 16711) at Sampson's Creek, Peldon; it is intended to undertake a more systematic survey of the remains of these and other hulks next year.

Essex Mapping Project

Caroline Ingle and Sue Tyler

Work continued throughout 2000 on the Essex Mapping Project, as part of the National Mapping Programme (NMP), co-ordinated and funded by English Heritage. The 14 sheets mapped in 2000 brings the total completed to 165 (Fig. 1). The number of records on the MORPH database now stands at 10,028, with 606 individual records being added during the year. In addition, 160 new sites have been added to the EHCR over the year.

Mapping this year has been in the central western part of the county, around Stansted, the Easters and the Rodings in the south and between Saffron Walden and Wethersfield in the northern part of the mapped area. This area is predominantly lies on

Plate 1. Red hill at West Mersea. (photo: S. Tyler. © Essex County Council).

Plate 2. Oyster pits on Old Hall Marshes, Tollesbury. At the top of the photograph, there are two decoy ponds. (photo: S. Tyler. © Essex County Council).

Boulder Clay with only limited covering of lighter glacial sands and gravels on which cropmarks are generally better developed. As a result features are for the most part visible only as isolated features or small groups of cropmarks. The main exception are dense spreads of former field boundaries (many of which have been lost over the past 60 years) in some areas, particularly around High Roding and the Easters.

There are relatively few features identified as, or suggested to be, of prehistoric date. The absence of ring ditches (which are relatively common in the lower parts of the river valleys) is notable. It is not possible from air photo evidence alone to ascertain whether this is an indication of their true absence or a reflection of the more general lack of cropmark development on these heavier soils. There are isolated examples at TL651256 (EHCR 19018); TL699262 (EHCR 19023); TL693267 (EHCR 19022); TL640256 (EHCR 19063); TL613263 (EHCR 19064); TL580170 (EHCR 19126) - all new additions to the EHCR. At only two locations, TL691311 (EHCR 1579) and TL605273 (EHCR 1359), do two ring ditches occur together and substantial clusters are completely absent. Large circular enclosures have been recorded at TL595105 (EHCR 19205), this with a large central pit, and at TL566118 (EHCR 19201) and TL634315 (EHCR 9858), the latter adjacent to a very irregular enclosure.

Three circular features now visible as cropmarks are the remains of windmills: TL605273 (EHCR 17201), TL643326 (EHCR 19002) and TL604162 (EHCR 1050). The latter is shown on the OS 2nd edition map and marked on the Chapman and André 1777 map as 'Mill-hill'.

Other features of probably prehistoric date include rectangular and rectilinear enclosures. They include a sub-square enclosure, approximately 17 x 14m, beside a possible track near Great Easton (EHCR 18075) first recorded during the Archaeology Section's aerial survey in 1989 (Gilman 1990). This is suggested to be an enclosed cemetery, an interpretation based on the numerous rectangular pit-like features interpreted as graves in and around it, although these are aligned on the possible trackway rather than the enclosure, and one or two possibly cut the enclosure's north-western corner. A second site (EHCR 13403) near Thaxted, first recorded from the 1989 aerial survey, is a rectangular enclosure with internal subdivisions and attached smaller enclosure at the north-east corner. In comparison with other dated examples, it is suggested to be Late Iron Age (Gilman 1991). Several of the enclosures plotted were first recorded during the 1996 aerial survey, including a group of three sub-rectangular enclosures near Little Sampford (EHCR 17140). Two of these have attached field boundaries; the third is more irregular and rather boat-shaped with an entrance to the
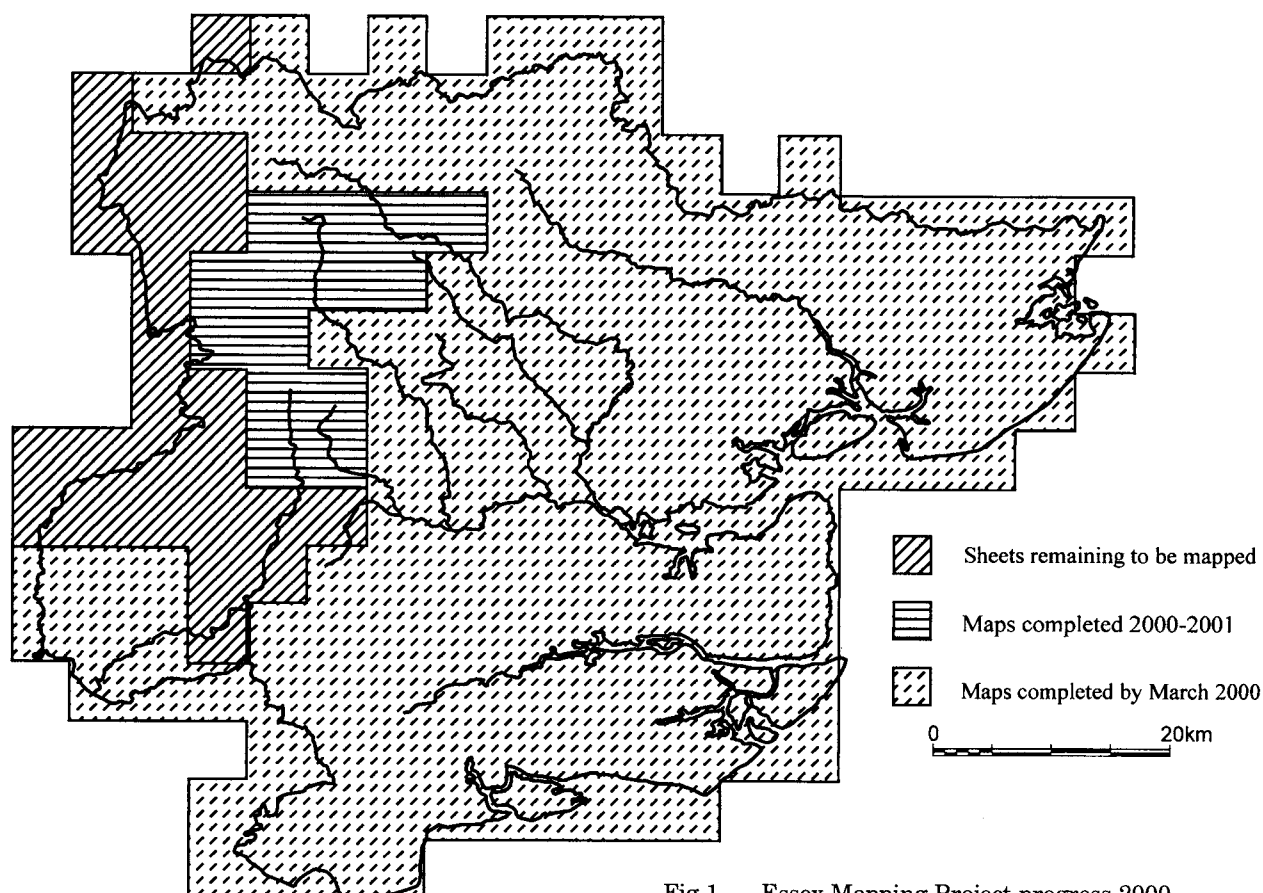
Fig 1   Essex Mapping Project progress 2000.

300

south-west. A further group of enclosures was plotted south-east of Good Easter, including two conjoined sub-rectangular examples (EHCR 7326), one with an internal division which may have been associated with a more regular enclosure to the east (EHCR 17151). There are further sub-rectangular enclosures c.350m to the south-east and 700m to the southeast.

Moated sites of medieval origin are relatively common across the area, the majority still extant, although several examples survive only as cropmarks. EHCR 6938 near Wethersfield is a large sub-rectangular example which survives in part as an earthwork in woodland. In its record of the site the Moated Sites Research Group noted that this was depicted on a map of 1741, although at that date it had no buildings on the platform. At the site of Waltham Hall (EHCR 4561), south of Molehill Green, now scheduled cropmarks indicate the plan of the rectangular moat and associated field boundaries and track. There are further cropmark examples south of Rickling Green (EHCR 18894), High Easter (EHCR 1074-5), High Roding (EHCR 1052), and, south of Good Easter (EHCR 911), the site of Paslowes. At the latter, cropmarks of the approach road were also visible, together with linear features within the moat, the remains of a World War II searchlight emplacement.

Many of the former field boundaries visible as cropmarks on aerial photographs of the area mapped over the year are depicted on the OS 1st edition 6 inch sheets of the 1880s, and so have not been recorded on the NMP map overlays. Loss of boundaries since the late 19th century appears to have been particularly dense in the areas around the Easters and Rodings. However, there also appears to have been considerable enlargement of field size prior to that date to both the north and south of the A120, e.g. at Little Canfield. EHCR 18877 and 18884 are patterns of small fields and trackways that survive only as buried features.

Airfields have been the main feature of World War II date recorded from aerial photographs in this area (the project does not plot roofed buildings), with the examples at Wethersfield (EHCR 16658), Debden (EHCR 16539), Great Saling (EHCR 14090), Great Dunmow (EHCR 14070) and Great Sampford (EHCR 16569). One anti-aircraft battery has also been recorded at Molehill Green (EHCR 18888).

Brentwood Historic Settlements Survey
Maria Medlycott
Brentwood Borough Council commissioned the Heritage Conservation Group to undertake an assessment of the principal historic settlements of Brentwood Borough, using the methodology adopted by the Historic Towns Survey. Ten historic

settlements are currently being assessed: Blackmore, Fryerning, Ingatestone, Kelvedon Hatch, Great Warley, Hutton, Mountnessing, South Weald, Stondon Massey, and Herongate and Ingrave.

Monuments Protection Programme
Sue Tyler
The Additional Scheduling Project was funded for only a relatively short period of four months during 2000. Nonetheless a number of sites were visited and are currently in the process of being scheduled. The Programme is continuing to bear fruit with 18 new monuments added to the Essex Schedule since March of last year.

Recently notified scheduled sites include several coastal fish weirs; these are situated within the Chelmer/Blackwater estuary and include an example sited off Sales Point, Bradwell close to the Saxon chapel and former monastery of St. Peter's, Othona. Radiocarbon dating of the timbers shows it to belong to the middle Saxon period and it may be associated with the former monastery.

The scheduled World War II gunsites include a particularly fine example at Lippitt's Hill on the Essex/Hertfordshire border. This battery is of particular historical importance as it was manned by American troops under the command of Major M.F.J. Emanuel, and in March 1944, Battery B, 184th Anti-Aircraft Artillery, equipped with Mark 1 90mm guns, became the first American crew to fire in the defence of London.

The two categories of monument visited and assessed for scheduling during 2000 were ruined and redundant medieval churches and World War II bombing decoys. So far scheduling proposals for four medieval churches and three World War II bombing decoys have been drawn up and forwarded to English Heritage's Scheduling Section.

The surviving remains of the bombing decoys include the brick and concrete control bunkers generally comprising two rooms, one housing the military personnel controlling the ignition of the decoy lights and fires, and the other the generator needed to power the lights and ignition switchgear. These have been found to survive well at Kirby-le-Soken, Wix and at Nazeing. The first two are naval decoys controlling a whole array of lights and decoy fires designed to draw German bombers away from naval installations at Harwich and Wrabness; the third, at Nazeing, was an airfield decoy designed to replicate the airfield at North Weald some four miles to the east.

A number of churches and bombing decoys still await assessment and it is hoped that further funding will be forthcoming from English Heritage in order to continue this important work next year.

The Stour Valley Project

D. Strachan, N. Brown and D. Knopp

A remarkable cropmark landscape is known to exist in the Stour valley, comprising numerous barrow cemeteries and other monument complexes, which include concentric ring-ditches, long mortuary enclosures/long barrows, and cursus monuments. Many of the monuments are difficult to accommodate within traditional classificatory schemes. In addition there are a numerous cropmark field-systems. Despite the long-standing regional co-operation and co-ordination between local authority archaeologists in the eastern counties, the perception of the archaeology of the Stour valley as an integrated whole has been hampered by its status as a border zone between two County Councils. Throughout much of the valley, management for the maintenance and enhancement of landscape value and nature conservation is well established; by contrast appreciation and management of the considerable archaeological resource in the valley has lagged behind. The proposal for the Stour Valley Project arose from preparation of the Eastern Counties Regional Research Framework (Glazebrook 1997; Brown and Glazebrook 2000). The work of the National Mapping Programme formed the foundation of the cropmark synthesis, whilst the English Heritage funded Monuments at Risk Survey (MARS) had identified cultivation as the single biggest hazard

Fig. 3   The cursus at Bures St. Mary (the hatched area showing gravel extraction) and a linear and nucleated cemetery at Mount Bures to the south of the river. Both the cursus and the linear element of the barrow cemetery 'cut-off, or enclose, meanders in the river by their position, running along the 20m contour. (Reproduced by permission of Ordnance Survey. © Crown copyright).
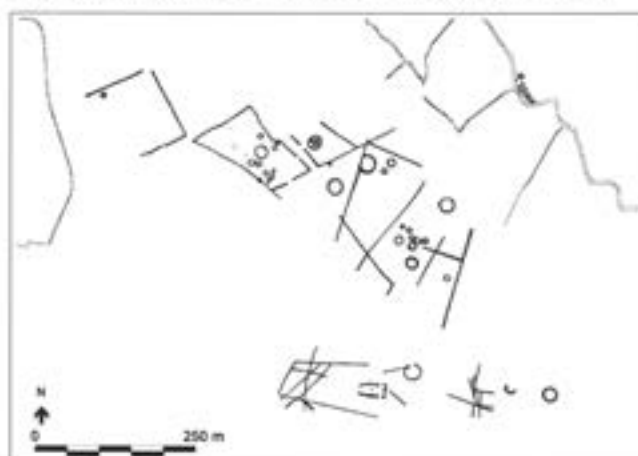
Fig. 4   A series of ring-ditch groups to the east of Dedham, parts of which appear enclosed by a rectilinear system which includes a trackway. (Reproduced by permission of Ordnance Survey. © Crown copyright).

Fig. 2   The location of the river Stour running between Essex and Suffolk, and in relation to London and the East Anglian counties. Parts of the study area lie within the Suffolk Rivers Environmentally Sensitive Area (ESA) and the Dedham Vale Area of Outstanding Natural Beauty (AONB). The area also includes two Sites of Special Scientific Interest (SSSI). Management of the cropmark landscape is one of the long-term aims of the project.

Fig. 5   A series of ring-ditches at Higham, which includes both examples where ring-ditches are cut by subsequent linear features, and the suggested pond barrow (to the bottom of the frame) which is respected by a staggered field boundary. (Reproduced by permission of Ordnance Survey. © Crown copyright).

Plate 3. An oblique image of a nucleated barrow cemetery appearing as a cropmark complex at Cavendish, Suffolk. The site includes a long mortuary enclosure and several ring-ditches, including two dual concentric examples, and is situated on a meander of the river. The photograph was taken in June 1996 (photo: D.Strachan. © Essex County Council).

Fig. 6 Stour Valley Project. The rectified version of Plate 3 imported into GIS and viewed with 5m contours. The interpreted cropmark plot of the barrow cemetery is shown, while the local geology and rectilinear landscape plots are present but not visible. The Drift Geology layer is also inactive. (Reproduced by permission of Ordnance Survey. © Crown copyright).
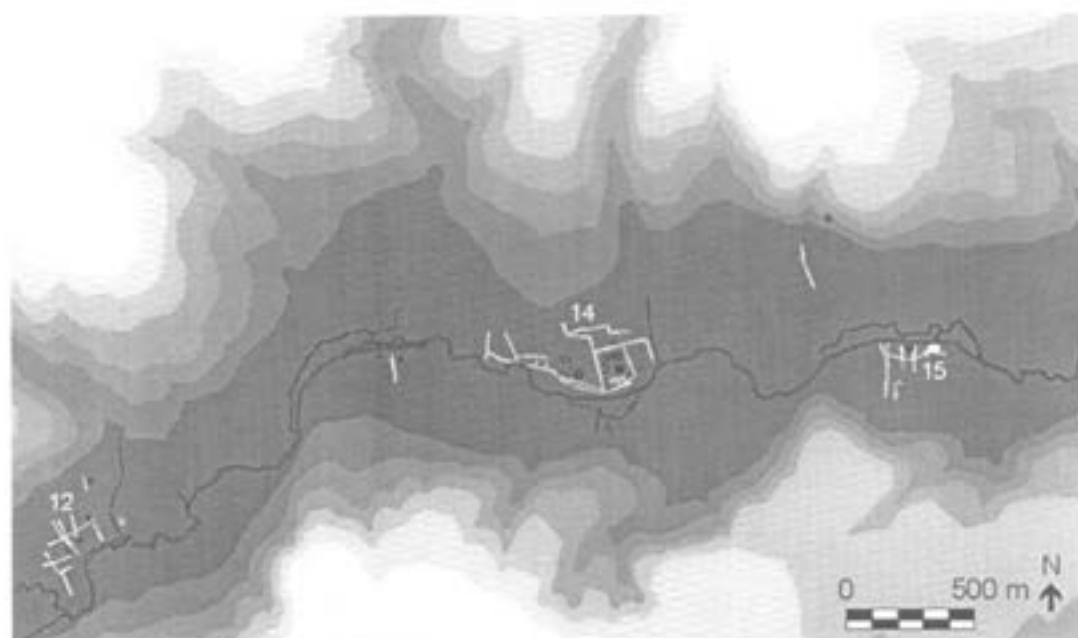
Fig. 7   Stour Valley Project. The Cavendish complex viewed with neighbouring sites, including a complex at 12, along with the 5m contours, the river, and the rectilinear landscape. (Reproduced by permission of Ordnance Survey. © Crown copyright).
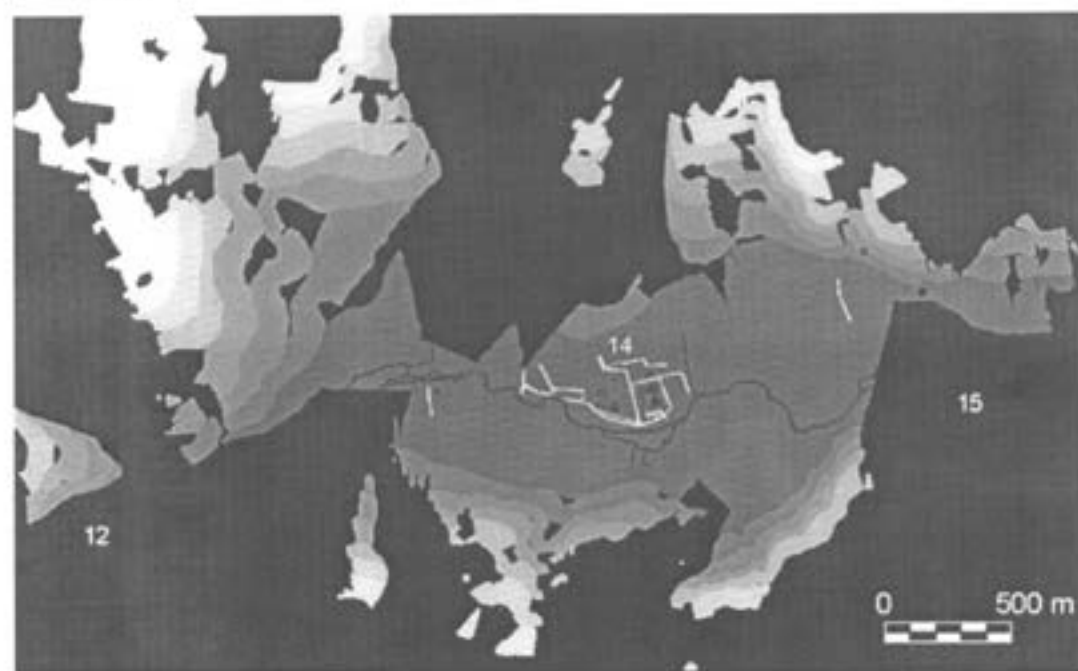
Fig. 8   Stour Valley Project. As per Fig. 7, but including view-shed analysis from a position 3m above a central ring-ditch in the Cavendish complex. The black areas indicate where visibility from that point is obscured by terrain, including the complex at A. Other sites are shown to be inter-visible. (Reproduced by permission of Ordnance Survey. © Crown copyright).

facing archaeological monuments (Darvill and Fulton 1998).

The project was designed to provide a synthesis and interpretation of the existing cropmark data. This was intended as the first step towards developing a collective approach involving all those with an interest in the archaeology of the Stour valley, in a longer-term programme to enhance understanding and management of the cropmark

landscape. English Heritage agreed to fund the work as part of the implementation of MARS.

An initial stage of the project aimed to prepare a synthesis and interpretation of the existing air photographic evidence, in a GIS environment. This offers the opportunity to develop enhanced understanding of the monument types represented, of the nature of the monument complexes and their relationship to one another, of the cropmark field

systems, the river, and the topography of the valley. The GIS database can be used as an important tool to inform and promote better management of the cropmark landscape, Figs. 3-8 and Plate 3 provide examples of some of the uses to which this information can be put. It is anticipated that an account of this first stage will appear in the journal *Landscape History*, and it is hoped that later stages of the project will involve work to improve understanding and management of the cropmark landscape of the Stour valley.

Greater Thames Estuary Survey; Essex

Ellen Heppell and Nigel Brown

During the 1980s the Hullbridge Survey project (Wilkinson and Murphy 1995) surveyed a large part of the Essex coast. This work concentrated largely, but not entirely, on extensive areas of prehistoric land surface and associated deposits now preserved within the intertidal zone. Following publication of *England's Coastal Heritage* (Fulford *et al* 1997) and a *Regional Archaeological Research Framework for the Greater Thames Estuary* (Williams and Brown 1999), additional survey was undertaken in the summer of 2000, funded by English Heritage.

This work was aimed at surveying areas not examined by the Hullbridge Survey and likely to yield Roman, Saxon, Medieval and Post-Medieval sites and deposits. Three areas were surveyed: Pyefleet and Strood channels at Mersea, Benfleet and Holehaven creeks at Canvey, and the creeks around the southern part of Foulness and neighbouring islands. In each case the survey team consisted of staff from the Field Archaeology Unit and volunteers from local archaeology groups and/or other interested parties, whose involvement was vital to the success of the project.

Field survey was carried out by walking along the sea wall and/or the edge of the salt marsh looking for any traces of archaeological remains. When such remains were identified a basic written and photographic record was made. Sites were located using GPS (Global Positioning System).

The results of the survey so far have been very encouraging. On Foulness wharves and jetties have been found, along with sections of relict sea wall and oyster pits. In the Mersea area, a number of wrecks were recorded along with earthworks, oyster pits and layings. On Canvey and along the associated creeks, earthworks and hards were recorded. A total of 264 archaeological features were recorded, 96% of which had not previously been recorded on the Essex Heritage and Conservation Record. An assessment report is currently in preparation and a full summary will appear in next year's *Essex Archaeology and History*.

Survey of modern archaeological and architectural remains

Shane Gould

The project was launched in 1994 in order to identify, record, protect and manage the County's rich and diverse 'industrial' heritage. Since its inception the parameters have been widened to consider all material aspects of past human activity from the period 1750 to date. This not only includes industrial sites, but also those relating to communications, housing, welfare, and leisure, retail and religious activities.

In the past six years 731 sites have been added to the EHCR as a result of the project. With the completion of extensive surveys of Essex maltings, World War I and II airfields, lime kilns, historic boundary markers, iron foundries, workhouses, Essex hospitals and the radio electronics industry in Chelmsford, a further report has been produced on the public water supply industry. These are all available for public consultation at the EHCR, Essex Records Office or National Monument Record Centre, Swindon. Similar surveys are now underway for brick and tile works, the archaeology of the Chelmer and Blackwater Navigation, and textile mills. Once an assessment of all the surviving monuments of a given type have been completed, informed policies can be implemented on their importance, protection and ultimately, preservation.

Intensive site surveys continue to be undertaken within the planning framework in order to inform future schemes of re-use or to make a permanent record of those elements that will be destroyed. These are available for public consultation from the repositories listed above, but it is hoped to publish those that are of exceptional interest in future issues of *Essex Archaeology and History* or *Industrial Archaeology Review*.

The following survey reports were received during 2000: Great Saling Hall Farm, Great Saling (EHCR 19055); Epping Union Workhouse, Epping Forest (EHCR 15377); former Adams Brewery, Halstead (EHCR 15051); Crockleford Heath Methodist Chapel, Elmstead (EHCR 19228).

The Essex Water Supply Industry

The archaeological remains of the public water supply industry are currently being assessed by English Heritage as part of their Monuments Protection Programme. The aim is to afford statutory protection, through either listing or scheduling, of a representative sample which reflects the full chronological and technological range of each industry. In the absence of a reliable database and in order to inform this process, Tony Crosby (an independent industrial archaeologist) identified 57 sites with potentially significant upstanding remains. These include water towers, pumping

Plate 4. Tiptree pumping station.

stations, service reservoirs and treatment works for both water supply and sewage.

The first Essex waterworks was established at Colchester in 1808 and following the Public Health Act of 1848, Local Boards of Health were also created in Chelmsford, Halstead and Braintree. At Colchester, only the 1893/4 neo-classical pump house survives (EHCR 15571) and this utilised steam power to transfer water to the brick-built tower on Balkerne Hill (EHCR 15600). Commonly known as 'Jumbo', the 105ft structure is of monumental proportions and forms a major landscape feature. Although there was an initial tendency for waterworks to serve a single urban centre, four companies developed during the late 19th century to supply a much wider geographical area. The Langford Waterworks (EHCR 8014) was opened in 1927 taking water from the rivers Chelmer and Blackwater at Langford Mill. Currently leased by the Museum of Power, the site retains a 1931 steam-driven triple expansion rotative pumping engine supplied by the Lilleshall Co. of Oakengates, Shropshire. These represent the last generation prime mover in water extraction and only six sets survive nationally.

Increased demand and the growing need to supply rural areas during the inter-war period led to the development of several sites on the Essex/Suffolk boarder by the South Essex Waterworks Company. The complex at Langham (EHCR 15588) beside the River Stour includes a covered reservoir, pumping station, treatment plant and workers' housing. Interestingly, this site together with those at Layer-de-la-Haye (EHCR 15589), Tiptree (EHCR 15587;

Plate 5. Concrete water tower, Cherry Garden Road, Maldon.

Plate 4) and Abberton (EHCR 15590) display a coherent company image based on the International Modern Movement style with white concrete walls, flat roofs, tall metal-framed windows and the use of glass blocks. The planting around the buildings almost certainly formed part of the original scheme.

Essex also retains a large number of water towers dating from the late 19th century to the present day. The Gothic tower in Epping High Street (EHCR 15008) was erected in 1872 and reflects the confidence of the water company in its clean, new and reliable product. The example at Balkerne Hill, Colchester (EHCR 15600) has already been mentioned, but the attractive campanile-style tower with its exposed iron tank can also been seen at Wivenhoe (EHCR 15601), Rowhedge (EHCR 15602),

West Mersea (EHCR 15603) and Bocking (EHCR 15604). With the introduction of concrete in the 1930s a uniform style begins to emerge with a circular tank, central shaft and surrounding columns. The structure at Cherry Garden Road, Maldon (EHCR 15607; Plate 5) demonstrates how this palette can be used to produce an interesting and attractive structure. Many of these towers are now disused and although some of the larger examples have been successfully converted into flats, the only practical use for the majority is as an anchor for radio masts. A detailed study of the results, *The public water supply industry in Essex 1850-1939* (report no. 12 in Essex County Council's Comparative Survey of Modern Archaeological/ Architectural Remains in Essex) has been prepared by Tony Crosby.

World War Two Defences in Essex Project

Fred Nash

Following the evacuations from Dunkirk in May and June 1940, a hectic programme of defence construction was put in hand to buttress all the vulnerable stretches of south-east England against an expected German invasion. With its relatively easy routes to both London and the industrial Midlands, Essex was a prime target. If Southend-on-Sea, at the mouth of the Thames, were to be taken, the roads built in the 1930s, to carry holidaymakers from London, would prove ideal for carrying the Panzer divisions westwards.

Southend therefore became the most heavily defended area of the county. Ex-naval guns pointed out across the estuary, concrete and barbed wire sealed off the beach, pillboxes covered the road junctions and steel barriers closed all access routes into the town. Surviving records paint a picture of the density of Southend's wartime fortifications and, sixty years later, the World War Two Defences in Essex Project has been unearthing this important part of the Borough's history. Over 180 sites have been rediscovered, of which around 20 still survive. The great majority were cleared away almost immediately the war ended, in some cases over a year before the end.

It is known that an almost continuous chain of concrete anti-tank blocks lined the promenade, over 3 miles long (Plate 6). Aerial photographs taken in May 1946 show remaining stretches of this barrier at places as far apart as Chalkwell, Westcliff, Southchurch and Thorpe Bay. Preserved as a permanent monument, two of these massive blocks, each measuring 5ft x 5ft x 7ft high still survive (Plate 7).

Shoeburyness Old Ranges, until recently a coastal artillery testing and training establishment, was formed in 1849 and was in continual use for well

Plate 6. This wartime photograph shows some of the anti-tank blocks along the seafront at Southend. It is dated 28 October 1944, and the typed caption reads: 'Removing barbed wire, used for defensive purposes in Southend'. The last two words have been crossed out by the censor. (Southend Museums Service).

Plate 7. A quarter-of-a-mile east of the Kursaal, two of the anti-tank blocks still survive. A commemorative plaque erected by the Borough Council reads 'County Borough of Southend-on-Sea. On the threat of invasion by the German forces in 1940, 1,804 of these concrete blocks were constructed on this sea front, as part of the coastal defences'.

over 100 years until its active military life ended during the 1970s. Throughout this period a wide variety of coastal artillery training weapons were emplaced. However, the advent of two world wars gave its location at the mouth of the Thames special importance and during both conflicts the standing artillery school weapons were augmented with a battery of 6-inch naval guns to protect against a seaborne invasion.

Set in concrete casemates, the World War Two guns had a range of seven miles across the estuary. They were controlled from a Battery Observation Post and, for night-time illumination of enemy warships trying to slip up the river, they were twinned with coastal artillery searchlights in

bunkers on the flanks of the battery. Although the gun casemates and Battery Observation Post have long since been demolished, two of the searchlight emplacements still stand in good condition - rare survivors of their type (Plate 8).

In the course of the survey, visits to the Public Record Office at Kew have resulted in the discovery of contemporary documentation detailing the layout of Old Ranges as it stood in 1943, together with the gun and searchlight specifications and a 'History of Works' covering the development of the battery. This find has enabled the project to historically document the site's WWII defences, both extant and demolished. Copies of the documentation have been lodged with Southend Central Museum to provide a valuable archive of Shoeburyness Garrison in World War Two and its role in the country's defence.

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Plate 8. Two coastal artillery searchlight emplacements still survey the estuary from the foreshore at Old Ranges, Shoeburyness. Sited to illuminate night-time raiders, they had a range, in average visibility, of two miles.

Book reviews

The Essex Landscape. A study of its form and history, by John Hunter. Pp. x + 210. 78 illustrations, including five in colour; endpaper maps. Essex Record Office publication no. 140. 1999. Case bound. 243mm x 178mm. Price £16.95.

The history of the English landscape was vigorously promoted in the 1950s by W.G. Hoskins, both in his own writings and in the county series which he edited. He then defined the purpose of landscape history as continuing and completing the work of the geologist.

> The geologist ... explains the bones of the landscape, the structure that produces a certain kind of topography and ... vegetation. But the flesh that covers the bones, and the details of the features, are the concern of the historical geographer, whose task it is to show how man has clothed the geological skeleton ... mostly within the last fifteen centuries. [Editor's introduction to R. Millward, *Lancashire*, 1955]

It will be noticed that Hoskins here refers to the writer of landscape history as 'the historical geographer'. That is a proper description, and it should be added that historical geography, defined as 'the reconstruction of past geographies', was already well established by 1936, when Clifford Darby and his colleagues published *A Historical Geography of England before 1800*. 'Landscape history' is, in fact, a new (and less intimidating) name for historical geography.

In later years Hoskins' view of landscape history was widened. He wrote in 1970:

> I now believe that some features in our landscape today owe their origin to a much more distant past than I had formerly thought possible ... that in some ...parts of England farming has gone on in an unbroken continuity since the Iron Age, perhaps ever since the Bronze Age ... We have so far failed to find the continuity ... because sites have been built upon over and over again, and have never been cleared and examined by trained archaeologists. [Editor's introduction to N. Scarfe, *The Suffolk Landscape*, 1970].

The value of archaeologists, in assisting landscape historians, has been amply demonstrated during the past thirty years. Their skills, while essential for prehistory, must also be taken into account in studying later periods. So must advances in geology, place-name studies, forestry, botany (e.g. in hedge-dating), and other sciences. All this makes it increasingly difficult for one person alone to write the landscape history of a large county or region.

John Hunter has not shirked the 'toil and moil' required for such a task. This is a substantial and thoughtful book with an even wider view of the subject than that of Hoskins. It is confined to the administrative county of Essex as it was from 1965 to 1998. It thus includes Thurrock and Southend, but not 'Metropolitan Essex', the area extending from the river Lea east to Havering and north-east to Chingford, which now comprises five Greater London Boroughs. That area contains not only a variety of urban development but, from earlier periods, such notable features as Hainault Forest and Dagenham Breach. Fortunately it has been covered by recent volumes of *V.C.H. Essex*.

The Essex Landscape is well presented, with an attractive dust cover by Keith Mirams, and good line drawings. Some of the half-tone illustrations are disappointing (e.g. Dedham Vale, page x). The colour illustrations, though well produced, might have been better selected, for only one is a landscape view.

The book opens with two chapters on the geology and landscape of the county, its regions and sub-regions; the general reader may find these heavy going. Chapter III 'Emerging Landscapes', relates to the Neolithic, Bronze and Iron Ages. In Chapter IV, 'Roman Essex', there is interesting new information on villa estates; but it may be thought that too much space is devoted to well-known political events not directly related to the landscape. Chapter V, 'The Saxon Kingdom', quotes a study of the Rodings to support the theory that 'shared place-names [suggest] the existence of huge estates in the early and middle Saxon periods.' In view of the meagre documentary evidence for Saxon Essex this must be regarded as controversial. Chapters VI and VII relate to the 11th and early 12th centuries, and are based mainly on Domesday Book and its interpreters. They provide a good summary, which, however, could be improved. The map of the

hundreds (p.72) omits the Domesday hundred of Colchester, and the half hundreds of Thunderlow and Maldon.

The section on the building of Colchester Castle (p.84) needs to be reconsidered in the light of *V.C.H. Essex* vol. IX, 241-2. Mr Hunter does not discuss the problems of identifying early place-names, a subject obviously crucial in landscape history. J.H. Round (to whose edition of the Essex Domesday he rightly pays tribute), and P.H. Reaney were pioneers in this difficult field. Further work has been done by *V.C.H. Essex*, and in several recent articles in *Essex Archaeology and History* as well as in *Essex in Domesday Book*, which Mr Hunter mentions. Place-name identification involves not only locating 'lost' names, but in interpreting ambiguous names and those, deceptively obvious, which now have a wider, or narrower, meaning than in earlier periods.

Chapter VII includes a section on the Essex forests. The accompanying map, taken from Rackham, needs a date, since the legal extent of the forests varied considerably during the 12th and 13th centuries. Chapters VIII and IX provide a useful and readable account of the Middle Ages. The map of the medieval towns (92) rightly includes Hatfield Broad Oak, and this might usefully have been supported by a reference in the text to the history of this place in *V.C.H. Essex*, Volume VIII.

The later Chapters, X-XIII, deal succinctly with the past 500 years. In discussing the Tudor landscape it would have been worth using the topographical introduction to John Norden's *Description of Essex* (1594). Chapter XII includes a good account of the plotland development in south-east Essex during the early 20th century. But it is surprising to find that the writer dismissed Harlow and Basildon New Towns: 'here we are concerned with landscape, not townscape'! Chapter XIII, on the contemporary landscape, benefits from John Hunter's personal knowledge. Until his retirement in 1996 he was for many years Essex's Assistant County Planner responsible for environmental services, and was thus well-placed to summarize the contribution made by the County Council in protecting and improving the landscape. He pays tribute to the county's archaeological section, established in 1972, whose work enriched this book.

The bibliography in *The Essex Landscape* consists mainly of publications appearing in the last twenty years. While it is, of course, essential to keep abreast of recent research, it would have been helpful, also, to make more use of earlier sources noted in the *V.C.H. Essex Bibliographies* of 1959 and 1987, particularly in the sections on Forests, Geography and Geology, Guides and Directories, and Topography in Part I, and also in the Individual Places in Part III. The balance of the book might have been improved if more space had been devoted

to the past 500 years, and less to geology and prehistory.

The well-constructed index, by Beryl Board, would have been even better if it had been prefaced by a note listing the subject entries in it, which can only be identified by trawling through the whole alphabet. The reader might well expect to find entries for: abbeys, agriculture, buildings, industries and woodland, but without guidance would be unlikely to seek out : ...apple..., bison, or elephants.

W.R. Powell

The Archaeology of Ardleigh, Essex: Excavations 1955-1980, by N.R. Brown. East Anglian Archaeology no. 90, 1999. Published by Essex County Council Heritage Conservation. ISBN 1 85281 164 1.

Ever since Erith and Longworth's classic *Proceedings of the Prehistoric Society* article published in 1960, it has been impossible to consider the Later Bronze Age without reference to Ardleigh. Felix Erith, the excavator, was a local farmer while Ian Longworth was a young research student at Cambridge. The article had less than five pages of text and eight figures. Now at last we have a fuller story of this classic site in its wider context published in this handsomely produced 195-page monograph. Written by Nigel Brown with fourteen specialist contributors, it continues the high standards we have come to expect from the Heritage Conservation Branch of Essex County Council's East Anglian Archaeology volumes.

This volume is far more than an excavation report. It is a narrative tracking the development of British archaeology over some fifty years as exemplified in a small tract of Essex landscape north-east of Colchester. We see Felix Erith following a newly introduced mechanised plough, finding pots, digging and publishing them in the 1950s and 1960s. We see the professionals wringing their hands at the 'great weaknesses of British archaeology' at the time. We see detailed plotting of air photographs in the 1970s leading to the scheduling of the site as an Ancient Monument in 1976. The ensuing Central Excavation Unit's Ardleigh project should have been a model landscape project. For reasons not clear in the report, the project fell apart both in the field ('little can now be said about objectives B and C of the original research design') and more significantly during the post-excavation stage. Fortunately Professor Grahame Clark's 1956 comment to Felix Erith, 'we so badly need a regionally organised archaeological service', was up and running in Essex by 1972 in the form of the Archaeology Section of the Essex County Council. Work began by them on the present monograph in 1995.

Although the key element of the report is the excavation and analysis of the Later Bronze Age urn

cemetery, the site spans time from the Neolithic to the Saxon period, with a major section on Roman activity, including perhaps the largest collection of properly provenanced rectangular chalcedony beads from north-west Europe. Although at first one may skim over the detailed descriptions and drawings of 185 Ardleigh style pots from the site itself and the wider area of north-east Essex, these 41 pages put this volume alongside David Clark's *Beaker Pottery* and Ian Longworth's *Collared Urns* as a work of reference which will stand the test of time.

The excavation and finds reports show that the surviving archaeological record is largely based on burials and boundaries, so these are the themes taken up in the concluding discussion. The nature of Neolithic activity at Ardleigh remains fragmentary and perplexing: a few fragments of pottery, a flint axe, a couple of greenstone axes. The first burials are probably associated with a couple of Beakers although no bone survived in the acid gravel. This may have already helped define the area propitious for extensive burial activity in the Later Bronze Age. Later Bronze Age burial was almost certainly not the simple process of death, cremation, burial of cremated remains in a pot. Everything was more complex. Sites were carefully selected within groups of ancestral mounds clustered in groups, perhaps of kin. It is suggested the deposition of cremated remains at Ardleigh may have followed a lengthy liminal period. Erith originally suggested that silt in the burial pits may indicate their excavation well before burial. Multiple burials, a feature of Ardleigh, suggest bodies may have been subject to storage, temporary burial or excarnation before cremation and final disposal. The pots come to life in the discussion aided by reconstructions (fig. 106) and even experimental 'bucket' burials (plate XXXIX).

Land divisions start in the Later Bronze Age Ardleigh but come into their own in the Iron Age and Roman periods. The Iron Age also sees the first certain settlement evidence with a substantial enclosed roundhouse. It was set in a ditched landscape developed in the Romano-British period when Ardleigh was a 'fairly mundane farming community'. The Saxon evidence, like the Neolithic, is slight.

This is a first rate data report, made more valuable by an informed and up to date discussion bringing in current theory but being led by the data recovered. Much is hung on the excellent illustrations largely produced in-house by Essex County Council Archaeology Section's Graphics Group. Although the future of archaeological publication is in a state of flux, this is a model to be used until we are certain new approaches to publication and technologies can truly deliver.

Peter Drewett

Public Spirit: Dissent in Witham and Essex 1500-1700, by Janet Gyford, illustrated by Ray Brown. Published by the author. 216 pages. ISBN 0 946434 03 4. £10.

This is the second of Janet Gyford's books on the history of Witham between 1500 and 1700, the first being *Witham 1500-1700: Making a Living*. Together they provide a comprehensive history of the 16th and 17th century town. Both books are the fruit of many years of research into Witham, and the range of sources used is impressive. Not only has Essex Record Office material, including the Quarter Sessions Records, the wills, and the parish records, been exhaustively searched, but material from the Public Record Office, the Guildhall Library and the House of Lords Record Office, has been extensively used. The result is a detailed and fascinating account of the men and women who lived and worshipped in Witham between 1500 and 1700. At times the material is so detailed as to become almost overwhelming, and it might have been helpful to repeat in this volume some of the family trees printed in *Making a Living*.

Although this volume does chart the history of religious dissent from the reign of Henry VIII to that of William III, it does much more than that. It discusses and explains the government of church and parish (at that time a unit of civil as well as ecclesiastical government), details the involvement of Witham men in the running of Witham half hundred and investigates the role of the local magistrates (usually gentry from nearby parishes) in Witham. The book covers some of the most complex and turbulent periods of English history, and the introductory paragraphs to each chapter explain the political and religious background to the events described and discuss the sources used to reconstruct them. The reader's attention is drawn to current debates and controversies and Witham is compared to the neighbouring parishes, notably Terling, for which modern studies are available. Wills are used to throw light on the beliefs and the literacy of 16th century parishioners. Their use for this purpose has been questioned by some scholars, but the evidence Janet Gyford has found for the scribes and the unusual phrasing of some wills, notably Dame Katherine Barnardiston's, suggests convincingly that in Witham the method is valid. Wills and the value of goods at probate provide an indication of the wealth and social standing, particularly of 16th century men and women. The ship money assessment of 1636 and the hearth tax assessment of 1673 are used as evidence of the wealth and standing of their 17th century successors. The records of the church courts, a difficult source if only because of the hand in which they are written, have been used to provide evidence of some of the 'godly' activities of Witham

churchwardens and other officials in the late 16th century and the early 17th.

Some of the inhabitants of Witham inclined to Protestantism as early as Henry VIII's reign, and puritanism seems to have been strong in Elizabeth's, although it was presumably discouraged by the pluralist Vicar John Sterne (1587-1608). The activities of Francis Wright (Vicar 1625-43 and 1660-68) who was accused of drunkenness and immorality, may well have contributed to the growth in the numbers of Quakers and Independents after 1660. His offences may, of course, have been exaggerated by his opponents; it is strange that he was accused both of the puritan practice of refusing to wear the surplice and of the catholic belief in transubstantiation. As elsewhere in Essex, many of the dissenters were yeomen or minor gentry. It is interesting that even the Quakers were able to act as parish officers in the 1660s and 1670s.

The very full footnotes give the supporting evidence for every statement; there is a full bibliography, and a detailed index. The book is beautifully produced, the illustrations breaking up the text and making it less intimidating for the non-specialist reader.

The book will be fascinating to anyone interested in the history of Witham, and the details of the local topography will be particularly useful to those who live in the town, but the professional historian too will find a great deal to ponder in the book. All in all it is a splendid addition to the books of Essex local history.

Janet Cooper

Five Miles from Everywhere: The Story of Nazeing, Part 1, by David Pracy, John Garbutt & Colin Dauris, pp193. Nazeing: Nazeing History Workshop. ISBN 0 953 7135 04. £10

The Nazeing History Workshop have produced a history of the village they know and have made their home up to the brink of Armageddon in 1914. It is a thoughtful, measured and scrupulous volume. If there is a disappointment, it is their reluctance to relate the particular events of Nazeing to the wider debates and unresolved issues of national developments on which micro-studies can shed such useful light.

The writers certainly know their English history and make good use of a wide range of local history sources, progressing the story of the 'people of the headland' (probable meaning of Nazeing) through a Middle Saxon nunnery to the establishment of Waltham Abbey which owned the Nazeing lands and established a deer park there. From field names and parish records the authors reconstruct the medieval landscape and the consolidation of Nazeingwood Common. The Black Death and the Dissolution both left their marks, the latter seeing the great abbey

come into the hands of Sir Anthony Denny, a royal favourite. After the Dennys there were Hays and Gorings, but Nazeing became a Puritan stronghold before the Civil War, a dissenting determination which led to the excommunication of the Vicar and a large percentage of his congregation in 1663. Nonconformity went underground but re-surfaced after the Toleration Act as a Congregational Chapel and a large Baptist congregation. For three generations Nazeing might be termed an open village, certainly one without clerical or seigniorial leadership, though a workhouse was opened in 1740.

This turbulent phase ended with the rise of two families, the Palmers and Burys, who were to dominate land ownership until 1914. Thus by 1831 Wright's Directory could describe Nazeing as 'A respectable little village'. Could Victorian authority bestow a more reassuring accolade? Some remarkable individuals emerge from this later narrative, notably from the Palmer pedigree, who might otherwise only sit framed in paintings and photographs. The railway and a new road coaxed Nazeing towards its most recent manifestation, a dormitory village. But that is another story. Expect a second volume on the 20th century before very long. Meanwhile, this is a first class book. Few villages in Essex have so fine a history.

Andrew Phillips

Essex bibliography. A bibliography of Essex archaeology and history at April 2001

compiled by A. Phillips and P. Sealey

Both monograph and periodical literature are included; articles published in journals which are devoted exclusively to Essex (e.g. *Essex Journal*) are not included. Items which have been overlooked in earlier bibliographies are added for completeness of coverage.

Badham, S. 1998 — 'Indents at Spalding, Lincolnshire and Waltham Abbey, Essex', *Transactions of the Monumental Brass Society* **16**, 139-

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Clark, F. R. 1998 — *The Romano-British Settlement at Little London, Chigwell,* Woodford Green.

Coles, B. J. 1998 — 'Wood species for wooden figurines: a glimpse of a pattern'. In A. M. Gibson & D. D. A. Simpson (eds.) *Prehistoric Ritual and Religion: Essays in Honour of Aubrey Burl,* Stroud, 163-73. [The *c*.2,250 BC Dagenham idol, like the other prehistoric wooden figurines from the British Isles with ambiguous sexuality, was carved from an evergreen conifer].

Cotter, J. P. 2000 — *Post-Roman Pottery from Excavations in Colchester, 1971-85,* Colchester: Colchester Archaeological Report No. 7.

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de Jersey, P. 2000 — 'Biga and better: Cunobelin's first gold', *Chris Rudd Celtic Coins Sales Catalogue* **54**, 2-3 [The earliest gold coins struck by Cunobelin at Colchester c.AD 10 (the biga series) are concentrated in north Essex and south Suffolk, and not in the Hertfordshire territory of his father, Tasciovanus].

Dövener, F. 2000 — *Die Gesichtskrüge der Römischen Nordwestprovinzen,* Oxford: British Archaeological Reports, International Series No. 870. [Study of Roman period pots with human faces on the neck which were produced at Colchester and elsewhere].

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Moore, P. 2000 'Tilbury Fort: a post-medieval fort and its inhabitants', *Post-Medieval Archaeology* **34**, 3-104.

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Sutherill, M. 1999 'John Hobcroft and James Essex at Audley End House', *Georgian Group Journal* **9**, 17-25.

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Williams, J. & Brown, N. R. (eds.) 1999 *An Archaeological Research Framework for the Greater Thames Estuary*, Chelmsford. [Includes the Essex coast].

Young, R. & Humphrey, J. 1999 'Flint use in England after the Bronze Age: time for a re-evaluation ?' *Proceedings of the Prehistoric Society* **65**, 231-42. [Section on Essex].m

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Atkinson, M. 1995	A Late Bronze Age enclosure at Broomfield, Chelmsford, *Essex Archaeology and History,* **26**, 1-23.
ERO	Essex Record Office.
Hawkes, C.F.C. and Crummy, P. 1995	*Camulodunum* 2, Colchester: Colchester Archaeological Report 11.
Medlycott, M., Bedwin, O. and Godbold, S. 1995	South Weald Camp - a probable Late Iron Age hill fort: excavations 1990, *Essex Archaeology and History,* **26**, 53-64.
RCHM Essex 1923	Royal Commission on Historical Monuments, *An inventory of the historical monuments in Essex. Vol. IV. South-east Essex,* London: HMSO.

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    c.120 BC

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