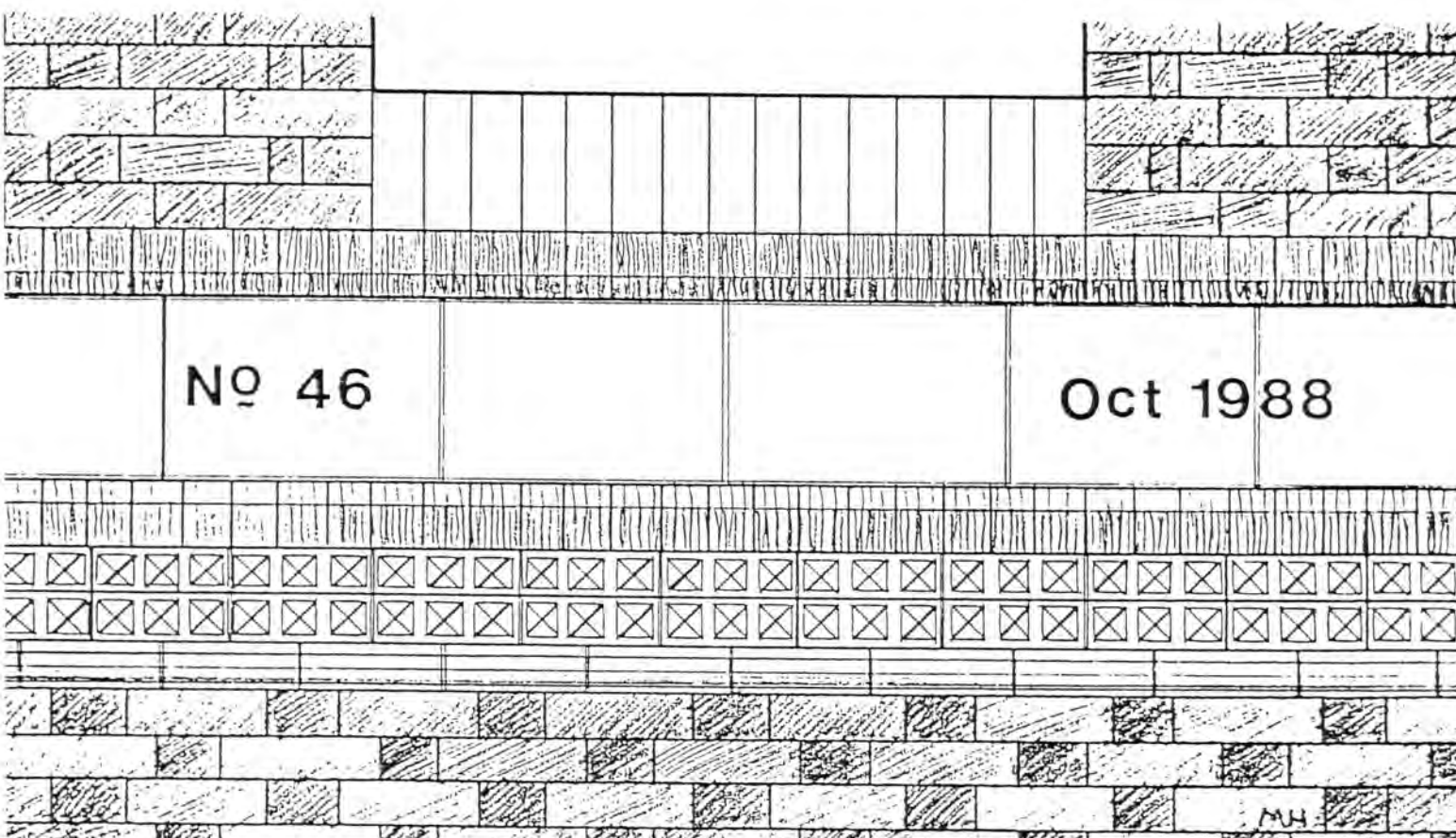




BRITISH
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SOCIETY

INFORMATION



No 46

Oct 1988

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BRITISH BRICK SOCIETY

INFORMATION 46

OCTOBER 1988

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Editorial: An Ill Wind

At time of writing it is exactly one year since the hurricane of 16-17 October 1987 swept through many parts of the country. Those of us living in the worse-hit areas will recall the great damage done, particularly to the trees including Sevenoaks' seven oaks. In Kent (and elsewhere) many roofs covered with the traditional peg-tiles were badly damaged, including those of the cast-houses at the well known Whitbread Hop Farm at Yalding, which lost 50% of their tiles. This has led to something of a revival in the craft of making these tiles, and Kent-based firms are being assisted by the County Council in this respect. It is to be hoped that this venture will be successful.

I should like to apologise for the late appearance of this issue of Information, which is entirely my responsibility. It is hoped that with the next issue we shall be back to our proper publication schedule.

Terence Paul Smith
Editor

LEICESTERSHIRE VISIT 1988

Mary Bentley

Normanton-on-Soar near Loughborough was the starting point for a full day of visits arranged to coincide with the Annual General Meeting of the British Brick Society on Saturday 18 June 1988.

Members and friends were taken on a guided Works Tour of Hathernware Ceramics Ltd. This company was established in 1874 and continues to produce handmade terracotta and faience products. Photographs, scale drawings, and the resulting complex moulds were seen, followed by the clay preparation area, moulding, and kilns. The packaging department showed the wide range of products made.

Lunch and the A.G.M. followed before we went on to Kirby Muxloe Castle (open to the public). Work on this brick-built castle started in 1480 and ceased in 1484 following the death of its owner, William Lord Hastings. It has remained uncompleted with the West Tower probably having been the only one to have been finished.

A brief visit to Groby Manor House (not open to the public) resulted in a useful contact being made with the present owner. The house was built by Thomas Grey but abandoned by him in about 1490, leaving it to be partly remodelled in the sixteenth century. Grey moved two miles away to his new house in Bradgate Park, which was to be the final visit of the day. The extensive remains of this early Tudor brick house are situated in its original park landscape. The park became a public open space in the early nineteenth century and now belongs to the City and County of Leicester so that all can enjoy the sight of deer and peacocks in beautiful surroundings. It was due to the kindness of one of the rangers on duty that members were enabled to visit the interior of the brick remains.

A very interesting and full day was enjoyed by all, and thanks go to Terence Smith and David Kennett for organisation, detailed notes, and a talk at each place of interest. Thanks also go to Michael Hammett for his rôle in co-ordinating all the events of the day.

SPRING VISIT TO EAST ANGLIA, 1988

Penny Berry

Saturday 14 May 1988 dawned fine and sunny as some three dozen members of the British Brick Society congregated in the Brewery Chapel Museum in Halstead. We enjoyed browsing round a splendid exhibition of locally made bricks, tiles, drainpipes, chimney pots, and the various moulds and tools used at brickworks in their production.

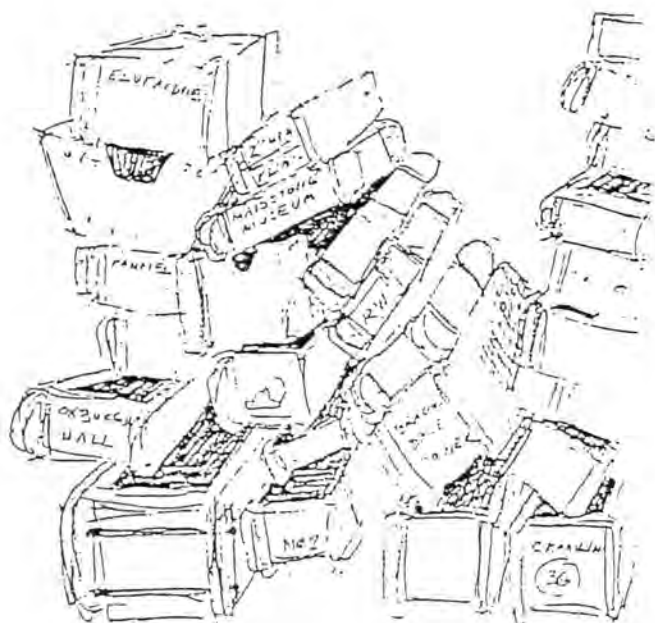
The exhibited photographs and documents gave fascinating glimpses into the many firms who produced bricks in this area, including the Corder family (Adrian Corder-Birch's ancestors) who ran the Southey Green Brick, Tile, and Pottery Works at Sicle Heddingham; Mark Gentry's Langthorne and Highfields Brickworks, well known in the area for the intricately moulded decorative bricks of a century ago; and George William English, who owned the brickworks at Hole Farm, Bulmer until 1920, after which it became the property of Laurence Minter and subsequently became the Bulmer Brick and Tile Company, owned as it is today by Peter Minter. It is, I believe, largely due to contributions of material and information by Adrian Corder-Birch and Peter Minter that we owed this special exhibition, which remained at the chapel until October.

After lunch and a stroll round the pleasant market town of Halstead we made our way to the Bulmer Brick and Tile Company, where

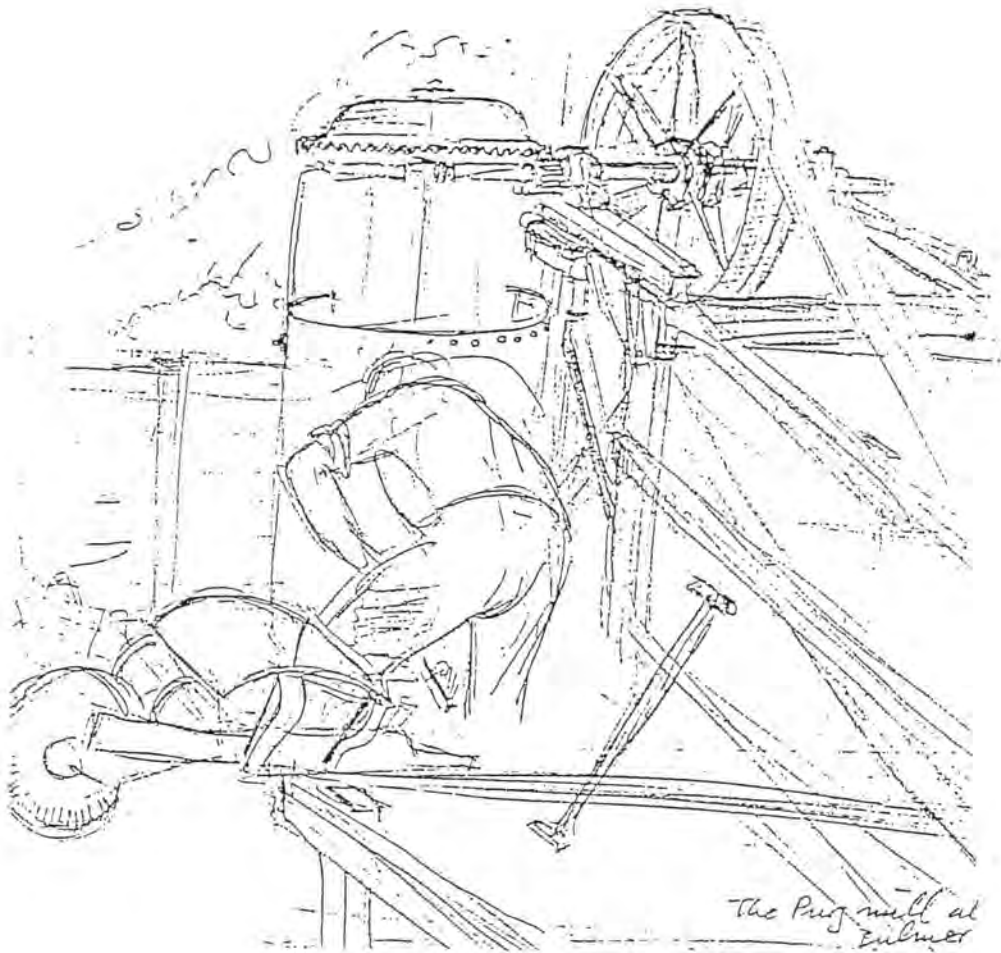
we were met by Peter Minter, who took us on a very comprehensive guided tour of his brickworks, which he runs with his sons, in tandem with the farm. London bed clay has been used for brickmaking on this site since early Tudor times, and it was Peter's father Laurence who started making bricks of special sizes needed to repair some of the older local houses. The clay there was also suitable for roof tiles and drainage pipes, and we saw water-filled holes near the main face of the claypit where the deeper 'blue' clay had been dug and used to make vast quantities of drainage pipes for the many wartime airfields in the area.

Nowadays the bulk of work produced is for special orders and when we entered the long

low buildings where these bricks are made and saw the stack of individually labelled wooden moulds stretching all the way along one side, we realised what a wide range of historic buildings the company has helped to restore. Peter sanded a large carved mould and threw a

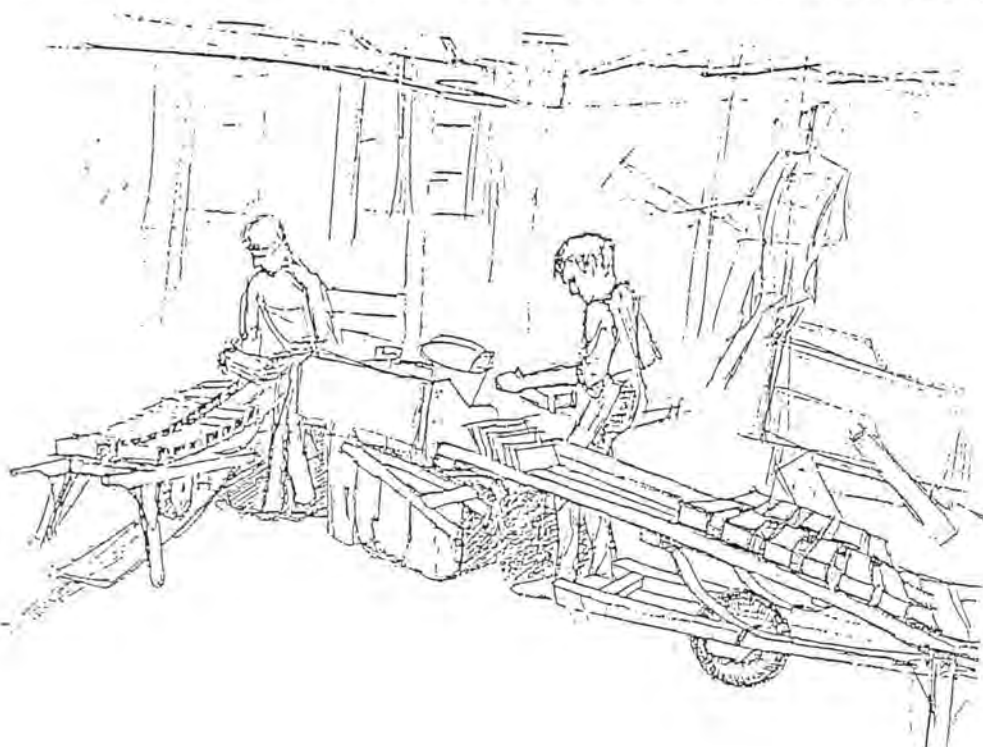


warp of clay into it; after tamping it down and trimming off the excess clay, he turned out a beautifully ornate brick onto a pallet. He explained that these large bricks needed a long slow drying time in order to prevent them from cracking and warping. As we followed him through the dimly lit shed past rows of ochre yellow brick laid



out to dry on the floor, he explained that the carved oak or pear wood bases of the moulds were detachable from the sides and that in the case of sectional chimney moulds, which had to follow a radius, wedges of wood were fitted at each side of the mould to create the taper, and these had to be removed before the clay could be turned out. We went out into the sunshine, passed a drying shed heated by coal fires when necessary, and came to the main brickmakers' tables, which are sheltered by a roof but mainly open at the sides to allow the makers to turn and steer their loaded barrows down the long rows of roofed hacks where the green bricks are laid out to dry in delightful zigzag patterns. A horizontal pugmill pushed out clay and one of Peter's makers showed us how the more standard bricks are made

using an alloy frame (mould) over a stock with adjustable height so that varying thicknesses of brick can be made. At the far end of the hacks we came to the smoke-stained, time-scarred circular downdraught kiln, built by Peter's father, and still capable of firing over 12,000 bricks during a single firing. Its seven coal-fired hearths round the outer circumference are sheltered by a pantiled roof to provide cover for the stokers during the three days that it takes to raise the bricks to their maturing temperature of 1,150°C. Underfloor ducts in the kiln draw the heat down through



the bricks to a side vent which leads to a chimney. As the maturing temperature is approached a circular pottery disc painted with lead oxide is passed through a pipe into the base of the kiln on a long metal rod; if, on inspection, the oxide has fused into a glaze, then the temperature has been reached and the fires let out and the long slow process of cooling the kiln can begin.

We admired the varying rich reds of the fired bricks outside and went on to see a selection of decorative chimney sections stacked nearby. Peter explained how vital it was to make a mould which would give a large enough joining surface to counterbalance the overhang when faced with the task of making copies or replacements for chimney bricks. Other radius brick sections had been made for the Whitechapel Bell Foundry for use in casting bells. There was also a sample brick made from the decorative sunflower mould used in Mark Gentry's brickworks and seen over many door and window lintels in the Hedingham area.



Finally, we came to the carpenter's workshop, where the

wooden moulds are carved. Peter explained how his feel for an ability to recognise bricks from different areas and periods of history had developed over the years and how important it was to match the way in which the carving of a mould was finished to the period of history from which the original brick came. He is at present training one of his young brickmakers in the technique of mould carving in order to keep pace with the demand for replacement bricks in restoration work.

The party then moved on to the castle grounds at Hedingham, admiring the four-pointed spans of the red brick bridge, built c.1490, as we passed from the Outer Bailey, with its red brick eighteenth-century Mansion House, into the Inner Bailey, site of an impressive Norman keep built in 1130. A surprising amount of the dressed-stone facade remains intact, and were it not for the distinctive carved stone Norman arches, one might be tempted to attribute the building to a later period. After tea on the first floor of the keep, members scaled the flights of brick stairs to inspect the view from the fifth floor and to admire the largest single span Norman arch in Europe over the Great Hall. Inspection of the dungeons was curtailed when a member of the catering staff emptied the remaining contents of the tea urn in that direction: although perhaps less daunting than boiling oil, it was nevertheless taken by the party as a sign that it was time to depart!

Adrian then announced an unscheduled item on the day's programme for those who still had time and energy; and a small cavalcade of vehicles followed him to a quiet leafy drive in Sible Hedingham leading to Rookwoods House, former home of the Master Brickmaker Mark Gentry. Here we peeped over privet hedges at two Lodges built by him using many of the fine decorative bricks which his two brickworks produced. The date plaques formed from four units were particularly magnificent, and we had a chance to see the sunflower lintel decorations in their intended places.

This had been a memorable and enjoyable day and I am sure that all who attended extend a warm Thankyou to all who helped in its organisation, particularly to Adrian Corder-Birch and to Peter Minter. May I say on a personal note as a new member how much Roy and I enjoyed meeting the other members present and how much we appreciated the welcome we received; we look forward to the next meeting.

Postscript: Peter Minter as Actor

Whilst preparing this piece for publication, I was delighted to see Peter Minter appearing in a BBC television programme during my lunch break on Monday 3 October. (I do not habitually watch television at lunch time but had seen a programme on brickyards announced in the Radio Times!) Aimed mainly at schoolchildren, the programme was largely devoted to the reforming work of George Smith, who did so much for the children exploited in nineteenth-century brickyards. This aspect of the vaunted Victorian Values was portrayed by children playing the parts of the brickworkers and Peter himself playing the part of the harsh owner. Particularly poignant was the scene at the end when a pile of bricks toppled and fell onto a little boy, and the owner's reaction was to shout, 'Mind those bricks!' It was a good performance - and a long way from the real Peter Minter!

T.P.Smith

A FIFTEENTH-CENTURY BRICK OVEN AT SEA

David H. Kennett

Long-standing members of the British Brick Society will recall a notice by Martin Hammond concerning the bricks of the Mary Rose,¹ the great ship of the reign of Henry VIII which sank in the Solent on Sunday 19 July 1545.² This we know had a brick oven.

The present note is to draw attention to a brick oven installed on a small ship eighty years before this. In 1462 Sir John Howard of Tendring Hall, Stoke-by-Nayland, Suffolk,³ began building a new caravelle which appears to have been called the Mary Grase.⁴ Fitting-out was still in progress in 1466.⁵ Almost the last item to be installed on the ship was a brick oven, for which the following accounts survive:⁶

The makenge of
the oven in the new
kervelle

Item, the xxij day of Aprylle, my mastyr rekened wyth Willyam Morse of Shotley and Willyam Wyston, for makenge of a new oven in the kervelle, and they axse for viij^c bryke, prise le c., vj.d.,

summa, iiij.s.

Item, for cc. and di. of howse tyle, prise x.d.

Item, for xiiij. pathynge tyles, iiij.d.

Item, for the werkemanshepe of the same oven be vj. dayis, the day iij.d., summa, xvij.d.

The some of alle drawythe, for makenge the ovyn, vi.s. viij.d.

The wyche some my mastyr paid hym this same day and so thei are contente.

One instructive sidelight on skills associated with brick in East Anglia in the 1460s may be offered by these accounts. It is clear from various references that the caravelle was built at Dunwich,⁷ but that she was transported to the Stour estuary for final fitting-out. In the account of her fitting-out voyage, the destination is called 'Orwell Haven', a reference which might imply Ipswich, but from the specific statement of Willyam Morse of Shotley clearly means the estuary: Shotley is at the point of the peninsula between the River Orwell and the River Stour, and directly opposite Harwich, where further fitting-out took place.

All kinds of specialist ship-building skills were available in Dunwich in the 1460s. Do the Howard accounts imply that the ability to construct a brick oven for the ship was not available at this port? We can never know, but Dunwich had been declining in significance since severe storm damage in 1286 began the erosion of the coast such that of its thirteen churches eight had disappeared by 1366.

The other point of interest lies in the location of Howard's brick craftsmen. Willyam Morse of Shotley and Willyam Wyston certainly built the oven, but whether they also made the bricks is not clear from the account. Shotley is at the end of the peninsula, 10 miles

east of East Bergholt, and 15 miles from Stoke-by-Nayland.⁸

Notes and References

1. M.Hammond, 'Bricks from the Sea - 2', BES Information, 33, May 1984, 17, following up 'Bricks from the Mary Rose', BES Information, 31, November 1983, 25; see also M.Hammond, 'Bricks from the Sea', BES Information, 29, February 1983, 5.
2. J.Ridley, Henry VIII, 1985, p.390; the Mary Rose was raised in 1982 and can now be seen in Portsmouth.
3. H.L.Turner, ed., 'Accounts and Memoranda of Sir John Howard, first Duke of Norfolk, A.D.1462 to A.D.1471', in H.Turner, ed., Manners and Household Expenses of England in the Thirteenth and Fifteenth Centuries illustrated by original records, Roxburgh Club, 1841, pp.147-621 passim. The volume is unindexed, but most pages of 'Expenses of Sir John Howard, knight, from A.D.1462 to A.D.1469', ibid. pp.147-458 contain references to the fitting-out of the vessel. There are fewer references in the 'Accounts and Memoranda ... A.D.1463 to A.D.1471', ibid., pp.459-621, which derives from a different document.
4. Ibid., p.lxxxvii, using a list of ships victualled by Sir John in 1470, ibid., p.489, but the basis of this surmise is not stated. Reading the accounts, I found no specific reference to the name of the new ship. For anyone researching ship-building costs in the fifteenth century this document is a valuable, if little known, source.
5. Dating is regnal. The account printed appears on folio 42 of the original; on folio 39 dorse there is reference to 'Anno vj.^{to} Edwardi quarti', i.e. 4 March 1466 to 3 March 1467. Ibid., p.204.
6. Ibid., pp.210-11.
7. Ibid., p.200 records expenses of voyage from Dunwich to Orwell Haven.
8. Note written 24 May 1988. I thank Norfolk County Library for arranging a loan of these published accounts from the British Lending Library.

Bricks on Paper. Early in 1988 The Guardian reported the affair of the Huangzhuang Brick Factory in Shandong Province, China. This was created less than five years ago to conform to a central directive urging reforms on the peasants. Output increased every month and within four years profits had reached 2 million yuan (£300,000), treble what they had been at the beginning. All went well until the local party secretary was promoted, on the strength of having made the bricks - on paper at least. But his successor could not find the wonderful brickworks and was not allowed to visit it. He then realised that there were profits from the bricks on paper, but no brick actually being made!

MEDIEVAL ENGLISH ROOF-TILES - Part I

Terence Paul Smith

Of all medieval fictile building materials, roof-tiles have been perhaps the most neglected, although they must be amongst the most numerous so far as excavated material is concerned. That they are sometimes (though with some notable exceptions) inadequately described in published accounts - and that there is no generally accepted schema for their description - may in part explain this situation, and something further will be said concerning this matter in a future article in this short series. This first article will consider the development of the material during the Middle Ages. Amongst those who have given time to the material, and who have described and discussed it to full advantage, is the late Alan Carter, whose tragic death at the age of 44 on 14 August 1988 has robbed medieval archaeology of so much. I should therefore like to dedicate this piece, and the series, to the memory of my former friend and colleague.

During the post-Roman period the art of tile-making, along with that of brickmaking, was lost in Britain, not to be re-introduced until after the lapse of several centuries. The Anglo-Saxon builders re-used Romano-British ceramic building materials, including roofing tegulae, but only, it appears, in general wall fabrics and not for roofing. So far as is known, tin or lead were used for major buildings, with thatch and wooden shingles used for smaller works.¹ The few Anglo-Saxon illustrations showing curved roof-tiles of continental type - such as the well known Harleian MS no.603, f.57 - are not to be taken at face value. As Nathaniel Lloyd pointed out long ago, the 'draughtsman's details seem to have been inspired by Southern European architecture, and it is quite possible that he himself may have come from the Mediterranean.'² It was, indeed, not until some time after the Norman Conquest that buildings were once again roofed with clay tiles.

In his Survey of London the antiquary John Stow wrote, 'As for prevention of casualties by fire, the houses in this city being then built all of timber, and covered with thatch of straw or reed, it was long since thought good policy in our forefathers wisely to provide, namely, in the year of Christ 1189,...Henry Fitzalwine being then mayor, that all men in this city should build their houses of stone ... and to cover them with slate or baked tile...'³ Many English towns suffered severe fires in the Middle Ages, and the roofing of buildings in 'hard' materials - tile, slate, stone slate, and also (less effectively) wooden shingles - was a means of lessening the danger. How effective such legislation was is not certain, but the London ruling had to be repeated in 1212.⁴ Its implementation, in any case, would have been hampered if sufficient tiles were not available. This was the experience at several towns in the Netherlands, which throughout the Middle Ages had a more highly developed brick and tile industry than that in England. In Amsterdam, for example, all new houses were required to have 'hard' roofs by a bye-law of 1452, following a severe fire; moreover, 'new bye-laws of 1478 and 1483 required the replacement of still existing reed and straw roof-coverings by incombustible materials.' But 'the regulations could not be fully enforced since "slates and tiles were scarcely to be had." Again and again delay must have occurred. In

1524 the aim was still not reached, so that the bye-law was once again tightened up.⁵ In Utrecht thatched roofs were still present on some of the buildings of the town defences in the sixteenth century.⁶ It is hard to believe that there were not similar problems in obtaining materials in England.

In Canterbury in the late twelfth century, the Prior of Christ-church cathedral-monastery stipulated that some shops on its own property should be covered with tiles as a fire precaution.⁷ The caution is understandable: a few years earlier, in 1174, the fire which destroyed the eastern arm of the cathedral had begun in some nearby thatched cottages.⁸ It is at about the same time, the end of the twelfth or the beginning of the thirteenth century, that tiles begin to appear in urban archaeological levels, for example at Bedford,⁹ Colchester,¹⁰ Gloucester,¹¹ King's Lynn,¹² Southampton,¹³ and York.¹⁴ Legislation, however, was sometimes a long way behind actual introduction of the material: in Norwich, tiles were not required by bye-laws until 1506;¹⁵ in King's Lynn not until 1572 (and the legislation had to be repeated as late as 1806!).¹⁶ Some tiles from Waltham Abbey have been claimed as early twelfth-century,¹⁷ though further evidence is required on these. At Canterbury, however, a hearth and floor of roof-tiles was associated with pottery of the first half of the twelfth century,¹⁸ and roof-tiles were built into the fabric of Orford Castle, Suffolk (1165-67).¹⁹ From the late twelfth century come roof-tiles at Southampton,²⁰ Gloucester,²¹ Dover Castle,²² and the deserted medieval village of Wharram Percy, Yorks.²³ Those from Bordesley Abbey, Worcs. date from c.1200.²⁴

It is clear, then, that at this time roof-tiles were used not only in towns but at rural sites as well. Some of the earliest yet encountered were used on the manor-house site at Goltho, Lincs. in the mid-twelfth century.²⁵ These are interesting not only for their early date but also because they already included tiles with shaped bottom edges - quarter-circles cut from each corner - in order to give a decorative effect to the roof. Tiles were not used on the village houses of Goltho at this period, and when they appear in the later Middle Ages they are in small quantities and were probably used only around the smoke-vents of otherwise thatched houses, again as an obvious fire precaution.²⁶ The same phenomenon has been observed at other excavated villages, for example at Seacourt, Berks.; Holworth, Dorset; Hangleton, Sussex; and Wharram Percy, Yorks., where even the manor house seems to have been built in this way.²⁷ At Harome, Yorks. remains of tile and thatch were found together.²⁸ Tiles, of course, gave no absolute guarantee against fire, and tiled buildings are known to have burned down in Milton Ernest, Beds.; Hythe, Kent; Battle, Sussex; and Upton Warren, Worcs.,²⁹ whilst devastating fires continued to break out in the towns.

If fire precaution was the major reason for the introduction of roof-tiles, they would also have been given a fillip by the fact that during the thirteenth century the price of wooden shingles increased rapidly, so that they became considerably more expensive than tiles.³⁰ The advance of the material may be gauged by their increasing appearance in later archaeological levels as well as from certain documentary sources. At York, for example, the numbers of tilers and tilemakers admitted to freedom of the city increased markedly during the fourteenth and fifteenth centuries, reaching a peak in the decade 1431-40 (fig.1).³¹ Prices of tiles were not static, however, and in 1362 Edward III issued decrees relating to roofing materials and tilers' wages, which had been put up because of the 'tempest of wind which has of late unhappily occurred in divers parts of our realm.' Clearly, makers and tilers were taking advantage of many damaged roofs in what must have been one of those rare storms reminiscent of October 1987. Fines and imprisonment were threatened for those who did not revert to the older rates.³²

Tilers and tilemakers admitted to Freedom of the City of York,
1301-1534

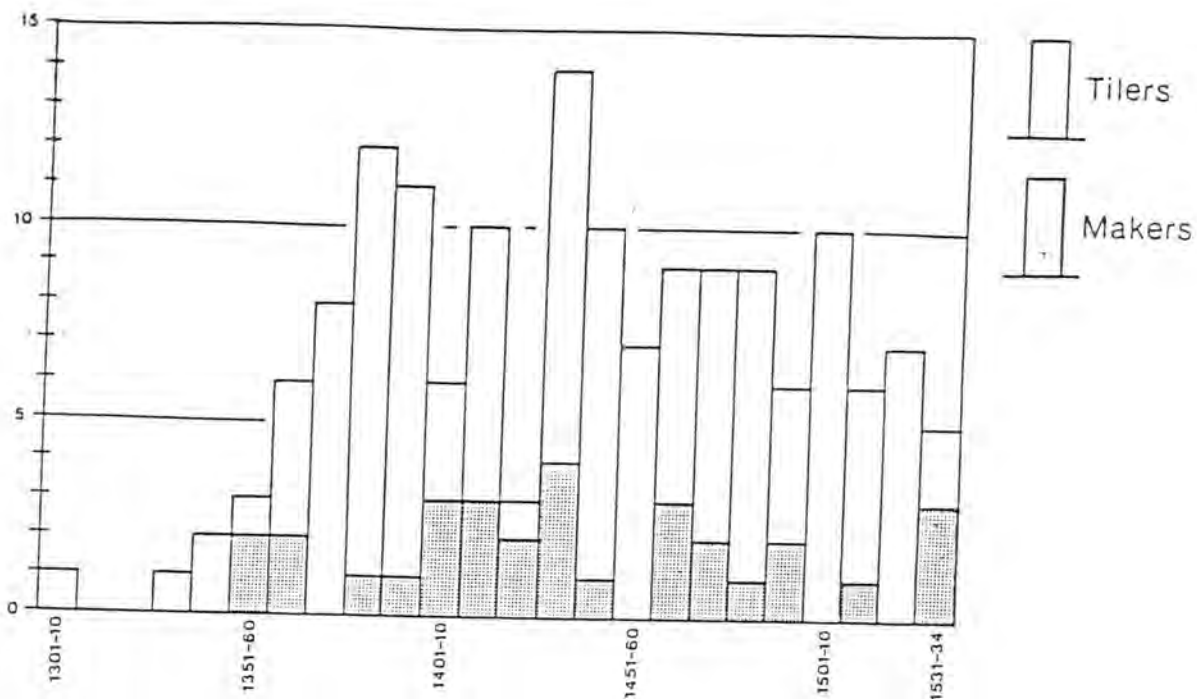


Fig. 1

It has been estimated, from archaeological evidence and from occurrences of the names Tiler, Tyler, and Telwright, that tiles were to be found in no fewer than fourteen English counties by the end of the thirteenth century.³³ The materials reflected in these statistics, however, include floor-tiles as well as roof-tiles. In later centuries, surnames cease to be exclusively occupation-names and often become true patronymics, so that they can no longer be used to assess the spread of the material. What is clear from the archaeological evidence, however, is that by the Reformation, roof-tiles, including ridge-tiles, were to be found in all the English counties except the most northerly as well as in many parts of Wales. It is of some interest that this distribution is markedly different from, and wider than, that of medieval bricks. By the early Tudor period, tiles had reached points in the west that bricks were not to reach for perhaps one-and-a-half or two centuries. Earlier in the Middle Ages too roof-tiles were far in advance of contemporary bricks. This circumstance underlines the fact, clear from other evidence too, that it was not normal during the Middle Ages to make bricks and roofing-tiles together. This is a matter, contrasting with later practice, to which we shall return later in this series.

Notes and References

1. Cf. H.M. Taylor, *Anglo-Saxon Architecture*, vol. 3, Cambridge, 1978, pp. 1060-61. Floor-tiles, however, are known from a number of important Anglo-Saxon, particularly ecclesiastical, sites.

2. N.Lloyd, A History of the English House..., London, 1931, re-issued New York and London, 1975, p.5; the drawing is reproduced at p.4, fig.3; see also caption to fig. It is surprising that Margaret Wood, who refers to Lloyd, does not echo his note of caution, and appears at least to take the drawing, and others, at face value: M.Wood, 'Norman Domestic Architecture', Arch.J., 92, 1935, re-issued as a Royal Archaeological Institute Monograph, London, 1974, p.78; M.Wood, The English Mediaeval House, London, 1965, p.294.
3. J.Stow, A Survey of London, London, 1603, ed. R.E.Wheatley, revised ed., London, 1956, p.76.
4. L.F.Salzman, Building in England down to 1540: a documentary history, 2nd ed., Oxford, 1967, p.223; thatched houses were still to be found as late as 1302: cf. F.B.Andrews, 'The Mediaeval Builder and his Methods', Trans.Birmingham Arch.Soc., 48, 1925, re-issued as a separate publication, East Ardsley, Yorks., 1974, p.71, n.4.
5. J.Hollestelle, De Steenbakkerij in de Nederlanden tot omstreeks 1560, 2nd ed., Arnhem, 1976, p.140. (My translation)
6. L.C. van der Vlerk, 'De stadsversterkingen in de late Middeleeuwen' in L.C. van der Vlerk et al., Utrecht Ommuurd, Vianen, 1983, pp.78-9.
7. W.Urry, Canterbury under the Angevin Kings, London, 1967, pp.416-17 the tileworks at Tyler Hill, just to the north of Canterbury, appears to have been manufacturing roof-tiles by this time: E.C. Norton and M.C.Horton, 'A Parisian Workshop at Canterbury. A late thirteenth-century tile pavement in the Corona Chapel and the origins of Tyler Hill', JBAA, 134, 1981, 78.
8. A contemporary account of the fire by the monk Gervase was translated by the late Prof.R.Willis, The Architectural History of Canterbury Cathedral, London, 1845, pp.32sqq.; re-issued in R. Willis, Architectural History of Some English Cathedrals, part 1, Chicheley, Bucks., 1972, with original pagination.
9. D.Baker, E.Baker, J.Hassall, and A.Simco, 'Excavations in Bedford 1967-1977', Beds.Arch.J., 13, 1979, 258.
10. P.J.Drury, 'Aspects of the Origins and Development of Colchester Castle', Arch.J., 139, 1982, 349-50.
11. C.Heighway, The East and North Gates of Gloucester and Associated Sites: Excavations 1974-81, Western Archaeological Trust Excavation Monograph no.4, Bristol, 1983, pp.213-14.
12. H.Clarke and A.Carter, Excavations in King's Lynn 1963-1970, King's Lynn Archaeological Survey vol.2, Society for Medieval Archaeology Monograph no.7, London, 1977, pp.298-306, 441.
13. C.Platt, Medieval Southampton: the Port and Trading Community, AD 1000-1600, London, 1973, p.42.
14. Medieval Archaeology, 18, 1974, 205; R.Hall, The Viking Dig, London, 1984, p.133.
15. L.F.Salzman, English Industries of the Middle Ages, London, 1923, p.174; J.H.Harvey, Mediaeval Craftsmen, London, 1975, p.140.
16. Clarke and Carter, op.cit. in n.12, p.441.
17. P.J. and R.M.Huggins, 'Excavation of Monastic Forge and Saxe-Norman Enclosure, Waltham Abbey, 1972-3', Essex Archaeol. and Hist., 20,

- 1976, 168; for a note of caution: P.J.Drury, 'Brick and Tile', in F.Williams, Pleshey Castle, Essex (XII-XVI Century): Excavation in the Bailey, 1959-1963, British Archaeological Reports, 42, Oxford, 1977, p.90.
18. S.S.Frere and S.Stow, Excavations in the St George's Street and Burgate Street Areas, The Archaeology of Canterbury, vol.7, Maidstone, 1983, p.53.
 19. Drury, op.cit. in n.10, 349-50.
 20. Platt, op.cit. in n.13, p.42.
 21. Heighway, op.cit. in n.11, pp.213-14.
 22. A.M.Cook, D.C.Mynard, and S.E.Rigold, 'Excavations at Dover Castle, Principally in the Inner Bailey', JBAA, 3rd series, 32, 1969, 81.
 23. J.C.Thorn, 'The Camera in Area 10', in J.G.Hurst, ed., Wharrah [Percy]: a Study of Settlement on the Yorkshire Wolds, vol.1, Society for Medieval Archaeology Monograph no.8, London, 1979, p.66.
 24. P.A.Rahtz and S.Hirst, Bordesley Abbey, Redditch, Hereford-Worcestershire: First Report on the Excavations, 1969-73, British Archaeological Reports, 23, Oxford, 1976, pp.172-5.
 25. L.Keen, 'Roofing Tiles and Bricks', in G.Beresford, Goltho: the Development of an Early Medieval Manor c.850-1150, English Heritage Archaeological Report no.4, London, 1987, pp.169-70.
 26. G.Beresford, The Medieval Clay-Land Village: Excavations at Goltho and Barton Blount, Society for Medieval Archaeology Monograph no.6, London, 1975, p.41, which appears to refer both to Goltho and to Barton Blount.
 27. M.Beresford and J.G.Hurst, Deserted Medieval Villages, London, 1971, p.100.
 28. Med.Arch., 15, 1971, 168.
 29. Med.Arch., 8, 1964, 270; 19, 1975, 245; 8, 1964, 245, 294; 3, 1959, 318 respectively.
 30. Salzman, op.cit. in n.4, p.228; Wood, 2nd op.cit. in n.2, p.293.
 31. H.Swanson, Building Craftsmen in Late Medieval York, Borthwick Papers no.63, York, 1983, Appendix, pp.39-41, on which also my fig.1 is based.
 32. Andrews, op.cit. in n.4, p.72.
 33. A.Clifton-Taylor, The Pattern of English Building, 4th ed., London, 1987, p.266.

Hathernware Hoffmann Kiln Survey Drawing

Someone asked me for a copy of this drawing after the works visit on the AGM day. I did not note who it was: would they please contact me at 13 Jackson Road, Parkstone, Poole, Dorset BH12 3AJ; telephone: (0202) 746102?

Martin Hammond

BOOK REVIEW

Terence Paul Smith, The Medieval Brickmaking Industry in England 1400-1450, British Archaeological Reports, British Series, 138, 144pp., 15 figures including maps, Oxford, British Archaeological Reports, 1985, £10, ISBN 0-86054-308-0.

There is a time span implicit in the title of this work, but much of what Smith discusses is relevant to the second half of the fifteenth century too: his data base for Table III, Prices of Bricks in Lowland England, includes material up to 1463. This is all to the enhancement of a work which ranges widely both in its text and its annotations: 545 footnotes, some of considerable length, and a bibliography of thirteen and a half closely set pages. For the latter alone the book would be worth having. The entries for both brickmaking and brick building are somewhat inadequate in D.J.Guth's Late Medieval England, 1377-1485 (1976), good though this bibliographical guide is on other aspects of cultural history.

Smith has finally given the lie to any lingering suggestion that brick buildings in fifteenth-century England relied on imported products, yet he does this without reference to the cargo-carrying capacity of medieval ships. The bricks for a modest modern garage - equivalent in volume, when stacked, to less than half of those required for just one outside wall of one courtyard of Caister Castle - would more than fill the hold of a Bremen cog. Caister Castle was built of bricks made at Caister-on-Sea, but it is a salutary thought that this one brick building alone would have required the ballast of one hundred ships of the tonnage of the Santa Maria. And what, one might ask, was the return ballast of these little vessels whose capacity was that of Columbus' ship?

Transport costs are among the many topics covered by Smith, who notes the proximity of brickyards to water transport. Lord Cromwell's works at Edlington Moor supplied Tattershall Castle, his main residence, and other projects: Bardney Abbey, Edlington Church, Kirkstead Abbey, the Tower-on-the-Moor at Woodhall, and Horncastle, all accessible by river, a point ably made by his figure 9, on the relationship of brickyards and buildings in Lincolnshire.

After considering the adoption of brick in late medieval England as a building material for major structures and noting the relationship of alien brickmakers to the patrons of this new way of demonstrating the great man's wealth, Smith goes on to outline the considerable documentary evidence for the production of bricks in fifteenth-century England. One distinction can be drawn. In Yorkshire there were municipal brickyards at Beverley, Hull, and York; elsewhere in England the patrons were private individuals or corporations. In addition to the map, already noted, for Lincolnshire, Smith presents cartographic evidence for the East Riding, for the Thames Valley, and for Norfolk, showing how brickyards, water transport, and brick structures are linked. His map of buildings in Essex and Hertfordshire omits rivers and brickyards as it concentrates on the relationship of the buildings themselves, but this, and his text, omits the north porch of St Mary's church, Stoke-by-Nayland, Suffolk, for which a date of 1457 for a will leaving money for its 'repair' is known. The building has corbel-tables of the kind found at Rye House, Herts. Smith postulates an atelier of craftsmen working on Essex buildings at Maldon Moot Hall and Faulkbourne Hall in the 1430s, moving on to Rye House after 1443 and to Someries Castle, Beds. in 1448. They were still available for work at Nether Hall, Roydon, Essex in the 1460s: the builder died in 1471. Work at Stoke-by-Nayland church would tie Nether Hall, Roydon to the earlier buildings. It also raises the intriguing possibility that the lost house of Sir John Howard at

Tendring Hall, Stoke-by-Nayland, where brick was used in the 1460s, may have been their work too. At this date, the Howards were a family rising in the world, as yet clients rather than members of the peerage. Their house, of twenty hearths in 1674, was demolished to make way for a new house in 1736, itself replaced in 1784: Sir John Soane's white brick Tendring Hall was demolished in 1955. This speculation raises another intriguing possibility - that the atelier worked elsewhere, perhaps at Lord Hoo's Luton Hoo, Beds.

The work at Stoke-by-Nayland church also gives a possible terminal date for the involvement of the atelier at Someries Castle, a building whose surviving fragment implies two groups of craftsmen, as Smith himself demonstrated in Bedfordshire Archaeological Journal 3.(1966) and in Journal of the British Archaeological Association 129 (1976). Specific reference to continued non-repayment of loans to the crown in 1456, when the builder, Sir John Wenlock, was Speaker of the House of Commons, may suggest a context for the departure of the craftsmen to better prospects, as much as the political events of 1459-61 which Smith postulated in 1976.

In his monograph, Smith does not extend to such speculation, being concerned rather with the industrial background to the buildings. His chapter 6, 'Methods of Manufacture', draws on a wide range of documentary sources for medieval brickmaking, from gathering the clay through pressing it in a mould, to loading the green bricks into a kiln and firing. This same group of sources is used also in the chapters on the 'Organisation of the Industry, 1400-1450', 'Money Matters', and 'The Nature of the Industry', to present an impressive account of one medieval industry.

If one has one criticism, it is that it stops too early. The Kirby Muxloe accounts covering 1480 to 1484 provide as good a starting point for the second half of the fifteenth century as do the Hull accounts from 1422 to 1457 and the building accounts of Tattershall Castle and Caister Castle in the 1430s for the period covered by Smith. It would be instructive to know how in the years between the accession of Edward IV (1461) and the death of Henry VIII (1547) the industry became consolidated after the nascent phase studied by Smith. Equally, one of the interesting questions one could look at is whether bricks became cheaper in real terms in the years of rampant inflation in the reign of Henry VIII. An unpublished analysis of the entries in the Norfolk hearth tax of 1664 does suggest that brick houses built after 1530 were noticeably smaller than those built earlier in Henry VIII's reign, and both of these were considerably smaller than those built before 1509.

David H. Kennett

BOOK REVIEW

Peter I. Davison, Brickworks of the North East, 290pp., Gateshead Libraries and Arts Service, 1986, £7-50.

This work is a photocopy of the handwritten manuscript, not a typescript version, though clearly written. It contains 290 pages and is of A4 size. It is primarily a gazetteer of the hundreds of brickworks which operated in the counties of Northumberland, Durham, and Cleveland in the last 150 years. It is an excellent publication, giving all the facts, dates, and locations of the various works in a most informative manner. Interest is added to the text by the recollections of former employees and by simple line maps. The photocopies of photographs are of good quality but take second place to about fifty beautiful pen-and-ink drawings of walls, bricks, machinery, and kilns.

cont./

These may well form the highlight of the book for many readers.

Copies may be obtained from: The Borough Librarian, Gateshead Central Library, Prince Court Road, Gateshead NE8 4LN, at a cost of £7-50 + £2-50 p&p, making a total cost of £10. A sample of the hand-written, but clear, layout is given below.

W. Ann Los

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BOOK NOTICES

John Greene, Brightening the Long Days: Hospital Tile Pictures, xiv + 81pp. illustrations, Tiles and Architectural Ceramics Society, 1987, £12-50.

W. Ann Los

G.B.Janssen, Baksteenfabricage in Nederland 1850-1920, 583pp. 121 tables, 40 line and halftone illustrations, Zutphen: De Walburg Pers. ISBN 90-6011-544-9.

Maud de Koninck and Hilde Marijnissen, ed. Ludo Vlind, Steenovensvolk, 303pp., numerous unnumbered illustrations, Amsterdam: Link. ISBN 90-6285-034-0.

The first of these books, although written 'niet alleen met verstand maar ook met het hart' ('not only from the head but also from the heart'), is a full technical discussion of brickmaking in the Netherlands during its chosen period, which covers the process of mechanisation in the industry as well as important social changes. The whole country is covered, though with a particular emphasis on the region of the 'great rivers' - Rijn/Lek, Waal, and IJssel. Much of the primary data has been studied for the first time and is presented in the form of numerous tables as well as being fully discussed in the text.

The second book to some extent overlaps the first in the period covered - broadly the first half of the present century. It brings together the comments, obtained by interview, of a number of former workers in the brickmaking industry. Because of what they sometimes have to say, false names are used and places not always identified.

Unfortunately, neither book is available in English, but both are invaluable for comparison with the British material for the same periods. It is hoped to review them more fully in a future issue of Information.

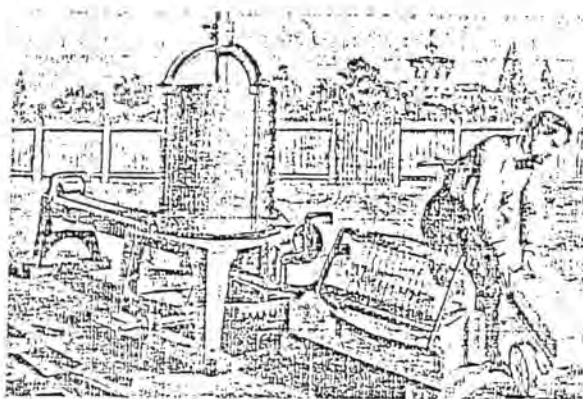
P.F. Smith

BOOK NOTICE

Members may be interested in the following work by one of our American members, Karl Gurcke. Copies may be ordered from The University of Idaho Press, 3368 University Station, Moscow, Idaho 83843, although larger booksellers in this country will be able to obtain it.

BRICKS AND BRICKMAKING

A Handbook for
Historical Archaeology



Karl Gurcke

BRICKS AND BRICKMAKING A Handbook for Historical Archaeology Karl Gurcke

In *Bricks and Brickmaking*, Karl Gurcke provides for the first time a definitive handbook for the identification of bricks used in the construction of historic buildings and found in excavated historic sites. Although archaeologists have studied many classes of artifacts, bricks have largely been neglected, due to the absence of an adequate system for their description, classification, and cataloging. The physical characteristics of bricks, however, as those of other historical objects, reveal how, where, and even when they were made. This book supplies both a broad cultural perspective on the manufacture of kiln-fired clay bricks and the detailed information necessary for accurately interpreting them in the context of an archaeological site.

Chapter I begins by discussing brick manufacturing processes in both the United States and Great Britain during the nineteenth and early twentieth centuries, since during that period large quantities of firebricks were imported from England and Scotland. Subsequent chapters present the history and growth of the brickmaking industry between 1790 and 1930, with particular concentration on the Pacific Northwest. Because the characteristics imparted by the processes of manufacture represent such a potentially valuable source of information for archaeologists, special attention is given to production techniques and to the forms and intended functions of the bricks to which these techniques were integrally related.

The appendix provides key information on brickmakers and brick brands for the United States and Canada from 1872-1942.

KARL GURCKE has worked extensively in field archaeology in the Pacific Northwest and is presently historical archaeologist for the National Parks Service in Skagway, Alaska.

University of Idaho Press

520 pages, June 1987
photographs, appendix, bibliography
ISBN 0-89301-113-5
paper, \$16.95

Two Courses

Members of the British Brick Society may be interested in the two following courses concerned with British brickwork:

1. University of Oxford, Department for External Studies, Historic Brickwork, Friday 13 - Sunday 15 January 1989. Provisional programme: Friday: T.P.Smith, 'Medieval Brickwork'; Saturday: P.Drury, 'Brickwork of the Seventeenth Century'; S.Parrissien, 'Brickwork of the Eighteenth Century'; M.Stratton, 'Decorative Brickwork and Terracotta of the Victorian and Edwardian Periods'; R.W.Brunskill, 'Hollow Walls: the development of the idea of hollow and cavity walling in brickwork'; T.Bidwell, 'Some Aspects of the Surface Repair of Historic Brickwork'; J.Ashurst, 'Mortar Analysis'; D.Fowler, 'Brick Cities and Brick Conservation'; Sunday: D.Carthy, 'Tudor Terracotta'; J.Thorneycroft, 'A Chronicle of Repair: brickwork at Hampton Court Palace'; A.Evans, 'Epsom 55 South Street'. Fee: Residential: Single £77.50, Shared £61.50; Non-residential with Meals (excluding breakfast) £42.00; Non-residential without Meals £23.50. Further details from: The Archaeology/Local History Course Secretary, Oxford University Department for External Studies, Rewley House, 1 Wellington Square, Oxford OX1 2JA.
2. Chiltern Open Air Museum, The History of Bricks and Brick Buildings in England, Sunday 19 March 1989. To be held at The Theatre, Newland Park, Chalfont St Giles, Bucks. Provisional programme: M.Hammett, 'The Development of Brick Manufacture from Traditional Hand-making and Primitive Firing Methods to Modern Industrial Production'; T.P.Smith, 'The History of British Brickwork including Roman and Medieval continuing to the Twentieth Century'; T.Bidwell, 'The Repair and Restoration of Historic Brick Buildings with Reference to the South-East of England'; M.Hammett, 'British Brickwork - a Tradition Sustained - the Essential Characteristics of Brickwork; the Great Variety of British Bricks; the Vocabulary of Brickwork; Texture, Colour, Pattern, and Scale'; the Museum will be open for those who wish to visit the buildings. Further details from: Chiltern Open Air Museum, Newland Park, Chalfont St Giles, Bucks. HP8 4AD (telephone: (02407) 71117), or from: J.H.Edmonds, Co-ordinator, 'Briarfield', Harewood Road, Chalfont St Giles, Bucks. HP8 4UB (telephone: (02404) 2775). Fee: £8.50 (£7.00 for Friends of COAM).

TPS

Bricks for a Good Home!

Mr Stephen Ball has a collection of 150 bricks of all forms, of which fifty have marks, also a collection of roof-tiles from 1400 onwards. He wishes these to go to a good home. He can deliver or can arrange for recipient to collect. Please contact: Mr Stephen Ball, Harrowby House, Ebrington, Chipping Camden, Gloucs. GL55 6NT.

QUERIES

7 From: Karl Gurcke. Information is sought on the origins of two brick types found in the USA, as follows:
(i) Firebrick Exports. Information is requested on the firm which produced a firebrick stamped:

HEATHERKNOW / PATENT / GLASGOW

The Glasgow is presumed to be the one in Scotland. The bricks are found on nineteenth-century sites in the western states of California, Idaho, and Washington.

(ii) Information is also requested on a double-frogged brick; the back frog is plain, the front is stamped:

STENSWICK (see photograph below)

The brick was found at Sitka, Alaska. Sitka was the capital of Russian America from 1808 until 1867 and of Alaska until 1906.




Replies to: Karl Gurcke, P.O.Box 157, Skagway, Alaska 99840, USA.

2 From: C.G.Stone. Information is sought on the manufacturer of a brick found at metal mines at Hexworthy on Dartmoor, Devon. The brick is embossed on the frog:

(-----) SHIRE Co Ltd
HORRABRIDGE

A brickworks site has been located alongside the River Walkham, next to Bedford Bridge, near Horrabbidge, Devon. The brick was used at Hexworthy c.1901, but may be re-used from an earlier building.
Replies to: C.G.Stone, 260 Meadowcroft, Aylesbury, Bucks. HP19 3UY.

 From: Martin Hammond. Is anyone able to assist with background information on any of the following manufacturers? In each case, details of stamping are followed by the provenance or present location of the bricks in question:

ROCK BRICK CO
BUCKLEY

Stawpit Marsh, Christchurch
Buff body.

G.R. WRIGHT
WOOLPIT

HANBURY
DROITWICH

Both exhibited at Weald and Downland
Museum, Singleton, Sussex.

HANCOCKS LTD
FLINTSHIRE

AP GR
EMPIRE

Firebricks, Westernzoyleand Pumping
Station, Somerset.

MUSGRAVE & CO
LIMITED
BELFAST & LONDON

'Clinker' pavior for stables, buff
colour, very hard. Provenance unknown.
Donated.

DAVISON & CO IMPROVED
MANUFERS STABLE
FLINT PAVEMENT

2-panel, stable pavior in blue fire-
clay body (similar to Butterley
Catteralls bricks).

ASHTON & GREEN
LONDON & BRISTOL

'Clinker' stable pavior, buff, very
hard. From the Old Coach House, Mudeford
Christchurch, Dorset. c.1884.

W REED

Seen amongst the 'olde worlde' decor
in the Richmond Arms, Charminster Road,
Bournemouth. Salvaged bricks re-used
quite recently. Another brick bore a
dated frog, thus:

1878

Replies to: Martin Hammond, 13 Jackson Road, Parkstone, Poole,
Dorset BH12 3AJ.