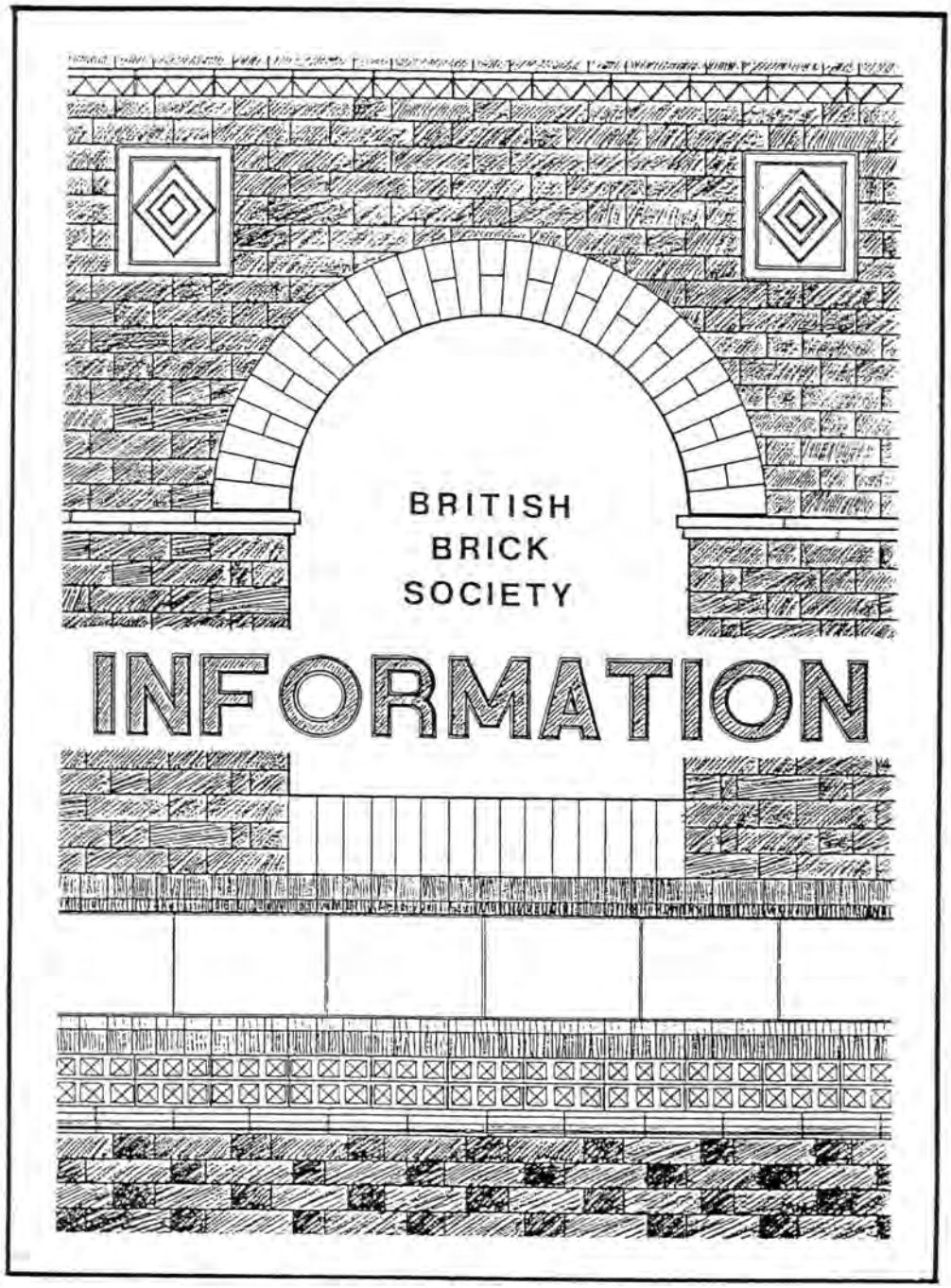
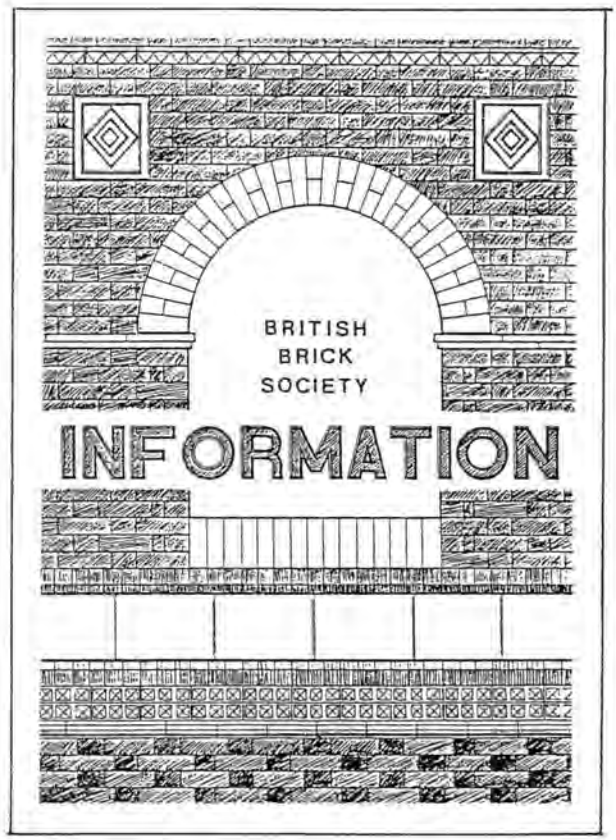


COMPILATION VOLUME I

1973 – 1981



COMPILATION VOLUME I

1973 – 1981

CONTENTS

FORWARD

The early issues of the British Brick Society Newsletter "Information" contain much useful material in the form of articles, notes, book reviews, etc. However, they also contain many pages of contemporary interest only.

New members often request copies of back numbers, but to reprint the whole series would be an impractical proposition. In 1986, it was decided to condense the still relevant material contained in the early issues.

This publication is a compilation of material originally contained in Information Nos. 1-25.

EDITOR'S NOTES

i) The Issue Numbers of "Information" in which the items originally appeared are not stated, but at the end of each item a date is stated.

ii) Generally the items appear in chronological order of publication. However, some adjustment has been made to allow the grouping together of series of articles and to relate answers to Enquiry items.

iii) In making the compilation, all material of a contemporary interest has been excluded, eg Notices of lectures, exhibitions and meetings, Minutes, Lists of Officers, Subscriptions etc., etc.

Some early articles dependent on supplementary material no longer available have been omitted.

iv) Some minor items of enquiry have been included, even though no answer has been published, because the reference may be of use to others working with similar material.

v) Names and addresses related to enquiries and authors are as originally published unless otherwise noted.

vi) Book listings and selected reviews are contained in Appendix A

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* Michael Hammett ARIBA

Hon.Secretary
British Brick Society

May 1988

THE SIZE OF THE BRICK

Preliminary Notes

Since 1939, when F.W. Brooks[1] cautioned against dating brickwork by reference to size, vernacular architecture has advanced. Consequently, every part of the pattern now has more to tell. We can better distinguish original from re-used bricks in a building because we know more about building practice. The more we learn about dates delimiting the working life of a brickfield, the firmer are our grounds for dating by reference to its products. This said, Brooks' caveat must be respected, but there is hope - and infinite scope - for the future of fieldwork on brick.

We use English, not metric, measurements because that is how the makers conceived them; also, the major sources use them. The three dimensions are given in terms of the front aspect of a 'stretcher' and in the following order:- Length (left to right) : Breadth (front to back : Thickness (top to bottom). Sizes are taken either from measurements made by the compilers or from reliable sources which, wherever possible, we cite. For simplicity we have rounded them off to the nearest ½ inch for L and B and ⅛ inch for T. This is because ancient moulds varied while methods of clay preparation and firing produced erratic shrinkage. Any more 'exact' data would, prior to industrialisation, be meaningless. What follows is a broad indication of the bricks which may be expected to occur at any one period. Regional variations, the difficulty of distinguishing the native from the imported article and, above all, the dearth of exact fieldwork prohibit anything more rigorous at present.

Roman Bricks

The Sesquipedalia: 18 x 12 x any thickness in Roman inches. Smaller sizes include: 12 x 12 x 4; 12 x 9 x 2. Hypocaust pillars: 9 x 9 x 2. Roman floor bricks (eg Colchester Forum) can be as small as 4 x 2 x 1. Made often to a size and shape (eg segmental bricks) to suit a purpose, from C.ii to C.iv and re-used in C.xi and C.xii Roman bricks are of little help in dating.

C.xii to C.xiv

Our first post-Conquest brick was the 'Great Brick' which has a broad area in comparison to its depth. Examples are:-

The intrados of the Romanesque arches at the east end (only) of the nave in St Mary's Church, Polstead, Suffolk : 1153 : 13 x 5½ x 1½.

Little Coggeshall, Essex[2] The Abbey Undercroft : 1167 or 1168 : 13 x 6 x 2.
The Abbott's Lodging : 1180 : 12 x 6 x 2. The Gatehouse Chapel of St Nicholas : 1223 : NW and SE coigns contain bricks of 18 x 5 x 2½.
At Waltham Abbey : 1370 : are splendid late examples of the Great Brick.
The Great Barn : 15 x 7½ x 2 : and the base of the Tower : 13½ x 7 x 1¾.

C.xiii to C.xv (we have to contend with an overlap of centuries)

Waltham Abbey (supra) may have been a very late survival which asserted the older tradition at a time when elsewhere two new bricks had come into use:- 10 x 5 or 4½ x 2; 8½ x 4 x 2. Nathaniel Lloyd[3] writes that C.xv standards stipulated a depth of 2in.

Britain's first major brickyard at Kingston-upon-Hull, Yorkshire[4] is one source of the larger bricks. Bricks from the walls of Hull (1321) are: 11 x 5½ x 2[5] and Holy Trinity Church (1315-1320) 9 x 4½ x 2. At Beverley, Yorkshire, the Minster (c.1330) 10½ x 5 x 2 and the North Bar (1409) 10½ x 5½ x 2. Other examples, not necessarily connected with Kingston, both 10 x 4½ x 2, are: St Olaves Priory, Herringfleet, Suffolk (c.1300) and the Cow Tower, Norwich, Norfolk (c.1380).

The smaller brick of 8½ x 4 x 2 has been associated either with those which began to be imported in the mid C.xiii from the Low Countries (the Tower of London - 1278) or with those made under immigrant direction, for example "Bawdwin Docheman's" work at Tattershall Castle, Lincolnshire (1435-1445). The probability that Englishmen were using this size at that time cannot be ruled out. For instance, Lt. Col. Glendinning, F.S.A., held[6] that the bricks at Caister Castle, Norfolk (1432) were made from "estuarine clay ..... (at) a site on the bank of the Bure, still known locally as 'Brick Pits'."

Whether or not the earliest known domestic brickwork in England (the solar upper walls above ashlar lower walls at Little Wenham Hall, Suffolk (1290) were built with imported or indigenous bricks, remains undecided. The Wenham bricks vary; 9¾ to 8½ x 5½ to 4 x 2.

C.xvi and C.xvii

Nathaniel Lloyd (op.cit) states that by the C.xv English Bond has superseded irregular bonds. With this improved regularity in bonding, the proportions became increasingly regular until custom crystallised into law. That, briefly, is the tale of these two centuries, the centuries of the misnamed 'Tudor' brick 9 x 4½ x 2¼ The older bricks did not disappear at once. Jane Wight (op.cit.p.43) records that "At Little Saxham Hall, Suffolk (c. 1505) it was agreed that fired bricks should measure 10 x 5 x 2½ ". In the middle of Henry VIII's reign, c.1528, a depth of less than 2½ was stipulated, but when, in 1568, Elizabeth I granted a Charter to the Tylers and Brickmakers Company, no size was ordained. This Charter was renewed in 1571. The renewal confirmed, but did not quote, ordinances (or bye-laws) made in 1570-1571. It is an 1849 MS copy (now lost) of these ordinances (q. N. Lloyd) that gives 9 x 4½ x 2⅜ for the so-called "Statute" brick. They applied to Bricklayers in London plus a 15-mile radius, but the evidence is that, by the late C.xvi, this brick was widespread(7). In 1625 Charles I slightly changed this scantling to 9 x 4⅜ x 2¼. In the mid C.xvii there were imports of small Dutch bricks called 'Klinckaarts' 6 x 3 x 1.

C.xviii to C.xx

In 1725 George I almost restored the 'Tudor' brick by enacting 9 x 4½ x 2½. Four years later (1729) his son, George II, introduced the distinctive eighteenth century proportions with an Act stipulating 8¾ x 4⅛ x 2½. In 1769 George III effected further reductions to 8¼ x 4 x 2½.

In 1784 among other measures taken to pay for the American War of Independence, Pitt, the younger, imposed a tax on the quantity of bricks. This stimulated the manufacture of outsized articles of up to 10 to 11 x 5 x 4½, known as 'Tax Bricks'. A house in West Street, Horncastle, Lincolnshire (c.1780-1790) has bricks: 11 x 5 x 3½ laid in English Bond.

The curtain walls to The Weir House, Bodenham, Herefordshire are of bricks: 12 x 6 x 3⅛in., but, significantly, those of the house itself (c.1740) are 9 x 4½ x 2⅜in. A brick, 10 x 5 x 3½, comes from Angel, Islington (behind Sadlers Wells) but the date is unknown. In 1803, in order to stop this evasion, George III doubled the tax upon brick exceeding 150 cubic inches in capacity. This penalty remained in force until repealed in 1850 by the Act of Victoria which established the C.xix proportions, 9 x 4½ x 3. British Standard 8⅝ x 4⅛ x 2⅝ was metricated in 1969 to 215 x 102.5 x 65mm (B.S. 3921). Some architects still favour and some yards provide the old 'Tudor' brick with its unique power to please the eye.

Metric Modular bricks are also produced in the following sizes:

290 x 90 x 90mms
290 x 90 x 65mms
190 x 90 x 90mms
190 x 90 x 65mms

but they are not particularly popular and are not widely used.

Metric Modular bricks and the British Standard Metric brick 215 x 102.5 x 65mms are intended to be used with mortar joints of 10mm nominal thickness.

NOTES

(1) J.BAA 3rd Series 4. p.53n. (1939)

(2) J.BAA 3rd Series 18. p.20-32 and Pl V-XIV (1955)

(3) "A History of British Brickwork" Nathaniel Lloyd, Greville Montgomery (1934)

(4) "A Mediaeval Brickyard at Hull" F.W. Brooks Cf. N.1 supra. Also for discussion on Hull, cf "Brick Building in England" Jane Wight pp.53-60 John Baker (1972)

(5) "Report on Excavation of the Walls of Hull" John Bartlett. Hull Museums Bulletin No.4 (March 1970)

(6) "Caister Castle, Norfolk" "Notes on the bricks and mortar" S.E.Glendenning. J. Norfolk Archy. Also cf. The Antiquaries J.32 (1952)

(7) Jane Wight, who provides this information, mentions that the 'Statute' breadth given in her book as 4½ should read 4¼.

BRICK COLLECTION - NORWICH MUSEUM.

The City of Norwich Museums possess a large collection of bricks and brick fragments of local provenance and of all periods, divided between the Castle Museum Archaeology Department, who hold the excavated material, and the Social History Department at the Bridewell Museum, who hold the bricks from standing structures and from local kilns. This part of the collection is housed in the Bridewell Museum of Local Industries and Rural Crafts where it forms a small section of large and rapidly expanding collections illustrating, among other subjects, local crafts and building traditions.

The collection has grown very rapidly within the last few years, as it is now Departmental policy to aim to collect at least one brick from each known kiln site within the county of Norfolk. This is a Herculean task and we are only scratching the surface at present. Those brickworks which worked until this century are being visited systematically, the buildings photographed, brickmakers interviewed and sometimes recorded on tape, and bricks, pots and brickmoulds collected for the Museum. One such site is at Swanton Novers, an estate brickworks in a village which has a continuous history of earthenware manufacture since the seventeenth century, and from which bricks, moulds, pottery and tools were collected, the foreman brickmaker tape-recorded and the recipes for the glazes on pantiles recorded. Another site is that at Little Plumstead, a yard belonging to the Gunton family who moved there from Costessey, taking with them the moulds for the ornamental bricks for which their firm was famous. Eighty-three different bricks and thirty-four different wooden moulds were collected in addition to two brick barrows and other hand tools. The Bridewell also hold two of the Gunton's trade catalogues and a number of photographs of buildings of Costessey Brick.

Those brickworks which closed earlier, or of which less evidence remains, are visited when other fieldwork takes a member of staff to that particular area. Place name evidence (Brick Kiln Farm, Kiln Wood, etc.) is followed up and if any structures remain these are noted and a brick collected.

Bricks from standing structures are collected whenever possible and the opportunity most frequently occurs when the Museum is called in to advise on restoring or altering houses and cottages or when notification is given of demolition work.

Bricks held at the Bridewell Museum are indexed according to a system devised by the Museum of English Rural Life, Reading, and adapted by the Bridewell to its peculiar needs. Bricks from known kilns are classified within the Crafts section and those from buildings within the Building section. Occasionally there is the need for cross-references. Each brick is numbered and the provenance marked on arrival at the Museum and the two sections are stored side by side.

Unfortunately it is not possible for the Museum staff to devote more time to brick collection than its position as one among many local crafts deserves, but we hope that we are providing a foundation upon which others can build. Researchers are welcome to visit the reserve collection during Museum hours, Monday to Friday 10.00 a.m. to 5.00 p.m., by appointment and there is a permanent exhibition of a few of the more important or interesting bricks and tiles.

FEB 1974

BRICK COLLECTION - DONCASTER MUSEUM AND ART GALLERY

About a year ago we realised that although there are only five working brick pits in the area now, around 1900 there must have been a flourishing industry. This is indicated by the many different stamped bricks found locally. We decided to collect them when found in our own 'territory' namely W. and S. Yorkshire, N. Nottinghamshire and N. Derbyshire. Todate over fifty different stamped bricks have been accessioned with descriptive detail and provenance. The oldest, from the Archbishop's Palace, Scrooby, (N. Notts), dated to 1506; another, marked 'Hatfield Brickyard Employees', bears the names of the brickmakers scratched in the clay.

We document the bricks on our 'Bygones' cards (prototype for the new BBS 'Casual Find' card). We are also documenting sites of former brickyards on the C.B.A. cards.

Old maps, directories and field work are all used in the search for the sites of former brick pits, some of which have gone without trace. In particular, existing buildings at disused brickyards are being documented. At the end of 1973 we documented the kilns at Balby Brick Pit before its demolition; they had been in operation from the 1880s until 1968. Our next project is to document some derelict brickworks at Moss, near Askern, north of Doncaster. One of these kilns has been left stacked with bricks ready for firing. The machinery is also present. We shall also research into its history. The museum also investigates place names for evidence of former brick kilns, for example: 'Brick Kiln Plantation'. Besides bricks, we also collect pantiles and tiles and hope to add chimney pots to our display.

Cusworth Hall Museum deals with industry in S. Yorkshire and, together with Doncaster Museum and Art Gallery, forms the museums and art service of the Doncaster Metropolitan Borough Council. It has early 20th Century wooden brick moulds from the working Stairfoot Brick Pit near Barnsley and from the derelict Askern Brick Pit. This museum also has several archives concerning brickmaking in the Barnsley/Wakefield area.

Doncaster Museum's archaeological department is beginning to record all the local brick buildings of importance. The oldest in the area, however, are in N. Nottinghamshire and the Isle of Axholme: the Archbishop's Palace (cited above) and the tudor Gatehouse at Hodsock. Brick was not, however, introduced into Doncaster until the 17th Century.

In Doncaster Museum there is only a small section concerning brickmaking on display. However, visitors may see the brick collection by appointment during museum hours: Monday to Friday 10.00 - 17.00 hours.

Bricks from the Wakefield/Barnsley area may be seen at Cusworth Hall, also by appointment during museum hours: Monday to Friday 09.00 - 17.00 hours.

Our study is not confined to past brickworks only; the museum also has an active interest in working brickworks. At present in our area one of Europe's most modern brickmaking plants is in process of construction at Nostell, north of Doncaster. In due course this will be visited for full information.

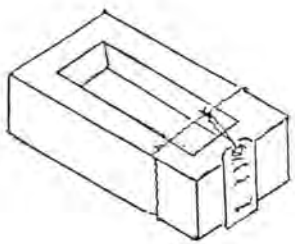
The geologist at the museum is also Hon. Regional Co-ordinator for the N.E. (Yorkshire) region of the BBS. Recently the museum has contacted all local museums and archaeology societies, together with the W.E.A. group. The aim is to recruit help in the search for bricks and sites and to see if there are any interested members who may act as recorders.

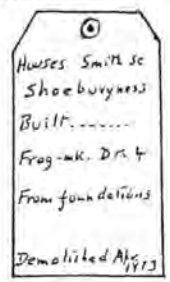
AUG 1974

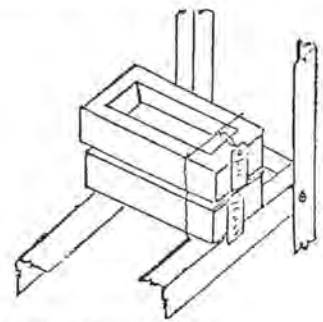
A MEMBER'S PRIVATE BRICK COLLECTION

Much re-development is taking place in our towns today and we do well to exploit the demolition of buildings in order to obtain samples of bricks from brickyards long since closed. Being in the building construction business* I am fortunate in having access to some of these sites and have collected about 300-400 samples in the ROCHFORD Hundred (Essex) for the past four and a half years.

A careful note is made of the property they come from and the date of the building is recorded. If possible four samples are collected to obtain a random selection because there are so many variations in size, burning, frog-mark, etc., therefore my collection represents 100-150 different bricks. They date from mediaeval to the present day. Each brick is first thoroughly dried, and then washed and cleaned. When the brick is dry again I tie string round it and tie a label to this to record all the information in a vertical position so that, when the brick is stacked, the label falls over the head for easy reference:







Bricks are stored on Dexion shelving, which comes in multiples of 3". I use angle only. The bearers are a foot apart with uprights about 2'6" apart, and the shelves are only 9" deep with angle front and back. The bricks are grouped in bays with the labels to the front. This shelving provides a simple and strong support but, for safety, I secure it to the wall with screws and rawlbolts, according to the nature of the seating. As my collection grows I add fresh bays.

Concurrently with this collection I am recording all the brickfields on record sheets (Cf. below), together with site plans to show the positions of washmill, washbacks, sheds, clamp-ground, kilns etc. These I copy, when I can, from O.S. maps. I have been able to record some 50 brickfields in the Rochford Hundred and many more in the surrounding area. Only two are now working : Star Lane, Great Wakering and Cherry Orchard, Rochford - both owned by Milton Hall (S'end) Brick Co.Ltd.

SITE	Shoeburyness Brickworks		DATE 1971	VISITED 26/7/1972	
KNOWN AS:	"Model"	Ref. Lester	O.S. TQ78 937 955	Ref No	
OWNERS	Eastwood & Co Eastwoods Ltd Redlands Group	MADE BY Hand machine	DATES 1897 1945 1963	FILE CARD E	Refs MAP Lester
BRICKS:	Red	STOCK	Special		
WASHMILL	✓	PUGMILL	CLAY : Al.Id	CHALK ✓	
REMAINS @ 26/7/72	Measured washmill @ N. Shoebury. Washbeds as shown on map Photo Taken in 1962				

* The contributor, John Jackson, is third in generation of a family of building contractors. He is a founder-member of the Brick Section of the BAA, and is also Convenor for the London & SE Region of the BBS. Members wishing to view his collection should first contact him at: 7 Bournemouth Park Road, Southend-on-Sea, SS2 5LQ TEL: (0702) 66688.

NOV 1974

BRICKMAKING COLLECTION

The Education Resources Service, formerly the Educational Museum Service, of the Nottinghamshire County Council, has a small but rapidly growing brickmaking collection relating to Nottinghamshire.

Some sixty-one kiln sites are at present known to have existed in the county, but only three remain in use. The Service aims to record and collect examples from as many of these sites as possible. Although one must admit only one member of staff is involved, and it is only evenings and week-ends!

One of the first examples acquired in 1971, was a late 18th C. long brick from South Notts. measuring 46 x 11.5 x 5cm. A small exhibition staged at our headquarters in Gedling, Nottingham, during April/May 1974, stimulated further studies, and encouraged a number of volunteers to help. From this source, a booklet illustrating the range of bricks produced c.1870, and three patterned bricks were added to the collection. The collection then grew rapidly during 1974 with items coming from some unusual sources, eg city multi-story car parks/public-house loo/quarry tip/ demolished bridge/garden well and a disused old school. Several N.C.B. bricks, all no longer produced, have also come into the collection.

Other than bricks, three sets of hand moulds have been located, one acquired, one promised, one now cared for. Todate, six kiln sites have been visited, three interviews undertaken with elderly builders/traders and approximately 40 bricks, pantiles and drainage tile/bricks collected.

Each brick is catalogued individually and the provenance recorded. In addition, a general index relating to the county includes such features as examples of outstanding brickworks, known kiln sites and associated place/field/ street names. A close liaison has been established with the Planning Departments to have buildings 'listed' or 'directed' with the information from the index.

Researchers are welcome to see the collection, by appointment, Monday - Friday, 08.30 to 17.00 hours.

Rodney Cousins, Assistant Administrative Officer, Gedling House, Wood Lane, Gedling, Nottingham, NG4 4AD, (TEL: Nottingham 247858). BBS Member No. 100.

APRIL 1975

THE MUSEUM OF THE METROPOLITAN BOROUGH OF ROCHDALE

The brick collection at Rochdale is still in its infancy and has unfortunately been relegated to a minor role recently whilst work on the new museum has been in progress. However, the groundwork has been done and a survey sheet sent to all museums in the north-west requesting information about their own collections and local brickworks, and representative brick samples. The response has been good. Many museums already collect bricks and most have offered to send duplicates to form a central collection at Rochdale. A list of people likely to have further information has been made and these, together with brick manufacturers, will also be contacted.

Space is a problem. We hope however that when more bricks and brick-making equipment have been collected, these will take a more prominent place in our display.

NOV 1975

BRICK COLLECTIONS: VI.

The President's Collection - L.S. Harley
(now deceased Ed.)

For over a quarter of a century I have collected samples of bricks which have interested me, either because of special shape, texture or topographical association. I find that I have over 120 examples, ranging from Roman and 12th Century to the present day - with emphasis on mediaeval and Roman specimens. Almost all are British, mostly from Eastern England. They are housed on wooden shelving at my home in Stoke-by-Nayland, Suffolk, and each is labelled with its provenance and apparent date.

A collection, even of fragments of known date, if arranged in chronological order, gives a remarkable insight into progressive changes in brickmaking technique, and I should like to think that all private collections, such as mine, would one day be cared for in reputable museums and adequately labelled.

It is essential to label each new specimen immediately upon acquisition and after cleaning; even a day's delay can blur recollection and lead to disasterous mis-description. Used bricks are not striking exhibition objects; but I find that a light coating with a vinyl floor-varnish makes them more attractive without concealing their essential 'brickiness'. This may be a possible treatment for brick as a museum exhibit. It is important that the dusty white surface coloration be suppressed while retaining the original colour of the body. Removal of adherent ancient mortar can sometimes be a disadvantage because such mortar may assist in dating the first and subsequent use. A broken brick fragment should not be despised: the fractured surface shows the true body-colour and may often exhibit 'inclusions', such as pebbles, shell and other indications useful in diagnosing the origin of the brickearth.

JAN 1976

*** Most of this collection is now in the Science Museum, South Kensington,London. It may be seen by special appointment. Applications should be made in writing to the Curator of the Building Construction Collection of the Dept. of Engineering.

Some items of local interest are at the Museum of East Anglian Life, Abbott Hill, Stowmarket.

GLADSTONE - The Working Pottery Museum.

This new living and working Museum of British Ceramics is concerned with every part of the industry. Galleries and displays open already cover the ceramic tile, colour and sanitary ware industries; while research is currently under way for a major gallery devoted to the heavy clay industries. The Museum is housed within a mid-19th century factory complex, the Gladstone works, which is itself a fascinating exhibit of bricks.

Visitors and laymen have traditionally thought of the Potteries as the home of tableware; the rich tradition of quarry tiles, roofing tiles and, of course, Staffordshire Blues, has all too often been overlooked. So we have started to organise field work to record the sites of Staffordshire brick and tile firms and to research their histories. Already we have collected splendid examples of moulds, 'horses', catalogues and manufacturing equipment, not to mention bricks, tiles and finials.

The Museum has been donated films, documents and relics of a recently defunct hand brick-making plant at Southend, and has acquired a broad range of illustrations of early processes, but is anxious to relate the rapid technological changes recently experienced throughout the industry. We would be glad were BBS members to inform us of threatened or overlooked kiln sites, machinery and documents that may assist us in presenting this story - wherever they may be. The task seems impossible - until we co-operate.

Members wishing to visit us may like to know that we open daily, except Mondays: 10.30 - 17.30 (Sundays & Bank Holidays 14.00 - 16.00). The brick material in store may be seen by making a prior arrangement with the Director, Uttoxeter Road, Longton, Stoke-on-Trent ST3 1PQ.

The Museum was started and is administered by an independent charitable trust, and in these hard times needs all the support that it can muster, whether from firms or from individuals. The Friends of Gladstone is a worthwhile "supporters' club". The subscription is £3.00 p.a. and enquiries should be sent to the Membership Secretary, Friends of Gladstone at the address given above.

BRICK COLLECTIONS: VIII The Complete Collector

When, in 1974, Martin Hammond - now Co-Ordinator for our Southern Region - came to Poole, he left behind him in the N. Midlands a rich legacy of information and brick samples. What one man may achieve in two years can be seen from the following account which we requested of him. Ed.

"Until recently Poole had several large 'potteries' which produced a wide range of bricks, tiles, terra cotta and salt-glazed ware from the local ball clay, as well as brickyards making stock bricks from sandy clays and loams.

In two years I have collected about 90 bricks both locally and from further afield when used locally - perforated bricks from Somerset; 'Haunchwood' blue bricks from Nuneaton and Flettons. Trade names include: 'Eastwood', 'Marston Valley', and 'Redland'. The foreshore at Baiter by Poole Harbour is being reclaimed with demolition rubble and so is a particularly rich source of finds - a 17th Century Dutch paving brick; Marston Bespres and a Bale's Patent Glazed and Coloured brick. These I clean of loose mortar, seaweed etc., measure and record on a BBS Form. I index them on a sheet with a copy to the Poole Museums Service which now has its own small collection and is the designated heir of mine.

I also have some Hitch's patent brick; sand-lime bricks and 'mathematical' and other tiles. All are stored outside, unlabelled but identifiable by the index. I have yet to devise a suitable method of storing and labelling" (Cf. John Jackson's article in 'Information 5'. He uses Dexion shelving and a neat strong/label device. Ed.)

"Using a wood-fired kiln I experiment in brickmaking and have already reproduced the silver-grey effect, found on old bricks, by prolonged heating at 1100°-1200°C. I now intend to collect samples of clay from each known local brickyard, mould them into briquettes and fire them. As the local geology is most varied I hope to be able to identify the source of old bricks by colour-matching them with my test samples".

Martin Hammond's address is: 13 Jackson Road, Parkstone, Poole, BH12 3AJ.

B.K. Pegden of Rosemeade, Chater Alley, Ramsdell, Basingstoke, seeks information of London and local (Sussex/Kent) production of bricks used in the construction of Martello Towers, Redoubts and Batteries erected between Folkestone and Seaford during the years 1793-1815.

David Sekers, Director of the Gladstone Pottery Museum, Uttoxeter Road, Longton, Stoke-on-Trent ST3 1PQ, has formed a Brick Group which already has to its credit the rescue of 'The Bridge': the 'local' for Wedgewoods at Etruria. He now wishes to hear from anyone who can help to cover a survey this Group is making of Bottle Ovens remaining standing throughout the country.

B.G. Shying, MAICS, is writing a paper on: 'Early Brickmaking and Bricklaying in Australia'. He seeks information on the method used to burn bricks in England between 1770-1785, including ways of firing the kiln. Replies: Wollongong Technical College, Foleys Road, N. Wollongong, P.O. Box 1223, Wollongong, N.S.W. 2500.

NOV 1976

BRICK COLLECTIONS IX.

AVONCROFT MUSEUM OF BUILDINGS
STOKE PRIOR, BROMSGROVE, WORCS

Last summer work began on a collection to record the products of local brickworks, past and present, together with unusual examples of bricks and tiles from elsewhere. The bricks are also used for exhibitions and to illustrate lectures either at the Museum or extramurally. They offer a source of reference to architects when restoring buildings in the area, and to historians of architecture and industry.

In June, 1976 the Museum's Education Officer, Jennifer Costigan, began to record the bricks on our accession cards. These note: type of brickearth; brickworks of origin; date; measurements, and site where found, with sketches of unusual features. An index shows brick-number and year recorded. These details are repeated on the accession card and, in black indelible ink upon a white-gloss strip painted on the brick.

Catherline Atherley, a graduate of Manchester University, took over this task in July and by the end of August several hundred bricks had been accessioned and sorted into different groups (hand/machine made, decorated, firebricks, etc.) ready for classification. 'Classification'!? We await a national system, and anyone with ideas should, please, send them to Miss J.A. Costigan, as the Museum.

Visitors to the Museum will receive a hand-out containing a brief history of brick and local brickmaking, and a request of what we require by way of fresh items for our collection. We hope to display this collection on the site together with other examples of building materials: stone, wattle-and-daub, cob, flint, timber, and chimney pots.

MAY 1977

THE EARLY HISTORY OF BRICK IN N.E. GERMANY -

An epitome of Dr. Ing. Noah's lecture to the BAA.

In the 11/12th centuries glacial granites and tufa were used to replace timber until, from about 1200 AD., the Cistercians introduced brick from the northern part of The Netherlands. Bonding, at first haphazard, came in three stages: c.1250; then up to 1400 and finally the 'Gothic' bond up to 1500. Thickness, initially (c.1230) just over 3", increased to 3½" c.1476, but by 1763, had diminished to 2⅛" which is nearly today's standard.

'CHINESE BOND'

This bond creates semi-cavity walls which, Mrs Anthea Brian has written, the Chinese did produce. Such walls, according to an article of 1840, were beginning to be made about then. Dr. Lyle E. Perrins wrote citing examples of 'rat-trap' bond in Hatfield and Ashwell, Herts. Mrs Walker has, herself, subsequently found two books dating the vogue for Chinoiserie, to a century earlier: W & J Halfpenny 'Rural Architecture in the Chinese Taste' 1752, and Sir W. Chambers 'Designs for Chinese Buildings, Furniture, etc.' 1757. See also, when it is published, Dr. Brunskill's record sheet for brick which illustrates both rat-trap and Dearne bonds, the latter of alternate courses of headers and of bricks laid, as in rat-trap, on their broadest side. But we still need more facts.

MAY 1977

ENQUIRIES Information 13 May 1977.

Karl Gurcke (archaeologist and BBS member), seeks advice on the chemistry of "breeze" bricks used in 19th C. England but also perhaps sent for the building of a village near the (Hudson's Bay Co.) Fort Vancouver, Washington, U.S.A.; and would like any details of English brick makers' marks.

REQUESTS FOR INFORMATION NOVEMBER 1977

Southwark and Lambeth Archaeological Society have been excavating at the site of the Vauxhall Pottery (late 17th to mid-19th century) in London, and request information and comment on the following bricks found while digging -

1 Refractory brick "RAMSEY" in a kiln tentatively dated to the first half of the 19th century.

2 Refractory brick "RAMSEY" unstratified.

3 Buff brick, "PRUDHOE", unstratified.

4 Buff brick in late 19th century wall stamped "JBW/&/SON". All the above are 9 x 4½ x 2½ ins.

5 Kiln lining brick made on the site 8½ x 6 x 2 ins.

"Ramsey" and "Prudhoe" bricks almost certainly come from brickmakers in Newcastle-upon-Tyne. Further comments which would assist in dating (eg when did "RAMSEY" become "RAMSAY"?) or details of other sites where these bricks have been found will be gratefully received by Roy Edwards, 12 Blackland Drive, Hayes End, Hayes, Middlesex UB4 8EU.

Bracknell and District Historical Society are planning a publication on the local brick industry, and wish to place this in its wider geographical context. Anybody with information on brickworks in East Berkshire is asked to contact Mr F E Reeks, 3 Lynwood Close, Bracknell, Berkshire.

Martin Hammond of 13 Jackson Road, Parkstone, Poole, Dorset, recently picked up a fragment of a brick of a type unknown to him. He writes "The Complete brick would have been 230 by 108 by 65mm, handmade but treated in a re-press. The upper face of the brick has 32 studs on it in 4 rows of 8, which engage with 32 indentations in the bed of the brick above. The idea was to give a better key to the mortar. It is stamped, between the studs, VICTORIA WORKS/WAREHAM DORSET (the previous occupiers of the Sandford Pottery site 1851-95), and underneath, ... TTS PATENT. Whoever's Patent it was could not have had a very long name as there isn't room, probably something like Platts or Betts".

HOLKHAM ESTATE DOCUMENTS

Mr W O Hassall has advised us that there is now available on microfilm a large part of the Earl of Leicester's manuscript collection at Holkham Hall, Norfolk. Of particular interest are the Estate papers, including accounts and letter-books, which contain many references to the making, sale and use of bricks in the 18th and early 19th centuries.

A brochure on the available material can be obtained from ep Microfilm Ltd., Bradford Road, East Ardsley, Wakefield, West Yorkshire WF3 2JN.

NOV 1977

INDUSTRIAL HERITAGE - TICCIM

The Third International Conference on the Conservation of Industrial Monuments was held in Sweden from 30 May to 5 June 1978. These Conferences, the first of which was held at Ironbridge Gorge Museum in 1973, tend to concentrate more in the politics and philosophy of industrial monuments conservation than on the nuts and bolts or the bricks and mortar. Nevertheless, it was a stimulating opportunity to meet and discuss the practical side of conservation with 130 delegates from 18 countries, mostly European. It seems that there is more in common than in divergence, which can only be encouraging.

Sweden is not in the 'front line' of brickmaking countries because its brickearth and clay deposits are limited in extent. But in Stockholm can be found, facing each other across the water, two superb brick structures of fairly recent date. Ragnar Ostberg's City Hall (1911-23) is elegant and romantic; the Mũchen Brewery is functional, but exquisite in its own way, with some splendidly ornate detailing in the brickwork.

The Conference adopted a proposal to establish an International Committee on the Conservation of the Industrial Heritage, which will in due course be affiliated to UNESCO. Lovers of brick and of the many splendid examples of its use in industrial structures can therefore take heart, as efforts to preserve and re-use such structures gain momentum throughout the international community (by Michael Bussell).

AUG 1978

BEAMISH BRICK WALL

The Beamish Open Air Museum near Chester-le-Street have displayed their collection of bricks by building them as a wall in the Information Centre. The maker's name or mark may be read at leisure, but alas, the surface texture, glaze, colour etc., is lost to view. The rest of the Museum is well worth a visit and it is developing all the time.

AUG 1978

ENQUIRIES AUG 1978.

USA

Mr Jim Graves, 1468 Coolidge, Wichita, Kansas 67203, USA, has a list of 3,000 US brickmakers and belongs to a collectors club which has over 100 members who are brick collectors. Mr Graves would be interested in hearing from anyone interested in doing some international brick trading.

BRICKWORKS ON THE BEACH

I was surprised to find so many items remaining at a disused brickworks built into the cliffs and out onto the beach in North Wales this year. It is on the north coast of Anglesey at Porth Wen, between Bull Bay and Camaes Bay and can be reached by a rough track on foot or by a boat. (Old O.S. Map 106 402947). The main access to the Works when in use was by sea, but a vivid imagination could lead one to believe that the incline past the crushing plant (a jaw remains) led to the minor road above. As the path winds down the steep cliffs the tops of two large chimneys appear and three round kilns, almost intact, are clearly visible on the edge of the site. The products of the works are underfoot mostly yellow in colour, but some red, and some with a glaze of black, brown or navy. The yellow shaley clay could be clearly seen in the worked cliff face, and the beach itself was covered in rocks and boulders of every shade of purple you could imagine. One ruin in the grass seemed to be of an old rectangular kiln and chimney stump, whereas another ruin seemed to house an old gas making plant. We were told that the site was worked by a staff of Chinese men.

Anyone lucky enough to have a holiday to come in North Wales would enjoy a visit to this site. The Editor would be grateful for any information re this site.

PS "TIDY" is marked on some of the bricks on the site.

Mrs W A Los AUG 1978

BRICKWORKS ON THE BEACH (Mrs W A Los - AUG 1978)

My article on "Brickworks on the Beach" has brought this delightful response from the first editor Geoffrey Hines. In connection with Porth Wen brickworks, Anglesey, between Bull Bay and Camaes Bay, Mr Hines writes -

From what was lying around I deduced two stages of haul. First a funicular from works-level to the cliff top; and then a tram-way thence to the road head. The coal I imagine would have come direct by sea, but some bricks would have taken this land route.

The place was, "they say" locally, developed by Germans as a cover for a convenient submarine base in the First World War. This, even if apporophal, might give C.1913 as a lower date for the plant.

What I do know is this. The son of the former Manager of the Holyhead refractory brick works lives, a very old man, in Holyhead, where I met him at his home. When he succeeded his father as Manager, they tried to tempt him to resign and take on Porth Wen. He visited the place and looked at the cliffs to find "very little Cl-er-ay idee-art but much sarnd and rawrk. I torld them that it would not do for cl-er-ay brick. They said to me - "Look you, it will make refraaaatory bricks also". So-a I saird to myself: "If they think they can make bo-a-th clay bricks A^{RN}D refractory bricks, tharts no play-ace for you boy-oh".
And I wish you could have seen the old boy's twinkle as he said it.

In conclusion: At some time before 1914 either after an inadequate survey or a good one that was, for some reason, disregarded, a lot of capital was sunk into the clay-preparation plant, harbour, moulding plant, kilns and vast chimney for what turned out to be a most inadequate brickyard. Perhaps it was the Germans after all.

Anyway it's a peach of a spot for a picnic when the wind is in the SW and when, despite this, that side of the island is sunny.

by Geoffrey Hines

THE FIRST ENGLISH BRICKS

The introduction of bricks to this country, like several other advances in our civilisation, was the work of the Romans. It is hoped, therefore, that this brief and simple account will be of interest, and even of value, to those who are interested in the topic.

To the Romans, as to succeeding ages, bricks possessed advantages. To make them was cheaper and far easier than the arduous labour involved in quarrying and fashioning blocks of stone. Once finished, bricks were not difficult to transport, - if indeed that was necessary, for the clay was often found on the site of its utilisation.

So the Romans set the brickmakers to work. In their native Mediterranean climate, the bricks were sun-dried, but the conditions of the British weather meant that here bricks had usually to be burnt.

Burning was effected either in clamps or in specially prepared kilns. One such kiln, ... and no doubt representative, ... was constructed in a square of brick and tile, bonded with clay, and partly buried in the ground. The floor was of clay, with holes for the hot gases to emerge from the flues beneath. A tunnel increased the draught.

According to Vitruvius, the Roman encyclopaedist, white or red clay or a gravelly clay, were the most suitable. The finished products varied considerably in dimensions. One brick I had in my possession measured 7 x 5 x 1½ ins. Some were larger, - 12 x 6 x 1½ ins, and still larger - 18 x 12 x 2 ins (these latter were often used in brick vaulting). Other examples were square, - 7½ ins square x 1½ ins thick; 16½ ins square x 2 ins thick, 22 ins square x 2¾ ins thick. There were triangular-shaped bricks, used sometimes for the outer casing of walls, and there were hexagonal bricks.

Brick was also used in small cube-shaped pieces called tesserae, together with pieces of natural rock and glass, to form the well-known pictures and patterns called mosaics.

All the bricks were thin - for which reason it might be more accurate to classify them as tiles, - but since they were thin, they could be well burnt, and hence lasted longer.

The Roman uses of brick were numerous. They were utilised for small buildings such as shops and houses, and some of the brick lintels still remain, as well as many hypocausts and flues. Barrel vaulting was achieved by placing concrete on a vault of brickwork. To prevent walls from sagging, the Romans laid a line or two of thin red bricks every four or five feet of height, and the best examples of such work can be seen in the flint walls at St. Albans, Richborough, Colchester, and the fort walls of Burgh Castle, as well as the Pharos or lighthouse which the Romans built at Dover. Towards the end of their occupation of our island, ie, in the 4th century, different coloured bricks were used for pattern work. (In brick making, the greater the heat, the darker the hue).

When the Romans quit this country, the brick-making industry ceased, but its products endured, for they were indeed of good quality. Thus Roman brick was re-used by the Saxons, especially for churches, and by the Normans who utilised it for castle walls, churches, jambs, arcades and stairs.

Thus anyone who visits the south-eastern counties, - Sussex, Kent or Essex in particular - can appreciate the sound initiation which the Romans gave to the Brick Society.

A.H. STAMP

Mr A.H. Stamp is well-known in historical circles in the North and has written books on various topics of history, as well as lecturing in history. Our sincere thanks to him for this interesting and valuable contribution to our knowledge.

NOV 1978

ENQUIRIES

EPSOM

Mr Maurice Exwood, a new BBS member, would welcome information on locations of buildings using "mathematical tiles", also known as "weather tiles" or "Brick tiles", if possible, with the approximate date of use. Information would also be welcome on locations where exceptionally large bricks have been used to minimise the impact of the Brick Tax (1784-1850). Bricks in excess of 3½" thick would be of interest. The most likely period of use would be 1784-1803, when bricks in excess of 10 x 3 x 5 ins became chargeable with double tax.

BRICK TAX

Our members from the USA may be interested to know that the American War of Independence was the cause of our Brick Tax, the money collected being put towards the expenses of the war. In 1784, the tax was 2/6d per 1000; 1794 4/- per 1000; 1803 5/- per 1000; 1833 5/10d per 1000; and in 1849, the year before the tax was removed, the Government collected taxes on 800 million bricks, which according to my basic arithmetic is £525,000.

Perhaps other members will know these large bricks as "Wilke's Gobs", after Sir Joseph Wilkes who made bricks almost twice the size of a normal brick at his yard at Measham in Leicestershire.

In 1803 tiles were also included in the tax and bricks greater than 10 x 3 x 5 ins were taxed at 10/- per 1000. The tile tax was removed in 1833 and the brick tax in 1850.

The largest brick in my own collection is 9⅛ x 5⅛ x 3 ins and is red, and it was found at Kirby Stephen in Westmoreland in October, 1976.

by Ann Los

NOV 1978

GUILDFORD CATHEDRAL

All the facing bricks for this beautiful Cathedral were made from the clay out of Stag Hill on which the Cathedral stands. The building was designed by Sir Edward Maufe, R.A. F.R.I.B.A., and although the foundation stone was laid in 1936 the work was not ready for the consecration ceremony until 17th May, 1961. The Cathedral is built in a special bond of two stretchers to one header.

The brickworks were opened in the last century by Thomas Mitchell of Farnham on a site at the foot of Stag Hill and they remained in the family until 1937. The works were then taken over by the well-known Sussex and Dorking United Brick Company Limited, a member of the Redland Group. At one time four and a half million tiles and enough bricks to build 750 houses were produced each year.

The brickworks closed down in the late 1950's and in March, 1962 it was reported to have been sold for a sum in excess of £160,000 and that the nine and a half acre site would be used to build 145 terraced houses on.

Re the article in Information 16 regarding Guildford Cathedral, I am delighted to include further information about the bond used from member Brian Blackwood DipTP (London), DipCon Studies (York), FRIBA, FRTPI, FSAScot, FSIA, FRSA.

Members may be interested to know that the bond used is a form of Monk Bond - which is very appropriate for an ecclesiastical building. Monk Bond has been used since Mediaeval times in Northern Germany and Scandinavia. It is a bond between Flemish Bond and Flemish Garden Wall Bond, and is known as modified Flemish Bond in America.

Brian Lockwood

JAN 1979

JUST FOR INTEREST

Did you know that in 1961 a total of 7,418,000,000 bricks were produced in this country; that is enough to build a wall eleven feet high completely round the 24,000 miles of the Earth's circumference.

NOV 1978

TEA FOR TWO

Anyone fancy a cup of brick tea?

Brick tea is the interior leaves of the tea plant mixed with a glutinous substance, sometimes bullock's or sheep's blood, and then pressed into cubes and dried. These blocks were frequently used as a medium of exchange in Central Asia.

NOV 1978

BRICKS FROM A BY-PASS

In the January "Clayworker" magazine of 1960 it was reported that 60,000 tons of boulder clay from the Doncaster by-pass workings is being unloaded at the Brickworks of Cocking and Sons Limited of Doncaster, a subsidiary of Brick Marketing Co. Ltd. The company manager Mr George Cox said "We will not start using it until next summer".

When he knew digging was to take place for the by-pass he had thought there would be boulder clay which could be used for brickmaking. An approach was made to the consortium building by the by-pass, Cubitts Fitzpatrick Shand for the boulder clay.

"They are now delivering the clay to our pit and I am very happy to get it" said Mr Cox.
"Our supply is almost worked out and this supply will extend the life of our pit by eighteen months".

Some time ago the company acquired about twenty to twenty five acres of land in Broomhouse Lane, near their Tickhill Road workings with a view to using the clay there for brickmaking. But now they have the clay from the by-pass this development will be postponed.

(Members may have a Cocking and Sons brick in their collection. The one in my own collection is a cream/white colour and came from a garden wall in Hessle near Hull, East Yorkshire.

W A Los JAN 1979

SHEFFIELD COLLECTION

Mr Graham Hague has spent over a year collecting named bricks from demolition sites in the City of Sheffield and has restricted his collection to those of Sheffield manufacture. The collection is housed in the garden of his home at the moment but is eventually destined for the Kelham Island Industrial Museum in the City of Sheffield.

I believe the collection is about two hundred bricks now, including decorative ones with a "dog's paw", a diamond motif, a star motif, a panel with leaves and flowers on; a blue brick with "1837-1897 DIAMOND JUBILEE" and a large building unit from the old firm of William James Greenwood impressed "W J G" and measuring 9½ by 6¾ by 14½".

JAN 1979

FOOT PRINTS IN THE BRICKS OF TIME

Some years ago, while working in the far north of England, I excavated a Roman brick. Clearly and deeply impressed thereon was the part-print of a hunting dog's paw. A long while later, and elsewhere in the north, I discovered another brick with the mark of a complete paw, - this time a domestic dog.

I was well aware that museums in the south and west of England have similarly marked Roman bricks. Other people I know have found them. In the Public Library in Hull at this moment, there is such a Roman brick on display, and I saw yet another this year while on holiday in the Midlands.

One therefore commences to gain the belief that Roman Britain was inhabited by a type of errant dogs, which spent their time running over the semi-liquid clay in a perpetual plague of the Roman brickmakers.

IMPRESSIONS ON "GREEN" BRICKS

In 1972 Dr Robert Noah opened an investigation into brick impressions of the kind made by animals and humans, deliberately or accidentally, upon bricks 'in the green'.

A H Stamp JAN 1979

RAILWAYS AND BRICKS

The demand for bricks increased because they were needed in the construction of railways and canals, and because these means of transport helped their distribution. It is known that some railway engineers discovered clay while constructing a railway and used to make their own bricks on the site. Readers may know of a brickyard working today that owes its origins to the railway.

Thomas Brassey made 13 million red bricks on the site of the GNR Welwyn Viaduct; in 1949-50 the clay removed from the Copenhagen Tunnel north of King's Cross was made into bricks at the tunnel mouth by Pearce and Smith, and then used for lining the tunnel - they are still there today; Lancashire's longest viaduct at Whalley, 70' above the Calder, has twenty eight spans of thirty feet and twenty spans of forty feet, and contains seven million bricks made on site near Whalley station; George Babb obtained a site adjacent to Grimsby Dock to make bricks of the clay that was removed during the construction of the docks. The twelve arch viaduct of 1858 at Hownes Gill, 730 feet long and 150 feet high was built of 2,655,000 firebricks from the Wear works of a famous northern firm, Please ... these bricks cost extra though because they were not made on site.

The Malton Driffield Railway made a poor quality brick for the construction of their railway line and as the line is now disused few examples have survived the frost damage, the vandal and the rail enthusiast, to display the elaborate three section frog containing large letters M D R.

The pride of my collection was given to me by Mr Geoffrey H Platt and came from Crewe Station. It is a red brick made by the London and North Western Railway Company and has a long thin frog on the back with their initials in "L N W R C" on it. The front of the brick is divided into three sections each containing a flower of twelve petals.

W A Los JAN 1979

RAILWAYS AND BRICKS - CREWE

Re the article titled as above, M D P Hammond has kindly supplied the following information re the brick from Crewe Station - 'The LNWR had a brickworks of their own at Crewe locomotive works. It was equipped with a Hoffman kiln and brickmaking machinery and was erected in the early 1870's. Bricks and pipes for engineering work were produced there, but apparently they must have produced facings and ornamental bricks as well'.

M D P Hammond

POPE AND PEARSON WAKEFIELD

Members who have obtained the P & P book will be interested in the following generous offer from the Wakefield Metropolitan District Council Library Services and their Archivist Mr J Goodchild -

"We have a considerable quantity of material appertaining to brickmaking from the seventeenth century onwards, including accounts, scale plans, leases, other plans, colliery company accounts etc ... and a large collection of papers on the Deepcar area including a written up essay by myself on Lowoods. The Wakefield district contains some locally early surviving brick houses - Red Hall c.1610, Clarke Hall c.1680, Lupset Hall c. 1716 and various town houses of the late seventeenth and early eighteenth centuries and I would be delighted to discuss these matters with any members of the Society who are interested."

MAY 1979

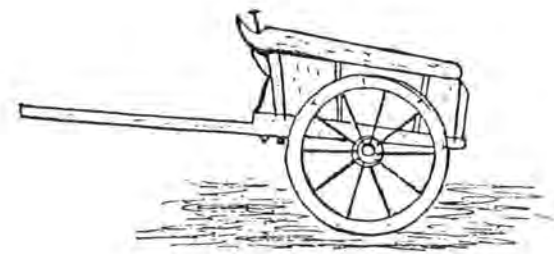
SELBOURNE BRICK AND TILE COMPANY VISIT

I have just surveyed what I believe is Britain's last coal-fired Hoffman kiln at the above works near Alton Hants. This visit was planned 18 months ago when I first heard that a new kiln was to be built. Just before Christmas I had a telephone call from the manager to say that the kilns would be let out on the 22 December 1978 and that demolition would start in January 1979. I visited the site on the 8th January 1979. The kiln was built with 12 chambers in 1933 and extended to 16 chambers in 1946. It is unusual in having a drying tunnel down the middle between the two rows of firing chambers. There are two tracks along which drying cards can be hauled by a hand operated winch and hot air was ducted straight from the kiln to drying sheds elsewhere. The kiln was fired with South Yorkshire 'smudge' coal brought from the Humber by sea to Shoreham, and thence to the works by road. Steenbrugge trickle-feed stokers, operated by rachets and chains from a shaft driven by a small electric motor were used. The stokers were set over each feed hole and were moved around as the fire progressed with the aid of a 'dandy', which resembles a sack trolley. I found work had already started on removing the asbestos sheet roof, and in the kiln the last four chambers were being drawn. In one chamber were 14,000 two inch bricks for I C I. The chambers hold about 10,000 bricks each. I had a talk with Bill Kilburn who was kiln burner on this kiln during most of its existence. The kiln was shut down during the war, and Bill returned from the army to re-light the kiln after it had been extended.

The new kiln is a large rectangular oil-fired downdraught kiln and some teething troubles are being experienced with it, resulting in large quantities of seconds and rejects, but this is only to be expected with a new kiln until its idiosyncrasies are known.

M D P Hammond MAY 1979

THE BRICK CART



On building sites, in brickworks, and along the streets of London, in Victorian times, and indeed, surviving until the Second World War, were the builders' carts.

These strongly-built, two-wheeled vehicles, drawn by a single horse, had boarded sides rising higher than the wheels. The front of the cart was a projecting open platform which could carry additional weight. As many as 600 to 700 bricks could thus be carried in a load.

A H Stamp MAY 1979

IRON BRIDGE GORGE MUSEUM TRUST

I surveyed the site last September (1978) for the project to restore the brick and tile works at the Blists Hill Museum site to working order. It will involve installing steam driven clay preparation plant and machinery and rebuilding the boiler house and at least one of the down-draught kilns. The works used to make handmade bricks and roofing tiles from deep-mined red marl.

M D P Hammond MAY 1979

RE-DEVELOPMENT OF BRICK WORKS SITE

I have heard that the site of the Reads Brickyard at Sandleheath, Fordingbridge, Hants, is to be re-developed as a small industrial estate in the next year or two. It has been disused for the last fifteen years though the three scotch kilns and some sheds containing handmade brick making equipment are still standing. The site was recorded in Donald Young's article 'Brick making at Sandleheath' in Industrial Archaeology, and my 'Brick kilns - an Illustrated Survey', also in Industrial Archaeology Review. Mr S R Read still owns the site and we dig my year's supply of clay there every year.

M D P Hammond MAY 1979

ENQUIRIES INFO 18 MAY 1979

Larry G Herr is preparing a dig manual and field record sheets for a major excavation in the Near East which will commence in 1980. He seeks advice on the use of a standard classification and terminology for describing mud-bricks and its characteristics, suitable for a computerised field recording system. Apart from L S Harley's paper in the BAA Journal 1974 which concentrates on fired brick, does anyone know of published attempts at such a classification? If so, please contact Mr L G Herr, Philippine Union College, Box 1772, Manila, Philippines.

MAY 1979

1450 - 1500

G C Hines (address below) would appreciate any information applicable to this period regarding the following:-

Bricks: 5½/140 x 3.3/4/95 x 1½/38: also, 8/203 x 4/102 x 2/51 and any of this size that were vitrified.

Any evidence of a 'proto' English Bond where a few headers between courses of stretchers above and below, are followed by a few stretchers between courses of headers above and below, but without any one course consisting entirely of headers or of stretchers. Please give as full a provenance as possible. Replies, if possible by 31 May to

Mr G C Hines, 51 Marlborough Road, Ipswich IP4 5BA

MAY 1979

GIGGLEWICK'S DOMED CHAPEL

The Yorkshire magazine 'The Dalesman' May 1979, contains a centre page spread about Giggleswick's domed chapel near Settle. One photograph shows very clearly the terra cotta interlocking blocks used to build the dome. No centering was used to support the blocks during the construction. The architect was Sir Thomas G Jackson and another photo-graph shows the man himself. Anyone interested in a copy and unable to obtain one from their local shop should write to The Dalesman Pub. Company, Clapham, via Lancaster.

COCKING & SONS LTD, DONCASTER

The 'Bricks from a By-Pass' article in Information 17 mentioned the brickworks of Cocking & Sons Ltd, Doncaster. Further details of this firm and of other brickworks in that area, including maps, diagrams, drawings and photographs, are in the Autumn issue of 'Narrow Gauge Times' price 65p (not including p & p), 193 Main Road, Longfield, Dartford, Kent. The article is by Colin Staxton and is titled "Chain Haulage Systems of South Yorkshire" and deals with the ways the clay was removed from the clay face to the works.

There is a very good diagram/plan of the adjacent sites of the works of Cockings Brick Company and the Doncaster Brick Company showing their buildings, clay faces, haulage ways and water filled pits. A general map of South Yorkshire shows companies in the area which had a chain haulage system and mentioned Wombwell Stairfoot, South Kirby, Cudworth, Hemsworth, South Elmsal, Selby, Moss, Upton, Conisborough and Edlington. (If any one interested in this article has problems obtaining a copy, will they please contact Ann Los - BBS Bibliographer.

THE BRICK CHILDREN

Those who are interested in bricks find their fascination in the technique or in the texture, in the history or the type, in the thrill of a collector's acquisition, or even in the beauty or a brilliance.

May I now, however, introduce to you yet another aspect of the brick, - a vital one. Let us meet some of the people who made the brick, and who thus made possible all your other interests in its existence.

In 'The Graphic' of Saturday, 27th May 1871, there appeared the illustration which you have in this issue of your magazine. It could be entitled simply 'The Brick Children', and as I looked at the picture, it prompted me to wonder who these children were, and what they did. Certainly, their existence was infinitely more sad and wretched than that of the well-known 'Railway Children' in modern film. But theirs was a reality, not a box-office emotion.

Their lives continued until about a hundred years ago, - not within living memory, no doubt, but not so very long ago, and a reminder of how greatly times have changed.

In 1853, the Government had passed yet another of its important Factory Acts, - the seventh. In accordance with the provisions, children from 8 to 18 had to work from 6.0 a.m. to 6.0 p.m. in summer, and 7.0 a.m. to 7.0 p.m. in winter, including 1½ hours for meals. As Saturday was a half day, the Act virtually imposed a 10-hour day.

You might care to read again the above paragraph, and really appreciate what it means. A child of eight, ... only eight, ... had to work a 10-hour day, over a 6-day week. Could any regulations be more remote from present-day practice?

But the Factory Acts at best applied only to the factories. They did not apply to the coal mines, the iron foundries, the brick works, or various other industrial concerns. So the Brick Children did not even have the 'protection' of the Factory Acts.

What, then, was the existence of these children in the brickyards?

In 1871, there would be between 20,000 and 30,000 of them, ranging in age from 3 to 16, and employed mainly in the Midlands. Their task was to carry the lumps of tempered, or 'pugged' clay as it is called, from the clay dump to the brickmaker. Two children served each brickmaker, a man who would produce about 3000 bricks a day, and which would weigh about twelve tons. That tonnage of raw clay had to be carried by the children. Thus a lad of nine was expected to carry a lump of wet clay some 43 pounds in weight.

The traverse from the dump to the brickmaker and back covered a journey of 12½ miles a day, half of that distance involving the carriage of the clay. The children worked 13 hours a day, - sometimes longer, including throughout the night, - rarely shorter, except in the slack season. And six days a week, sometimes seven. At the end of each day, they were completely exhausted, as well as beaten and bruised by blows if they failed in their deliveries.

Their toil, tears and sweat earned them but about 8d a day (4p), but this must be placed in its correct perspective. The present penny has a purchasing power in direct proportion to its size, but in 1871, a penny could buy, for example, a loaf of bread or about 3 lbs of potatoes, or three eggs or a pint of ale. Butter was 6p a lb. A chicken cost 13p. Nevertheless, the wage of 4p a day to cover the entire cost of living, was a pitiful inadequacy at the time.

So they toiled, these boys and girls, in their thin, ragged clothes, sometimes almost naked, their hair matted with thick clay, their bodies filthy since they rarely washed, illiterate and immoral.

The toil of the children was inevitable. The yard-owners were only too pleased to employ youngsters, for they could work for less wages. Many parents, too, regarded children as an investment, and reared large families, not for love, but for the sake of the extra income from their earnings. Other parents wanted to be rid of their children, while yet others, in sorrow and terror, had to send them to work so that the money they earned would save the family from starvation.

But whatever the reason, the youngsters were condemned to labour, and the system did not approach its termination until, in 1871, an Act of Parliament prohibited the employment of any female under 16, and any male under the age of 10. The system was not really terminated, however, until the 1880's, when legislation enforced education instead of employment, and the children were transferred from the kilns to the classroom.

So if you are in possession of a brick over a hundred years old, gaze at it now, for a moment, with a renewed interest. Remember, ... it might have been made by the Brick Children, their tears mingled with its texture.

The International Year of the Child.

A H Stamp NOV 1979

THE BRICK CHILDREN

The interesting article in Information 19 about the brick children reminds me that it was his early experience of the brickyards (as the son of a brickmaker, carrier in a brickyard at eight years old, owner and then manager of a brickyard) that led George Smith to espouse the cause of these children before undertaking his better-known work in the defence of the boat people on the canals. His "The Cry of the Children from the Brickyards" in 1871 interested the seventh Earl of Shaftesbury. In that year the Factories Act (Bricks and Tile Yards) Extension Act provided for regulating the employment of women and children.

Smith's subsequent campaigning led to the passing of the Canal Boat Act which came into force on the 1st January 1878.

Of brickyard conditions, Smith wrote: "The uttermost abomination of immorality, prostitution, impurity and loathsome talk and cursing are to be found .... and precociousness of the knowledge of things children ought not to know, much less to do, is one of the most terrible elements of the evil training."

My source is "Our Canal Population" by George Smith (EP Publishing 1974)

Philip Daniell

Resources Development Officer
British Waterways Board JAN 1980

"DAM NO BRICKS'

'Building' Magazine, 23/3/79 reported that the completion of the Aswan High Dam in Egypt has stopped the yearly supply of silt brought down by the floods. As a result, many brickworks have been forced out of business or were having to buy large tracts of valuable agricultural land for clay pits. Both the farmers and the Government took a dim view of this and the brick industry has almost disappeared.

Supplied by M D P Hammond NOV 1979

PITSHAM BRICKWORKS VISIT

Pitsham Brickworks, near Midhurst, Sussex, one of several works in S.E. England, owned by W.T. Lamb & Sons Ltd., of Horsham (SU 877 198). The works is in two parts, one based on hack drying and clamp firing, the other on heated drying sheds, and kiln firing. The latter is in production throughout the year; the clamp yard during the summer only, and those who work it dig clay during the winter after firing the clamp in the Autumn.

A year's supply of clay is dug and barrowed to a large heap about 5 ft high and weathered. In the Spring it is turned over and the correct amount of coke breeze added, and it is soaked with water from a hose pipe. This is done separately in the clamp and the kiln yards, each having its own Lintott pugmill supplying two moulding benches, driven by an electric motor and belting. In the clamp yard the bricks are moulded by hand in the usual way, and set on bearing-off barrows and wheeled to the hacks, where they are set on edge, in long double rows, on a wooden platform. The backs are built up one course at a time, and covered against inclement weather. The traditional wooden hack caps are being superceded by these made of polythene sheeting on a light wooden frame. In August building of the clamp starts. Two courses of burnt bricks set on edge 2 in. apart are laid to form the base, dished towards the middle. A 6 in. layer of ½ in. coke is laid on this, above which the dried bricks are set close together on edge in rows. The outside of the clamp is arranged to tilt the courses inwards, and cased with two layers of burnt bricks laid flat. The whole is about 3 ft. x 20 ft. x 20 courses high. The coke is then ignited and the clamp left to burn out. In 1976 the heavy Autumn rains put the clamp out leaving many of the bricks underfired.

The handmade bricks in the kiln yard are dried in two sheds heated by hot water pipes in winter. The moulders work out of doors in the summer, but in winter move into the sheds. Besides standard bricks all the specials, briquettes and purpose-made bricks are made here: the clamp yard produces only standards. They are burnt in a coal fired rectangular downdraught kiln of 20,000 bricks capacity. Firing takes 2½ days and consumes 9-10 tons of Annesley (Notts.) house coal. The fires are stoked every ¾ hour by the yard foreman. First the glowing fuel is pushed towards the back of each of the ten fireholes with a rake, then three shovelsful of coal placed at the front of the grate.

During my visit some bricks for Hampton Court were being fired, and it made my day to go round the kiln coaling the fires, watched closely by the foreman. I also made a few briquettes.

The works originally belonged to the Nyewood Brick & Tile Co., then to English & Sons; Lambs took over about 20 years ago. The kiln yard was the tile works, and the kiln dates from 1914, though almost completely rebuilt to the original design ten years ago. Great interest has been shown in the yard by a number of historians and industrial archaeologists, and for me it epitomises the traditional country brickyard.

The sand for moulding is obtained locally - the same used for the Midhurst White sand-lime bricks. It is dried on a flat area and raked over, then sifted. Any surplus to immediate requirements is stored in a shed for use during the winter.

M D P Hammond NOV 1979

AN EARLY BRICK MAKING SITE IN SUFFOLK ?

In early 1978 the local river authority carried out work to heighten the banks along part of the river Waveney. During excavation of a pond on the marsh immediately behind the river bank, to provide extra material for the bank, a number of bricks were uncovered. Eventually this information came to the ears of the field officer of the local archaeological society, who looked at the site and brought me a brick.

The site is very close to the junction of Whitehouse Dyke with the river Waveney at O.S. ref. TM491959. It is very difficult to examine this site without a great deal more work. A section of wall, or part of a brick stack, roughly coarsed, but no obvious evidence of mortar, approximately 20 ft long has been exposed about 9" below marsh level. The problem is that the pond water level is about level with the top course of bricks, with the dyke and river water somewhat higher. We were able to recover some of the material before it was incorporated into the river wall, but now all than remains is still under the marsh and in the pond, at, or below water level.

Our finds have included bricks in all states, very lightly fired and fragile, through to almost completely burnt cinders. Because of this variation in firing of the bricks, sizes also vary considerably, the range of usable bricks found are:-

L. 245 to 254 mm (9⅝" to 10")
B. 111 to 127 mm (4⅜" to 5")
T. 41 to 48 mm (1⅝" to 1⅞")

Red clay is also present in quantity, together with coal, wood, ash and cinder. Normal marsh clay is grey black, so we must assume that all of this material was transported to this site.

These bricks are very rough and uneven, and have reed marks on the face. I believe they were made in situ on a bed of reeds, on the ground, with the clay being pushed into a frame, the top struck off, the frame removed, and the brick left to dry. They would then be fired in a clamp, using coal and wood. What has been partly uncovered could be a clamp. Possibly it was flooded before firing was completed. This would account for all states of fired brick being present, any unfired brick or part of brick would just remain as clay.

Inevitably the question of date arises. From the size and type, the bricks are identical to the bricks in the tower of Ashby Church (2½ miles away) dated to about C.13 by Jane Wight, and similar to those in St. Olaves Priory (3 miles away) dated to about 1300. The site is convenient for water transport and an ancient trackway junction is nearby, and a large open area is available for drying, but until fairly recent banking and drainage operation, flooding would have occurred regularly. Unless these bricks were made pre-1350 - the approximate date of the inundation of the peat workings and the formation of the broads - despite good access, this site would seem unsuited to such a lengthy and vulnerable industry as brick.

M G Reeder NOV 1979

*** For "More Bricks from the Marsh" see p.67 - Ed.

4	SERJEANTS	100,000	48/6	£242.10.0	£26. 5.0.	16/3	£ 81. 5.0.	£350	NOTE 11
5	H.MONK	100,000	57/6	£287.10.0	£26. 5.0.	7/3	£ 36. 5.0.	£350	ILFORD NOTE 11
6	J.SCOTT	500,000	60/-	£1500	£131. 5.0.	4/9	£118.15.0.	£1750	
		2,500,000		£7362.10.0	£656. 5.0.		£731. 5.0.	£8750	NOTE 7
MALM SECONDS								AT 80/-	NOTE 1
1	H.JOHNSON	250,000	67/-	£837.10.0	£65.12.6.	7/9	£ 96.17.6.	£1000	
2	W.RHODES	150,000	70/-	£525	£39. 7.6.	4/9	£ 35.12.6.	£600	
3	SERJEANTS	150,000	58/6	£438.15.0.	£39. 7.6.	16/3	£121.17.6.	£600	NOTES 4 & 11
		550,000		£1801. 5.0.	£144. 7.6.		£254. 7.6.	£2200	NOTES 3 & 8
	TOTALS	13,450,000		£31053.15.0	£3530.12.6.		£2865.12.6.	£37450	NOTES 2 & 10

I am indebted to S.G.P. Ward whose article "Defence Works in Britain 1803-5" Journal of Society for Army Historical Research 1949, an introduction to Martello bricks was obtained, the full story being extracted from PRO file WO 55/778.

B K Reeder NOV 1979

ANALYSIS OF BRICKS PURCHASED BY ADAMAND ROBERTSON OF OLD BOND STREET SEPTEMBER 4 - OCTOBER 19, 1804, ON BEHALF OF THE BOARD OF ORDNANCE FOR THE CONSTRUCTION OF MARTELLO TOWERS AND OTHER FORTS ON THE KENT AND SUSSEX COAST

AGREEMENT		QUANTITY	COST TO A&R AT PER 1000		A&R EXES AT 5/3 PER 1000	A&R PROFIT PER 1000	COST TO BO PER 1000	REMARKS
COMMON STOCKS							AT 50/-	NOTE 1
1/2	STEVENS BUTT	2,000,000	40/-	£4000	£525	4/9 £475	£5000	HACKNEY & CLAPTON
3	SCOTT & CLARKSON	500,000	40/-	£1000	£131. 5. 0.	4/9 £118.15.0.	£1250	HOXTON
4	B.OAKLEY	1,000,000	51/-	£2550	£262.10.0LOSS	1/- £50	£2500	TOOTING NOTE 5
5	W.RHODES	500,000	40/-	£1000	£131. 5.0.	4/9 £118.15.0.	£1250	HOXTON
6	T.HOLLIS	500,000	40/-	£1000	£131. 5.0.	4/9 £118.15.0.	£1250	HAMMERSMITH
7	J.WATSON	600,000	40/6	£1215	£157.10.0	4/3 £127.10.0.	£1500	SHEPHERDS BUSH/ PORTLAND ST.
8	SERJEANTS	500,000	39/-	£ 975	£131. 5.0.	5/9 £143.15.0.	£1250	ERITH NOTE 11
9	J.JOHNSON	250,000	41/-	£512.10.0.	£ 65.12.6.	3/9 £ 46.17.6.	£ 625	HAMMERSMITH
10	J.SCOTT	2,800,000	40/-	£5600	£735	4/9 £665	£7000	HAMMERSMITH NOTE 11
11	H.JOHNSON	750,000	41/-	£1537.10.0.	£196.17.6.	3/9 £140.12.6.	£1875	HAMMERSMITH NOTE 11
		9,400,000		£19390	£2467.10.0.	£1642.10.0.	£23500	NOTES 5 & 6
BEST STOCKS (SQ MALMS)							AT 60/-	NOTE 1
1	STEVENS BUTT	1,000,000	50/-	£2500	£262.10.0.	4/9 £237.10.0.	£3000	NOTE 9
MALM PAVIONS							AT 70/-	NOTE 1
1	SCOTT & CLARKSON	1,000,000	60/-	£3000	£262.10.0	4/9 £237.10.0.	£3500	
2	H.JOHNSON	450,000	57/-	£1282.10.0	£118. 2.6.	7/9 £174. 7.6.	£1575	
3	W.RHODES	350,000	60/-	£1050	£ 91.17.6.	4/9 £ 83. 2.6.	£1225	

NOTES ON PREVIOUS ANALYSIS

1. The BO determined maximum sums allowable for each type of brick and A&R spread their purchases over 11 brickmakers in London for the reason, no doubt, that one or two firms could not have handled such large orders on their own, just as much to prevent a rapid rise in prices throughout the trade if the demand for such qualities in a scarce market had "got air".

2. Plus freight at 22/- 1000 i.e. £477.10.0 on initial 425,000 only, to Eastware Bay and Sandgate Castle; thereafter, the BO arranged freight which probably cost them considerably more. See Note 10.

3. Error in A&R cost figures totalled as £1791.5.0 in 7 November calculations.

4. Profits higher on this agreement as some orders cancelled by the BO after bricks purchased at 70/- 1000.

5. This agreement at the low figure of 35/- 1000 involved A&R in arranging freight from the brickyard but a serious miscalculation on costs from Tooting to the Tower Wharf (central point for loading) resulted in A&R expending 51/- 1000, exceeding the sum allowed by the BO by 1/- and paying their own 5/3 1000 expenses, a total loss of £312.10 (unless part was absorbed in the remainder of the business). But for this loss the profit on the Common Stocks £1955 would have far exceeded the average cost figures given as 41/3 + 5/3 = 46/6, average profit 3/6 1000 (£1645).

6. Ordered between 4 September and 19 October. Although A&R had undertaken to deliver the initial 2,500,000 (ordered verbally by BO 4/5 September because of their general scarcity and in order that the BO would not be caught at the beginning of the next building season with no stock and none normally burnt off before end of June) only 1,979,831 delivered between 6 September to 16 October. See Note 10.

7. Average cost 58/11 + 5/3 = 64/2, average profit 5/10 1000 = £729.3.4. Ordered 6 October and only 30,000 delivered by 16 October. See Note 10.

8. Average cost 65/1 + 5/3 = 70/4 average profit 9/8 1000 = £265.16.8. Ordered 6-19 October and only 52,000 delivered by 16 October. See Note 10.

9. Ordered 6 October and none delivered til after 7 November. See Note 10.

10. It is apparent that such massive purchases on behalf of BO did not remain a secret for very long, no doubt resulting in

    a) the BO having to pay a great deal more than 22/1 1000 freight (letter Morse-Chatham 8 October).

    b) an "absolute want of shipping" from 17 October from which date not one brick was carried from Tower Wharf til at least November in spite of or possibly because of the fact that the Boulogne fleet was massing.

    c) the inevitable rumours in the trade that A&R were "taking an improper advantage of the BO (? see Note 11) and "affording us the unwarrantable profit of 20/- 1000 on the whole of these bricks". This resulted in the 14 page letter of 7 November (the source of my figures) in which A&R set out in great detail their agreements with each brickmaker, prices paid, average and prime costs, profit margins and breakdown of their expenses; also explaining away the considerable wastage which must have occurred on offloading the ships on the Kent coast.

11. A&R deducted a loading charge from these orders from the money paid the brickmakers (net figures shown), but at the same time 2/6 was included in their incidental expenses for loading at Tower Wharf. It is possible that they not only had to pay the loading at Erith, Hammersmith and Barking but also the loading and unloading again at the Tower due to the acute shortage of shipping from 17 October to at least 7 November but if ships were available to proceed direct from these points then A&R possibly made another 2/6 1000 on a maximum of 4,400,000 bricks, i.e. £550.

B K Pegden AUG 1979

RADWINTER TILE KILN

In 1974 Len Bacon discovered an old tile kiln on a farm at Radwinter near Saffron Walden and in the summer of 1979 the site was excavated. The kiln was most probably in action between 1380 and 1420 and was used to make peg tiles for roofs, glazing tiles for floors, and towards the end of its life, early bricks. The kiln stopped its work because of the wear and tear with the contributory factor being experimental brick. It is thought that the kiln was worked by the tenant of the farmhouse nearby. The house was known as Matins but has now disappeared.

Cambridge Evening News Harriet Crawford

JAN 1980

RAVENSCAR BRICK WORKS

Ravenscar Brick Works is situated on the North-East coast of England, in the North Riding of Yorkshire, at the village of Ravenscar - a pleasant location, overlooking a picturesque coast-line with the well-known Robin Hood's Bay in the distance.

The site may be found on the O.S. map 93 old numbers, or 94 new numbers; grid reference 970015. The station at Ravenscar was known as "Peak" from its opening in 1855 until 1st October 1897. It was then re-christened 'Ravenscar' due to confusion with the Peak in Derbyshire, but on some maps, the village still bears its original name.

The works were erected at the turn of the century in an old alum quarry where the extraction of alum had been commenced by Sir Bryan Cooke as far back as 1615. The quarry continued in operation until 1862.

Two factors influenced the selection of the site for brick-making. Firstly, there was the opening of the Scarborough-Whitby Railway on 16th July 1885 by the Scarborough and Whitby Railway Company, with Sir Charles Fox and Sons of Westminster as the engineers, and John Waddell & Son of Edinburgh as the contractor. The second factor was the purchase of 750 acres of land by the Peak Estate Company Limited, to develop the village into a new seaside resort. However, only a very wide road, and a row of four shops were built, - the bleak weather of the Peak, and the difficult descent to the beach via the 631-foot cliffs prevented any further development.

Whitakers opened the yard in 'about 1900' according to one book of reference, while Kelly's Directory for 1901 mentions the 'Brothers Whitaker, brick-makers at Ravenscar'. By 1918, they were well known as B. Whitaker & Sons, but they ceased to trade in the following year. The site was then worked by the Meltham Silica Fire Brick Company Limited, and their siding off the North Eastern Railway was known as Ravenscar Brick Works siding. My railway records end in 1927, and no mention is made of any change of ownership up to that date. In the 1929 issue of Kelly's Directory, the firm at the site is recorded as The Silica Products Limited, and they were still there when the works closed in 1939.

The Whitaker family stamped their bricks with 'B W S' and also with 'B W & S', - both in a rectangular frog. I could not find a brick stamped Meltham Silica Fire Brick Company Limited, but perhaps the bricks on the path to the works, stamped with 'RAVENSCAR' in a rectangular frog, belonged to them. The last firm on the site stamped their bricks with 'THE SILICA PRODUCTS LIMITED', and I have found one of these bricks at Berwick-on-Tweed.

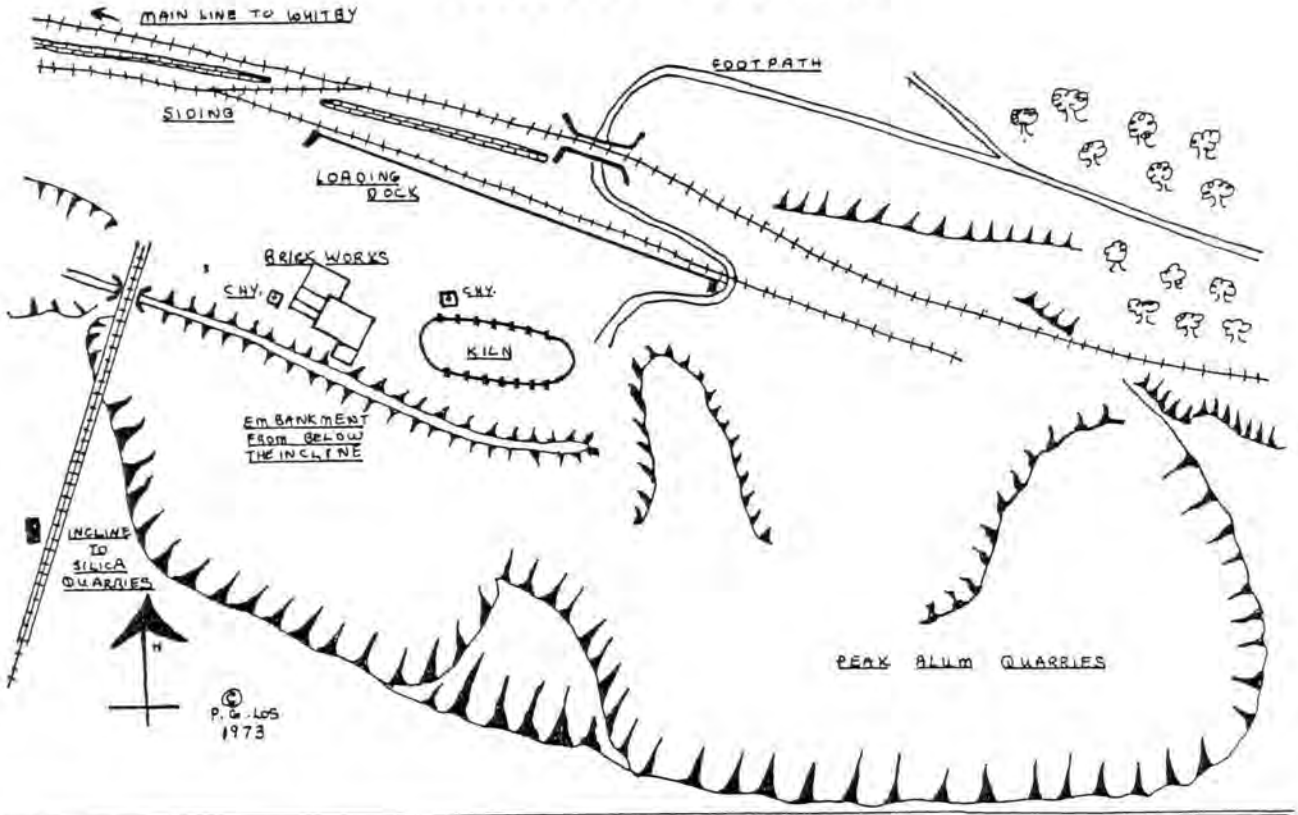
White fire bricks, stamped with G and large orange units, were also found in the kiln walls. The flue units from the kiln were stamped with 'Hancock Buckley Flintshire'. These latter would surely have required rail transport for their long journey, or could they have been second-hand, like so much equipment in the brick yards?

The material in the quarry around the works is Estuarine Shale of the Upper Cretaceous period, and it abounds in fossils. The silica for the bricks came from Stony Marl Moor Quarries (Grid Ref. 951003), west of Ravenscar. It was transported to the works by a narrow gauge railway which was laid across the moor and ended in an incline of 1000 feet. An embankment at a lower level and at right angles to the incline suggests that tubs from the incline were emptied into works tubs below the open bridge which is still visible. The line of the incline and track bed can also still be seen today. For those who desire a better view, an excellent aerial photo-graph of the site, showing the works and the incline to the quarries may be found facing page 114 in Dr. Arthur Raistrick's book 'Industrial Archaeology', published by Methuen.

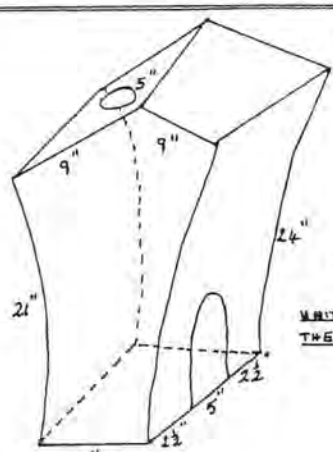
Although much overgrown with shrubs, heather and gorse, the old Hoffna kiln is clearly visible, and still has nearly half its roof safe enough to allowinternal inspection. The chimney for the kiln, however, has been felled across the end of the kiln. For the purpose of record, the kiln was 115 feet long, 55 feet wide and 9 ft 4 ins high , and it is possible to enter the fourth, fifth, sixth and seventh doors of the south side, numbered from the west end.

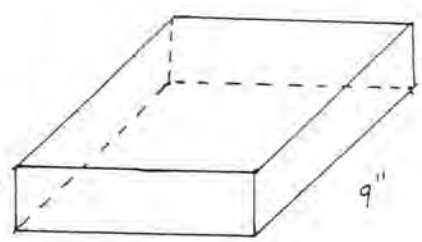
RAVENSCAR

BRICK WORKS

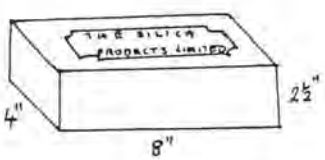


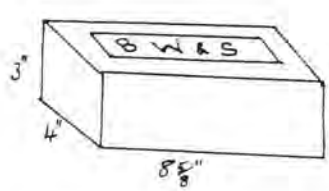
MAKER'S STAMP ON FLUE UNIT

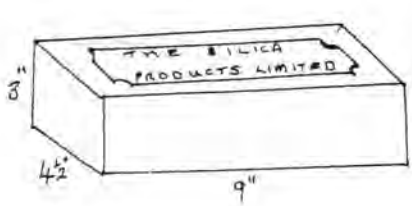


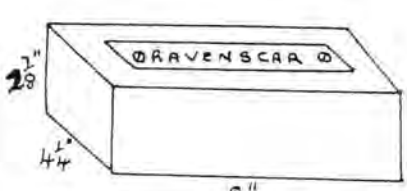


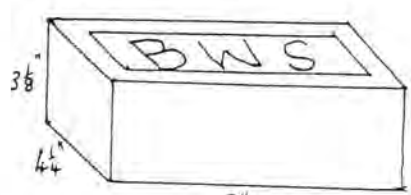
WASTE FROM THE KILN











At the load doors and fire doors, the kiln walls were 4 ft 8 ins thick, and it can be noticed that the walls of the kiln were made of un-marked bricks, but the arches of the load doors contain 'B W S' bricks. The fire holes were 18 ins wide and 12 ins high.

All the surrounding buildings have been completely demolished except for Brick Yard Cottage north-west of the incline, and two large blocks of concrete which, by the large oil stains, look like an engine bed. The embankment from the incline is also clearly visible, and makes an excellent vantage point for a photographer.

In addition, the details of the railway siding and loading dock area are clearly recognisable. The gradient of the line here is 1 in 39, so it must have been a real feat of sight and sound when a fully loaded train left the works for Ravenscar via the 279-yard long tunnel, on its way to Scarborough. The trains leaving the works for Robin Hood's Bay and the North would need little steam to set them moving down the 1 in 39 gradient over a distance of nearly 3 miles. An excellent picture of the railway and works appears on plate 31 in J.R. Lidster's book "The Scarborough and Whitby Railway", published by Hendon. I believe the photograph was taken by the well-known railway historian, K. Hoole, on 30th July 1954, and the kiln is in the shadow to the left of the chimney.

I came across the last industrial use of the site in the Whitby Gazette of 25th April 1975, which records "Yorkshire Potash Limited have successfully applied for renewal of temporary planning consent for the use of Old Ravenscar Brickworks for storage accommodation." The most recent use of the site is as part of a nature trail in our leisure orientated society.

So if you visit the site, you will have no difficulty in finding the works, and you will find full details of the geology of the area in 'Ravenscar Geology Trail', published by the North Yorkshire Moors National Park, The Old Vicarage, Bondgate, Helmsley, North Yorkshire, YO6 5BP.

W Ann Los

*** See note on p.54 - Ed.

AND JUST FOR INTEREST:

In 1774, workmen digging the foundations for Raven Hall, found a stone with a Roman inscription. It is believed to be the dedication stone for a Maritime castle for the use of navigation.

George III visited Ravenscar in its capacity as a watering place when he was suffering from his spells of insanity.

JAN 1980

RAVENSCAR WORKS

Information 20, Page 4/5.* Mr Hammond pointed out that the unit from the kiln which I thought was a flue was actually a feed hole. These were specialist items made by only a few fine brick manufacturers, and Catheralls Works, Buckley, Clwyd, established 1760, still make these units. The dimension of the kiln at the bottom of the page are also wrong "length 115 feet, width 55 feet, height 9ft.4ins".

(* see page 52 - correction made - Ed.)

FAGGOTS AND CHIPS!

I have now surveyed over 150 brick kilns of all types from faggot fired Suffolk kilns to the highly sophisticated modern continuous kilns. I have heard that Bricesco are constructing a "PORTAKILN" pre-fabricated tunnel kiln at the Yorkshire Brick Company's new works at Stairfoot near Barnsley. There can be few other industries like brick-making where traditional and high-technology methods can co-exist, producing an acceptable product.

M D P Hammond JAN 1980

RED RUBBERS

Thomas Lawrence and Sons of Bracknell, Berkshire are the only firm making red rubber facing bricks for gauged brickwork. They are made from a sandy clay found locally, washed, screened, and dried in settling ponds. It is then pugged up and moulded in the same way as ordinary hand-made bricks and dried in unheated drying sheds before being burnt in a coal-fired rectangular downdraught kiln with automatic stokers. They are made over size to allow for cutting down and rubbing down, the sizes being 120mm by 90mm by 260mm, 300mm or 340mm.

The rubbers are placed in the centre of the kiln, protected from the fiercest heat of the kiln by hand-made bricks which are also made here. There is a panel of carved gauged brickwork with the letters T L B on it outside the works office. Further information from M. Dumbletons booklet "Brickmaking a Local Industry."

M D P Hammond

Bricks to be rubbed to a smooth finish are made softer than usual by increasing the proportion of sand to clay in the mix and by carefully baking rather than burning in the kiln. Known as rubbers, and perfectly durable, these bricks were constantly in demand in Georgian times for such dressings as pilasters, window surrounds and arches.

Darker brick colours and very fine joints of lime putty are characteristic of gauged brickwork, which is most commonly found in arches of doorways or window openings. Willmer House, Farnham, Surrey and Bradbourne, Larkfield, Kent both contain examples of this type of brickwork.

(Details from English Brickwork by R. Brunskill and A. Clifton-Taylor and Bricks to Build a House by J. Woodforde).

JAN 1980

ENQUIRIES - INFORMATION 20 JAN 1980

"P" CORONET

Can any London area member suggest the origin of a brick found on the site of the new Smiths Industries headquarters building under construction on the corner of Finchley Road and Llanvanor Road, NW2? It is a light red pressed facing brick, rather soft fabric, with a rectangular frog with a "P" surmounted by a coronet, as a trade mark. The detail on the coronet is good, showing that the press die was virtually new. The site was previously occupied by an ice rink built in 1927 and later converted to a cinema, bowling alley, and a bingo hall in that order; and before that a garage and before than a farm.

PORTHYWEN ANGLESEY

Has any member any knowledge of any survey work, studies or written accounts of the Porthywen Silica Brickworks in the north-east on the Island of Anglesey, either already published or in the course of production?

Replies to Mr Brian J. Murless, 46 Holway Avenue, Taunton, Somerset, TA1 3AR.

WORKS VISIT, SEVERN VALLEY BRICK CO. LTD., AVONMOUTH.

The carbon black works adjacent to the works produces carbon black for tyres, and a waste gas is produced, and is used for steam-raising in a power station next to the brickworks. At that time, in the late '60's, the firm owned a town gas plant in Gloucester, making retest carbon. With the advent of North Sea gas, this became redundant, and a new gas works was erected to the rear of the power station, The hydrogen gas produced was at first flared off but in 1971, thought was given to how to use it. Advice was sought from Dutch brickmakers, and the works designed. The alluvial clay beds are 6m deep overall: the top 2m of red-burning clay, then 4m of buff-burning silty clay. These are blended with P.F.A. and sand to give a range of reds, buffs and multies. Proportions of each ingredient are measured in box feeders; the mix is then shredded, tempered to 36% water content and passed through crushing rolls to the de Boer soft-mud brick machine, the only one of its kind in the country and capable of producing 20,000 bricks an hour. The bricks are placed in chamber dryers fed with waste heat from the kiln. After drying, they are sorted and made up into fork-lift packs for setting in the kiln. The kiln is of Dutch design, transverse-arch type, similar to the Staffordshire, and fired with gas from the gas works, supplemented with natural gas. It has 50 chambers of 30,000 bricks capacity each, and two fires on the circuit. After firing the bricks are again sorted and taken to the stock piles. Bricks which are left in the open for three or four months become blackened with the fall out from the carbon black works, and they then match extremely well with old brickwork. Special bricks are handmade, using wooden box moulds. The works was opened on 31st July 1973 by Martin McLaren, then M.P. for Bristol North West.

M D P Hammond MAY 1980

MATHEMATICAL TILES IN LEWES. A "RESUE DIG" AND A SURVEY.

Road widening in Malling Street, necessitated by the South Street tunnel, made the demolition of a row of cottages inevitable. Two of these, numbers 114 and 116, were faced with black glazed mathematical tiles, and knowing my interest in them, Brian Dawson, the architect responsible for conservation for Lewes District Council, asked if the Group could assist in salvaging the tiles, which the owners of the cottages, the East Sussex County Council, were willing to let him save for his conservation work. In the belief, subsequently confirmed, that this would improve our knowledge of this building technique, and having received sufficient offers of help from our members, we agreed to attempt this rescue operation.

The cottages, which had been constructed as a pair, each consisted of two rooms on the ground and first floors, with an attic and basement. The basement was of brick construction and the rest of the structure timber-framed with brick nogging between the timbers. It had originally been clad with peg tiles suspended on battens, which had been removed except at the lowest level, where they had been retained as packing where the frame was badly out of upright. It is believed that the building dates from the early 18th century and received its Georgian face-lift in the early 19th century.

The re-facing of the building was achieved by bedding the black glazed mathematical tiles to the framing and nogging with neat lime putty and securing with nails where they could be conveniently used. Where the bedding was particularly thick, purpose-made holdfasts had been used. Nearly all of the nails had rusted away and the tiles remained in position solely by the adhesion of the putty. Although, because of the staggering of the joints and the overlap, a single nail has quite a wide field of influence, it is remarkable that, despite the heavy traffic, the tiles had remained in position for so long.

As is usual with glazed mathematical tiles, they were laid with header bond, that is with tiles of brick width with staggered joints, which was achieved by starting alternate courses with a "closer" or half tile. One interesting thing that we noted was that a proportion of the tiles had been scored with a knife cut down the flange and the face at the leather stage but previous to enamelling, to facilitate snapping to make two closers.

These tiles were perforated for two nails whereas the general rule was one perforation per tile. The nail holes were square, which would suggest an intended use of pegs rather than nails, but their positioning was too irregular for the pegs to be used over battens. In general it appears that where mathematical tiles were used on timber framing they were fixed to boarding rather than battens.

The ground floor windows had red sand-faced mathematical tile dressings to the reveals, the courses being one stretcher alternating with a header and a closer, into which the black tiles were bonded. Some of the stretchers had also been snap-scored to make provision for two headers.

E W O'Shea

From Lewes Archaeological Group Newsletter No.49

MAY 1980

MATHEMATICAL TILES IN LEWES

The "rubbed and gauged" archover one of the windows was of typical Georgian construction, using "rubber" bricks, sawn in half to give a two-inch thickness, laid with alternate headers and stretchers to each voussoir, with dry butt joints and false horizontal joints filled with lime putty. The window frame linings were set forward to mask the ends of the tiling.

Although some 1500 good tiles were salvaged, which has made a very valuable contribution to the Council's stock. Barbara Allen and Peggy Norman carried out the stripping, and I could not but admire their courage in working off a narrow scaffold with the roofs of huge lorries dashing past only three feet from their feet. I stayed at ground level manouvering the buckets and Jock Knight-Farr did sterling work cleaning and stacking.

In mid-August I joined Maurice Exwood and Ian West, two members of the British Brick Society, to assist them with their survey of the use of mathematical tiles, which they are doing on a nationwide basis. The results in Lewes were quite surprising as we recorded more than 60 buildings where they still exist. These tiles are not always easily recognisable especially in our town where we have so many buildings built with the unique Lewes grey headers which, when painted over, can be confused with tile.

In his eminently readable book "Brick to Build a House", John Woodeforde illustrates School Hill House as an example of mathematical tiles, another common error in recognition. Such intense burning to reach vitrification would cause distortion and black tiles can only be achieved by applied enamelling. Corners and window reveals provide the best evidence of tiling, where the edges of the tiles are masked by imitation ashlar timber blocks or linings, or by rendering.

The great majority of the tiled buildings in Lewes have been so treated in subsequent refurbishings or encroachment, because it was a cheap and effective way of providing a stylish new front elevation, and in very few instances would they have been used for deliberate evasion of the brick tax, but there are a few examples where this could well have been the reason for their use.

Most notable of these is the Jireh Chapel, now commendably restored and standing in splendid isolation by the entrance to the new tunnel. Built in 1805 it has sand-faced headers to three of its elevations.

The Friends' Meeting House, 120 High Street, and 2 Castle Precincts are also good examples of buildings designed initially for the use of mathematical tiles; No. 10 Malling Street is also in this category and has the unusual feature of cream gault tiles to the window reveals and matching gault brick arches; a harsh and disagreeable contrast to the black glazed tiles. No. 120 High Street (St. Anne's Hill) on the other hand is a very fine example of Georgian domestic architecture at its best. Other interesting features have been recorded, including a number of double cant bays, where the 45° angle has been formed by splay-cutting the tiles, unsatisfactory practice from a weather-proofing point of view. In no case did we find angle tiles being used to mask corners or reveals although this method has been used in other parts of the country.

Further research is being carried out on sources and methods of manufacture, costs, enamelling and the like, and I would be grateful to hear from anyone with any information on these points. I will also be pleased to furnish a copy of the complete list, when it has been put into a tidy form.

E W O'Shea
From Lewes Archaeological Group Newsletter No.49

NOV 1980

ESSEX

Bricks bearing a frog-mark "B O & II" found Railway Locations between Braintree and Stortford in North Essex are wider than is usual, up to one foot. Where do they originate from?

BROMWICH

The date of manufactore and any other information is sought concerning bullnose edgings, copings etc., blue engineering bricks manufactured by Joseph Hamblet of Bromwich. REPLIES PLEASE TO: MR. J.R. JACKSON, 7 BOURNEMOUTH DARK ROAD, SOUTHEND ON SEA, ESSEX SS2 5JG.

MAY 1980

SOMERSET BRICKS AND TILES

After several years of part-time study on the brick and tile industry in Somerset an interim statement is now due. The county, which for historical reasons includes the portion ceded to the County of Avon in 1974, has a varied geology with an abundance of suitable building material: Bath and Doulting stone in the north, blue-grey lias in the centre, colitic limestone in the south and red sandstone in the west. It therefore comes as no surprise that on present evidence brick makes its first appearance in the 17th century although one cannot ignore a native medieval pottery tradition and the clay products of the Romano-British period.

Local historians have been tempted to credit the Dutch with the introduction of brick, often with pantiles, into the county. However, this link has yet to be proven by archival evidence and a more plausible theory is that the landed gentry were influenced by the architecture that they had seen on their travels and were keen to advance brick structures locally as status symbols. Both the Pouletts of Hint St. George and the Clarkes of Nynehead had kilns on their estates in the 17th century; Ven House (1698) and Crowcombe Court (1734) are further examples of locally fired bricks used in a grand manner.

By the 18th century farmhouses like those at Ilton (1703) and Puckington (1720) were incorporating brick with style but in other vernacular buildings specialists have found that brick formed only an outer cladding. In an urban context bricks were chosen for 'prestige' terraces in Bridgwater (1723) and Taunton (1788) patronised by the First Duke of Chandos and Sir Benjamin Hammet, respectively. By the 1770's brickyards, as opposed to isolated clamp kilns, were being established. The very geology which had retarded the adoption of brick yielded a rich and plentiful supply of raw material to brickmakers throughout most of Somerset: the Fuller's Earth, Lower Lias and Oxford Clays of the Jurassic and the Keuper Marl of the Triassic.

It was the alluvium and estuarine alluvium deposits along the Bristol Channel shore which were the easiest to exploit, encouraged by a lucrative coastal trade and access to Welsh coal. Bridgwater became the commercial and productive centre of the industry though the town's fame and in part prosperity during the period 1840-1914 were founded on tiles (particularly the Double Roman pattern) and scouring bricks made from the river slime.

Bricks often took second place being useful as ballast in ships and in supporting the tiles within the kilns. At other Somerset yards bricks were fired in some quantity; at Poole, near Wellington, there were three circular Hoffmann kilns and the works had its own siding on the Great Western Railway's main line. There were other changes in the second half of the 19th century: the 'small' men who brought their own skills to a yard were replaced by larger business concerns with company secretaries and neighbouring yards were linked together commercially.

The decline of the Somerset industry (1945-1970) appears to follow a predictable course: lack of mechanisation, long apprenticeships and the development of new building materials all played their part. Of 180 sites so far noted, most are obliterated and only one works with automated equipment, at Poole, is still in operation. An agreement between the Somerset County Council and U.B.M. Mac Ltd should ensure the preservation of the last pinnacle or bottle kiln at East Quay, Bridgwater. A final point should be made: brick is now "on the map" in Somerset and workers in archaeology and local history (including B.B.S. members) continue to be most generous in the provision of information.

Brian J. Murless NOV 1980

IS THIS A RECORD?

Mr Bill Blowers of Hall Park, Great Barton, Bury St. Edmunds acquired a red brick from Wattisham Castle near Ipswich. The brick was made in the mid-19th century and measures 13½" by 8¾" by 4¾" (340mm by 220mm by 119mm).

Wilkes's Gobs, the popular name for the large bricks made to overcome the brick tax introduced in 1784, resulted in bricks greater than 10" by 5" by 3" being charged at double rate of tax. I wonder what the tax man would have charged Mr. Blowers' brick maker?

NOV 1980

ENQUIRIES IN NO.22 NOV 1980.

1. BALLINGER: These bricks were made at Clifford's Mesne. If anyone has one or any details will they please contact David Bick, The Pound House, Newent, Gloucestershire, GL18 1PS

2. DIAMOND JUBILEE: If anyone has details of bricks with these words on the frog would they forward them to Mr V.J. Chamberlain, 20 Springfield Road, Hanwell, London W7 3JP.

3. RIEVAULX ABBEY: If anyone has any details of the origin red/bluish bricks long rectangular and very shallow in the 13th century part of the Abbey, will they please forward them to Mrs A. Butler, Langdale, Copse Close, Northwood, Middlesex.

4. COLLIERY BRICKS: Salford Museum of Mining is keen to expand its knowledge of bricks made by colliery companies. The Museum already has local bricks marked: A T (Astley and Tyldesley Coal Company), C K (Clifton and Kersley Coal Company) B (Bisham Hall Brick and Terracotta Company). It would be much appreciated if details of any colliery bricks could be sent to Salford Museum of Mining, Buile Hill Park, Eccles Old Road, Salford M6 8GL. Tel. 061 736 1832.

POLYCHROME BRICKS ON LUNDY

Some years ago I visited Lundy Island. The Buildings on the island are mostly of stone but I remember being surprised on looking inside the church and seeing the wealth of white, red and blue polychrome brickwork.

M D P Hammond NOV 1980

BRICKS AND THE FROG QUESTION IN SUFFOLK. Part 1

As stated in Information 20 (January 1980), Audrey Butler gave a talk about Somerleyton Brick Works to the Blundeston and District Local History Society. Together with a few other members of the Local History Society, I arranged a display of items, mainly locally made bricks.

At this meeting two questions which intrigued me were raised about brick. One put to the speaker was - "Why do some bricks have identification marks in the frogs?". The other put to me later was "Why have a frog in a brick?"

In my own mind I put these two questions together, and searched through reference books, and found only a few vague mentions, certainly nothing that adequately answers them. I believe these questions deserve a thorough investigation, and, therefore, I tried reasoning out, and building up an answer. The connection between the two questions became tenuous and, therefore, I give me answers separately. Probably others can give different and better answers. I hope they will commit them to the page.

WHY HAVE A FROG IN A BRICK? Part 2.

I believe it is connected with the roughness and porosity of bricks, and also the thickness and speed of building walls. So my answer, to this seemingly simple question, has to take us back through the history of brick.

In the beginning, the hard moulded, unfired, mud bricks in use about 9000 years ago in the middle east, were very irregularly cornish pasty shaped. They were not at all stable, but were very porous and when used with mud mortar to slowly build thick tapering walls, they were satisfactory. Roman bricks (or more correctly tiles for they are very thin) were mainly well fired and, therefore, not very porous, they were flat and smoothly finished. These tiles being large and flat were stable, and could even have been used to build walls without mortar. Undoubtedly these tiles were difficult to manufacture and were, therefore, combined with other non-stable material when building. Even the addition of these tiles as strengthening ties in flint, or rubble stone walling, could not have enabled a wall to be raised more than about ten feet in height each year.

Early British bricks tend to be hard and dense, but with at least one very rough surface. This roughness was usually the result of making the bricks on a bed of straw, reed or coarse sand. Often the opposite face of the brick appears also to have been roughened or deliberately not smoothed. Again these bricks were successfully used with large quantities of lime mortar, to slowly build thick walls.

Up until about 1700, bricks were made from available brick earth basically as dug from the ground, and not transported very far. Therefore, bricks varied considerably from place to place. It appears to me, that generally where the hard less porous bricks were produced, they were deliberately made rougher, while areas producing softer, porous bricks, finished them smooth on all faces.

This type of production continued through to the 19th century in some areas. To give just two instances, around Lowestoft in Suffolk, smooth soft red unfrogged porous bricks were still in use in the mid 19th century. While around Stokesley in North Yorkshire, very rough, uneven, hard, almost vitrified unfrogged bricks seem to have been used into the 20th century. But these examples are the interesting survivors in the byeways of brick.

Around 1700 brick production generally began to be mechanised, with the introduction of the horse driven pug mills, able to mix clay and sand together. This evenly mixed clay enabled more rapid and even drying of the unfired "green" bricks, which could now be stacked straight from the mould. Whereas formerly, unless the clay were ideal, bricks had to lie where they were made until partly dry. Firing of these bricks could be quicker and the finished product was more consistent, with less rejects. As the industrial revolution gained momentum, bricks were in great demand and were transported from the expanding mechanised brick yards to build factories and housing for the rapidly expanding population of industrial workers. As we all know, as mechanisation increases, time becomes increasingly scarce. The new factories had to be built quickly and cheaply. The new bricks being regular in size and shape could be used to build more regular, stronger, and thinner walls, but the slow setting lime mortar became the limiting factor. In fact, the lime also changed about this time. If one examines old lime mortar, the lime is in pieces up to about ¼" across, giving a very coarse, very slow hardening mortar. Mechanisation produced a finely ground lime, so less lime needed to be used, thinner mortar joints could be used, and a quicker set resulted. But the mortar was more unstable and slippery in use than the old type. There are stories quoted for a later period in the book "The Truth About Cottages" by J. Woodforde, of walls being shored up while being built because they were so unstable. Then fires were lit at the base of the walls to bake the mortar; this gave quick marginal stability, but destroyed the long term strength of the walls. His illustration is of the 1870's but this must have also happened in earlier days.

Some one around 1690 realised that by making a deliberate depression in the bricks the mortar would be more securely trapped and thereby give greater stability while building. Many bricks at this time were still of an open, porous texture, and only a small depression was needed as some water from the mortar was sucked into the brick. As bricks became harder, larger frogs were necessary, in some cases on both sides, to retain stability.

As we move to recent times, and cement mortar with its quick set and tenacious adhesion is used for brick laying, the frog loses its original purpose. However, in the true spirit of conservation and survival of a species, the frog found new attributes. Most modern bricks have very large frogs, up to 20% of their volume, less material is used, weight is reduced, very important today when bricks are transported so far. Press moulding is easier with a large frog, and firing is quicker. However, some high quality modern bricks have dispensed with the frog. Is it doomed in the future?

WHY DO SOME BRICKS HAVE IDENTIFICATION MARKS IN THE FROGS? Part 3.

When bricks were locally made, the builder and the purchaser would more than likely know the brick maker. In a close-knit community news spreads fast and reputations are easily lost, the brick maker did the best he could with his local material. The builder knew his local bricks and their idiosyncrasies, and allowed for them. Once large mechanised brick yards were established from the early 18th century, and their products transported far and wide, some method of identification became essential. Quality assurance had to be established for bricks far away from their point of manufacture. The builder and purchaser had to know what they were buying and using. They had no protection from any enforceable national standard, and sub-standard or difficult bricks must have been numerous throughout the 18th and 19th centuries. Many must have been tempted to cut corners to produce in quantity at the expense of quality.

This need to identify, originating from mechanisation, arose sometime after the introduction of the frog. Therefore it was logical to put the identification in the frog. In some cases the identification forms the frog, being one or more deeply impressed marks. The majority of marks are, however, formed in the bottom of the frog. The marking of bricks has never been universally needed or adopted. Two Suffolk examples illustrate this well. Cave Bottom brick works near Louthwold still produces bricks. Being a small works situated on a private estate, it formally produced bricks almost exclusively for the estate, and its bricks have never been deliberately widely promoted.It has not found a need to mark its bricks. In contrast, Somerleyton brick works began to sell its bricks far and wide after the lease changed hands in 1854, and from then to its closure in 1939, marked all its bricks, even to the extent of each individual brick maker having a personnel number stamped into his bricks.

MORE BRICKS FROM THE MARSHES.

My display of bricks at this meeting consisted mainly of bricks made at Somerleyton between 1854 and 1939, as our speaker's subject was Somerleyton Brick Co. I also displayed a few of the bricks recovered from the marsh, near Wicker Well (* Reference Information 19, November 1979) "An Early Brick Making Site", hoping that someone would come up with more information. I was in luck, for Mr Jack Bell, a local farm worker, told me he knew of the Wicker Well site from seeing differential crop growth. He also said there are other sites on the marsh, further along the river, one he gave me precise details of. A few hours later, I visited the spot, beside a track leading from the B1074, opposite Herringfleet Church, to the river Waveney, O.S. Ref. TM474974. In the side of the dike we found a few bricks, very similar to the Wicker Well bricks, but thicker (size 10" (254mm) x 5" (127mm) x 2¾" (70mm)). We walked towards the river and my guide noticed some bricks in the opposite bank of the dike; these turned out to be identical to the Wicker Well bricks (2 7/8" (251mm) x 4 7/8" (124mm) x 1¾" (45mm)), made in a frame on straw or reeds and light red in colour. One odd man out is yellow and has been made on sand or ash 10½" (260mm) x 5" (127mm) x 2 3/8" (60mm). There are obviously quite a number of bricks at this spot, whether they are a wall or stack can't be seen. Most likely the ones we found have been dredged out of the dike, and some of them have traces of mortar adhering to them.

Five hundred yards from this site stands Herringfleet Church, dated to around 1070. In the round, flint tower can be seen similar thin red bricks, they have been used to fill in the putlock holes made to hold the scaffolding during repairs. The thicker red bricks can be seen in the gable end of the nave, up against the tower. The yellow brick is almost identical to bricks in the ruined St. Andrew Church, three miles to the east at Flixton in Lothingland. Most other old churches in this area contain identical or similar bricks to these three types.

All these in situ bricks have been used to repair or modify older buildings, and, therefore, do not help in dating. One can only say that the thinner bricks could be 13-14th century, with the thicker ones 14-15th century.

M G Reeder NOV 1980

(* see page 45 of this compilation - Ed.)

120 YEARS OF BRICK PRODUCTION.

The Ramsdell Brick Works near Basingstoke (SH.593576) closed down last May after being in more or less continuous production since 1860. It belonged to H.N. Edwards Ltd., builders of Basingstoke, and produced 800,000 bricks a year. These were made by the Berry soft mud machine and dried in hacks and sheds during the summer and fired in two oil-fired rectangular downdraught kilns of 40,000 bricks capacity each. Last September (1978) the Berry had been sold back to its makers, Ibstock Hudsons Limited of West Hoathly, Sussex, and stock piles of bricks were being cleared. The works were closed because the owners were unable to purchase any more land for clay extraction.

M D P Hammond NOV 1980

SCOTCH KILNS.

There are 13 Scotch Kilns in England at present:- 4 at Wm. C. Reade & Sons Ltd., Aldeburgh, Suffolk; 3 at Bovingdon Brick Works Ltd., Hemel Hempstead, Herts; 3 at Dunton Bros. Ltd., Leyhill, Chesham, Bucks; 3 at H.G. Matthews Ltd., Bellingdon, Chesham, Bucks. They are all oil-fired and vary from 30,000 to 55,000 bricks capacity. The Chesham group produce Berry moulded bricks from clay with flints, mixed with loam and anthracite dust. Firings last 36 hours using 600 to 800 gallons of processed waste engine oil. Bovingdon have a new Scotch Kiln under construction and H.G. Matthews say they will rebuild their kiln. The colours of their bricks can only be produced in a Scotch Kiln.

M D P Hammond NOV 1980

NOTES TO "TYPOLOGY OF BRICK" BY L.S. HARLEY
(JOURN. B.A.A. VOL XXXVII, 1974).

The photographs illustrating my Typology show bricks of which the following notes on dates may be helpful.

Plate XIII	(1)	Roman 1st-2nd cent. (2) c.1180-1200
	(3)	Left, 1177; Right, c.1370 or reused earlier brick.
Plate XIV	(1)	Late 13th cent. - early 14th cent.
	(2)	E. 14th cent: mid 14th cent: 1307-1310
	(3)	Top c. 1495, left c.1400, right 1440.
Plate XV	(1)	C.1450 (2) 1503-1510, 1527-8, 1527
	(3)	1619, 1671.
Plate XVI	(1)	Top 1796; left and right, mid-18th cent: centre 1760.
	(2)	Top 1920:1854 fragment and complete 1854.
	(3)	Top 17th cent. stable floor brick: left and right, 15th cent. and Roman small bricks centre: 'klinkart' of 17th cent.

It seems desirable that the type references and codings given in my "Typology of Brick" should with advantage be extended in some cases to allow a more complete description. This would apply to Type (see p.73 et seq), where 4.1, 4.2, ... etc., would become 4.01, 4.02, ... 4.09, 4.10 ... etc., and similarly to Types 5 and 6 (see pp.76). In particular, Type 6 (Modern Brick) should cover the multifarious recent varieties of purpose-moulded bricks.

The Numerical Coding on p.81 et seq. should have additions:

p.81	Method of Shaping Shape and Size	Add after Code 6, Code 0 None of these. 3 Rectangular Prism length over 8" (203 mm), Thickness 2¼" (57 mm) or less. 4 Rectangular but thickness greater than 2¼".
	Add:	0 None of these (eg a brick 7"-8" long).
p.82	Surface Treatment	Add 0000 Marked, but NOT as detailed above.
	Texture Amend:	9 to read Signs of clinkering or None of these textures described above.

p.85	Frog	to be extended to two digits, so that 8 becomes
		08 An impressed frog ..... deep.
		09 As 8 but with the maker's name or trade-mark impressed on one side or along it.
		10 More than one frog on one face i.e. multiple depressions, usually rectangular.
		11 As 10 but with depressions or single depression, diamond-shaped or heart-shaped.
		12 Frog in two opposing faces, each BL.
		13 Frogs for keying in BT ends.
		14 Cylindrical perforations in a BL face for maltings drying-floor.
		15 Cylindrical perforations for keying.
		16 "Stab" marks for plaster keying.
		17-19 Reserve for other types of Frog.
	Primary divisions	Add to 1,2,3: 0 None of these.

These proposed changes would add some 13 digits to the complete code but any modern computer can deal with this.

Finally: The title of the paper should really have been "Typology of British Brick" since all but a small section of Adobe refers to Bricks to be found in this country.

L S Harley JAN 1981

BRICKS IN CYPRUS

I saw no ancient bricks or tiles of Classical times; presumably these structures were as Vitruvius stated all built of sun-dried tiles and doubtless have long since reverted to their original earth. The walls ancient KITION (a colony of Tyre peopled by Phoenicians C. 800 BC) later now called LARNACA, were all of massive roughstone blocks. The 15th/16th century Venetian forts were all built of well-laid ashlar.

I visited a 17th century village house which had mud-brick walls, topped with tile, and these looked good for another two centuries. Most of the 18th and 19th century buildings both in the village and in the open country side were of sun-dried red mud and chopped bamboo shoots. They measured 254mm/10" x 102mm/4" x 51mm/2".

Modern buildings of perhaps 50 to 100 years ago were built of good, hard-fired red bricks of similar width and thickness as those of the 18th/19th centuries but shorter; 229mm/9", perhaps NOT of Cypriot manufacture.

Today, following the Turkish invasion of the North, the Greek Cypriots are putting up buildings at a furious rate. They use bricks with 3 or 5 large holes for lightness or bonding, made by the Lebra Brick Factory of NICOSIA and measuring 279mm/11" with identical thickness to that of their predecessors. It is interesting to note this tendency towards a 51mm/2" thickness much as with our pre-Tudor bricks in England. The bricklaying is poor, little care being taken in laying courses since all will be covered with white cement plaster. I do not envisage these new buildings standing up to much weather, let alone mild earthquake shocks. In the Greek sector, each new house that I saw had solar heating on the roof with 2 panels to a house.

L S Harley JAN 1981

CLOSURE OF CROWBOROUGH BRICKWORKS

The Crowborough Brickworks at Jarvis Brook (TQ 532 296) ceased production at the end of February 1980, having been in existence for close on a hundred years. It occupies a site alongside the railway to the west of Jarvis Brook Station. The old claypit now forms a large pond and more recent clay workings are reached through a tunnel to the north of the works.

Although brickmaking has now finished, quite large stocks remain in the yard and a skeleton staff was still working when we visited the works and spoke to Mr Hill, the Foreman. He said that there were no immediate plans for demolition, but it seems likely that the site will be redeveloped quite soon. Mr Hill kindly allowed us to look around the works and take photographs and gave us details about its operation.

Clay preparation was straightforward. It was first passed through crushers to break up any stones, then, after admixture with coke breeze, it was subjected to fine grinding in a normal edge-runner mill. An interesting feature of the Crowborough bricks was that fine coke breeze was incorporated with the clay, even though the bricks were kiln-fired. We had previously been given to understand that breeze was only used for clamp-fired bricks and would welcome any observations that members may have on this subject. The resulting colour of the bricks was purplish, with some quite large black spots on the surface.

Originally all bricks were hand-moulded, and special shapes contained to be made by hand to the end. However, an Avison brick-making machine was used for the production of the ordinary bricks. This was steam-driven until the 1960's, when the change over to electricity was made. Steam heat was also used in the drying chambers until the boilers were removed, when propane gas was substituted.

There were three kilns, all of the continuous type. The oldest, a Hoffman kiln, had 16 wickets. The Sercombe kiln had 20 and the Belgian kiln, the most modern had 24, but each of the three had a capacity of about 250,000 bricks. Before 1939, the kilns were coal-fired, the Belgian kiln being stoked through the wickets, the other two from above. During the last war, brickmaking ceased and the works were taken over by the Army, who used it as a bakery! (It had been a storage depot during the 1941-18 war). In 1945 the change to liquid propane gas-firing was made.

Latterly, 45-50 men were employed in the yard and production was running at about 250,000 bricks per week. However, the clay had been exhausted and Redland Bricks, who took over the works from the Crowborough Brick Co. in 1961, decided that closure was the only course.

(A note published in Sussex Industrial Archaeology Society Newsletter No. 26 April 1980).

W R & M Beswick JAN 1981

NOTES ON CROWBOROUGH WORKS

Re the article on the closure of Crowborough Brickworks (Jan 81) the mixing of fuel in the form of coke breeze, anthracite dust or town ash is almost universal practice in south east England whether the bricks are fired in clamps or in any type of kiln.

The Aberson soft moulding machine is of Dutch manufacture, by Joh's Aberson, of Olst, established 1847.

The kilns are interesting. There is an oval Hoffmann kiln of 1890, later extended from 12 to 16 chambers, apparently by the builders of the Sercombe kiln - the brickwork is similar. The Sercombe kiln is one of only two I know of; the other is at Norton, Worcestershire, near Junction 7 on the M5 motorway. It is similar to the Hoffmann, but has branch flues in the chamber arch for the removal of steam in the first stage of firing, and two outlets per chamber at low level for waste gases, all connected to the main chimney flue.

I have surveyed the Belgian kiln. A photograph of this soon after completion appears as fig. 287 on page 448 of the 1956 edition of A.B. Searle's "Modern Brickmaking". Although captioned Staffordshire kiln it is definitely a Belgian, designed in the London office of the Viennese engineer Alphons Custodis. The change to gas took place in 1975. The bricks were packed close together in the kiln for firing and the dark colour results from the reducing conditions. Where exposed to excess air the bricks come out an insipid flesh pink. "CROWBOROUGH ASHDOWN" bricks of similar colour are now made at the new Ashdown works near Bexhill-on-Sea. This highly automated works using an Aberson machine and a Butterley K7 continuous kiln opened in 1979.

M D P Hammond NOV 1981

MATHEMATICAL TILES IN LEWES

Anyone drawn to Lewes and prepared to stray forth miles east to Rye will be well rewarded, not only by a rich variety of vernacular but, in particular, by a splended example of Mathematical tiles. This comes in "The Old Custom House". It is easily found because it faces the east end of Rye Church at the top of the town.

Close by is Lamb House, a N.T. property of which the new owner-custodian should be known to most members through the publications of his firm. Sir Brian Batsford is already planning to replace solecistic intrusions of modern brick and brick paving by that which is fitting to this home of the hereditary mayors of Rye. But check first, when it is open.

G C Hines JAN 1981

ENQUIRIES INFORMATION 23 JAN 1981.

1. SLADE WEST BROMWICH

The date of manufacture and other information would be appreciated concerning purple bullnose bricks bearing an oval stamp by the above maker. Replies please to Mr B.J. Murless, 46 Holway Avenue, Taunton, Somerset.

2. ANDREW'S BRICKWORKS EPSOM

Information is sought on a 19th century Surrey brickfield for a publication on the history of Epsom Common. The Andrews works is known to have been in operation in the 19th century and accounts show that a number of large houses were built with its products. Details are needed on the works and the Andrews family. Replies please to Miss J.R. Glover, 71 Christchurch Road, Epsom, Surrey, Tel: 20456.

3. WEST MIDDLESEX

Mr Gibson would be grateful if anyone could give him a reference regarding the pre-1800 history of any brickmaking in this area, particularly in the Uxbridge, Harefield, Northwood, Ruislip area. Replies please to Mr. R. Gibson, 28 Farthings Close, Eastcote, Middlesex.

4. HENRY RYDON OF HIGHBURY AND WARE

Details are sought about the location of the brickfields of this brickmaker and builder and the period of his brickmaking activities. Replies please to Mr. J. Smallshaw, A15 Penbody Square, Islington, London, N1 8PT.

5. PARALLELEPIPEDON SHAPED BRICKS

These were found on a timber framed farmhouse near Cranleigh in the brick nogging by the Domestic Building Research Group in Surrey. The bricks were 190mm long, 50mm depth, very roughly finished and may have been applied in the C.18. Details of the dates, spread and purposes of such bricks are required by BBS Member M. Exwood.

6. IS THIS A RECORD?

Bricks 14" x 8½" x 6" stamped with a dragon trade mark and the name EDWARD PARRY & SONS LTD BUCKLEY were found on Anglesey by Brig. A. Trevor. Any information re the date of manufacture of these large bricks to BBS Member, M. Exwood.

7. NIBS ON PLAIN TILES

It seems to be generally assumed that nibs lugs for hanging plain clay tiles instead of oak pegs first occurred in C.18. C.G. Dodson in "Historical notes on the Langley Museum" mentions 1836 as the earliest reference in a patent specification. I have heard reference to the use of nibs on the C.14 tiles. Does anyone know the source of this information? Replies please to BBS Member, Maurice Exwood.

8. INDENTED BORDER

Bricks from an excavation at Bridwell Palace, near London had an indented border around the upper face, usually about 1cm wide and a few mm deep, but not always regular. Information is required as to what part of the brickmaking process this mark is made and any other details. Replies please to Mr. Derek Gadd, 58 Bruce Road, London E3.

9. LONDON TRADE DIRECTORIES

Does anyone have any information on trade directories of brickmakers in London between 1850 and 1914? Dobson's Rudimentary Treatise 1850 names a few, but details are sparce and there must have been made more active during the late 19th century expansion of the London suburbs. Replies please to Michael Bussell, 23 Fitzgeorge Avenue, London W14 OSY.

10. ENGLISH FIRE BRICKS TO THE USA 19TH CENTURY

The following list of bricks have all been found as imports in the USA in the 19th century. Details of any of the brickworks concerned, their owners, dates, locations etc., or references to books about their history would be welcomed. Replies please to Karl Gurcke, University of Idaho, Moscow, Idaho 83843, USA.

BENSON BONNYBRIDGE CALDER J. CARR COWAN FOSTER GARTGOSH GARTVRAIG GLENBOIG H.R. BROWN & SON PAISLEY ROBSON SNOWBALL RUFFORD STOURBRIDGE T. CARR W. GARNKIRK PATENT M.T.CO T.CARR/CHURCH 4.

THE BLACK COUNTRY MUSEUM, DUDLEY.

A PERSONAL ACCOUNT OF THE BBS AGM VISIT.

It was a crisply cold morning on 21st February 1981, so the welcoming coffee was a fitting inception to the Annual General Meeting of the British Brick Society, held this year at the Black Country Museum, Dudley.

Cheerful and pleasant, the curator, Mr. Stuart Holm, welcomed the 16 members who arrived. After apologising for some disarray as the Museum was really closed, he then gave an interesting illustrated talk about the Museum enterprise. His 'before and after' slides provided an impressive realisation of the three stages in the development of a once-derelict coal-mining site of 26 acres - a development still continuing as it strives to retain a past that would otherwise have no future.

Stressed in that development were, firstly, the steadily acquired skills in removing and rebuilding the old dwellings - the careful numbering of each brick, strut and frame; then photographed in situ, hand-dismantled, transported, and re-erected often with the camouflaged strength of new techniques. Secondly, there was the enthusiasm if voluntary labour - best exemplified in the canal basin project, which involved standing thigh-deep in mud to dredge out the old canal boats, removing the sewage from the limeworks, and strengthening the waterway banks.

A short tram ride took the party to the site, passing the colliery with its wooden pit frame and steam machinery. Ahead lay the 1879 bridge, re-erected here over an arm of the canal. Alongside the canal basin were the impressive remains of the 1780 lime-kilns in use until the 1920's.

Beyond the bridge were a row of typical Black Country buildings, carefully and perfectly re-erected. They included a general store; an impressively 'embottled' chemist's shop; and a chain maker's home which had a brewhouse in the back garden for laundry and liquor, and also a chain workshop. The 1838 Methodist chapel had not only been beautifully re-erected here, but also re-consecrated, so services are now held therein.

Beyond the chapel, on the canal, was the entrance to the 3000 yard Dudley Tunnel, completed in 1792. Despite the limited time factor of the visit, it was still possible to see the coal-fired bakehouse, the working lifting bridge, and boat dock with the once familiar canal long-boats.

The AGM of which an account appears elsewhere, was held in the Victorian parlour of the chain maker's house, and an excellent dinner was then provided in the living room of the same building. The dinner was traditional - groaty pudding, faggots and peas, bread pudding, bread and cheese, and ale - thus providing a practical knowledge of a meal in the past.

The remainder of the afternoon was occupied by a guided tour of the Stourbridge Brick Co. Ltd., brickyard. Though the yard was in process of re-organisation, it was claimed that once this had taken place, with the establishment of a new drying kiln and German installed machinery, it would be the most modern, up-to-date brickworks in Europe.

The guide showed the entire organisation of the works from clay to finished product, with particular emphasis on the mechanical aspect in the making and stacking of bricks. He ended by showing the wide range of colour, texture, shape and size of brick which could be produced, and all with a wastage of less than four per cent.

Then with sincere thanks to Mr. Stuart Holm for the organisation of an excellent meeting, the members duly departed for home.

A H Stamp MAY 1981

FIREBRICK IN THE BLACK COUNTRY

No single industry has fashioned the modern way of life, but a few have had very far-ranging effects. Among these is the manufacture of firebricks. Yet it has been sadly neglected in literature. And nowhere is this more true than in the Black Country, with its former great concentration of brick yards.

Until Henry Doulton's patent for glazed fireclay sanitary pipes, in the mid-1800's, open sewers were the common thing in big cities and towns. Disease was rife and sanitation was virtually non-existent.

Now take modern day life without glass, no windows in houses, or in cars, no lenses of lighthouses, or cameras, no bottles or jars. The glass manufacturing industry is totally reliant on the firebrick or the modern refractory. Here again the Black Country was to the forefront with Chance's glass works on Smethwick, and that is just the heavy side of glass, Now think of crystal glass, so much sought after; this trade, perhaps more than any other, brought fame to the Black Country firebrick trade, It was among the first to exploit the first class fireclay of the area; this was in the 16th century.

We now turn to the heavy industry of iron and steel. The use of firebrick here is crucial, the only real change in the last three decades, as far as iron and steel are concerned, is the need for a higher grade of firebrick. In the early days of ironmaking firebricks, to a less exacting standing, were acceptable, (Abraham Darby was using Stourbridge firebrick in 1718, for his furnaces at Coalbrookdale). As technology advanced additives were needed to make the local clays capable of withstanding greater heat. One such mineral, Cambrian quartzite, was quarried from the Licky Hills just outside Birmingham, and this combination proved very good. Scottish fireclay, with its high percentage of silica, was also used extensively. Today's manufacturing conditions call for something different, using alternative raw materials still basically refractory.

The three main sources of home heat, light and cooking, also require firebricks. Electricity needs them for its steam boilers which power the generators. It may be thought that this would not include North Sea gas, but even that has to flow through pipes made of steel which in turn needs firebrick to produce it.

From the early 1800's up to the mid-1960's, the gas industry was probably the best customer for firebrick from the Black Country. Every one of the 18 or so yards working in 1947 was making a contribution to the millions of tons of retorts and firebricks that the gas works were using. In 1834 Benjamin Gibbons of Dibdale, Upper Gornal, Dudley, was the first to take advantage of their fairly new industry and was about the largest in the Black Country, in this field, if not in the United Kingdom. About 80% of the production of Timmis of Lye, near Stourbridge, was for the gas industry.

In 1868 there were 16 firms producing firebricks; in 1916, 26; and several of these firms owned more than one yard. In 1947, 18; in 1972, six; and 1981, four. It will be seen how badly Black Country brickyards suffered with the closure of gas works, the scrapping of the steam locomotive, and technological changes in other industries.

Until the early 1960's many people travelled by train, hauled by a steam locomotive, without realising the major part played by firebricks in the steam producing process of these fine machines. In the Black Country, production of boiler blocks and firebrick arches for locomotive fire-boxes was an important part of production. In many yards it was carried on as a regular production process.

Last, but by no means least, the bricks and tiles used to build our homes, places of work and public buildings all depended on firebricks for their production.

With the exception of a small percentage of building bricks and tiles that were fired by the open clamp method, countless millions of bricks, tiles, pieces of terracotta ware, etc., have been fired in kilns of various types and sizes and lined with firebrick. Even firebricks themselves need a firebrick lined kiln to produce them.

John Cooksey MAY 1981

BRICKS AND DECI-BELLS - CHARSFIELD CHURCH, SUFFOLK.

Ronald Blythe described what must be one of the most beautiful as well as practical uses of brick in his chapter on "The Ringing Men" in his book "Ackenfield" (Penguin: first published 1969). Writing of the bell towers, he says "The Towers have a great effect on the sound of the bells which hang in them. The tower here" (Ackenfield, actually the Suffolk village of Charsfield) "is soft red brick and it absorbs the strike notes, whereas in a modern tower made of concrete and steel you would get a harsh bell note .....
The old bricks soak up the sound and sweeten it."
(Prospective builders of church bell towers, please note!)

Pevsner ("Suffolk", Penguin 1961) is more complimentary: "An exceptionally stately brick tower ... Diagonal buttresses." Both authors mention the brick porch with polygonal buttresses which Pevsner dates to early XVIth century.

G C Hines MAY 1981

PIDDINGHOE KILN

Further news of the dismantling and rebuilding of the Piddinghoe Kiln by the Lewes Archaeological Group may be found in the Sussex Courier, 2nd August 1980 and their own Newsletter numbers 53, 54 and 55. E.W. O'Shea in his article on kiln reconstruction in the March 1981 issue states that another 5 weeks should see major construction work completed.

MAY 1981

SOUTH HUMBERSIDE TILERIES

The magazine "The Narrow Gauge" number 89, pages 4-9 contains a very interesting article by Adrian J. Booth on the South Humberside Tileries. The text is biased to give details of the narrow gauge railway used at the works but in so doing supplies full details of the clay extraction. The article also includes a plan and two photographs of William Blyth's Far Ings Tile Works; a plan and three photographs of William Blyth's Barton Works or Hoe Hill Works; and a plan and two photographs of the Works of the Goxhill Building Products Limited.

In the same magazine, pages 24-27 is an article by E.R. Shepherd "Visit to the Marland Light Railway". The line was opened in 1880 to convey clay from the Marland Brick and Clay Works to the main line and a Brick and Tile Works is marked on the sketch map with the article.

MAY 1981

ENQUIRIES

1. UNUSUAL TILES

As a result of a mutual interest in Enamelled Slate and Mathematical Tiles, Mrs Irene Cockroft invited me to look at an unusual system of house-building she had noticed near her home in Barnes, London. The system used was to lay 'L' sectioned tiles in two rows, 10" apart, on a bed of mortar. The resulting 'trough' was then filled with any convenient material and covered with a layer of mortar; on this was laid a further two rows of tiles, which were similarly treated. The process was continued until a suitable number of courses had been laid when one or more courses of brick were inserted.

Sketch (A) illustrates the system and indicates the shape of the tiles. Standard size appears to be a length of 12", the sides of the 'L' being 3" (78mm) and 3.7" (93mm). The lacing-courses are of perforated bricks, perforations arranged 7 - 6 - 7 and averaging 15mm in diameter. A sample of brick 8.9" (226mm) by 4.3" (111mm) by 2.8" (71mm). It appeared that the same type of brick had been used for corners, doors and windows.

Sketch (B) indicates how, by 'marrying' two compatible tiles, something similar to a land-drain tile can be produced.

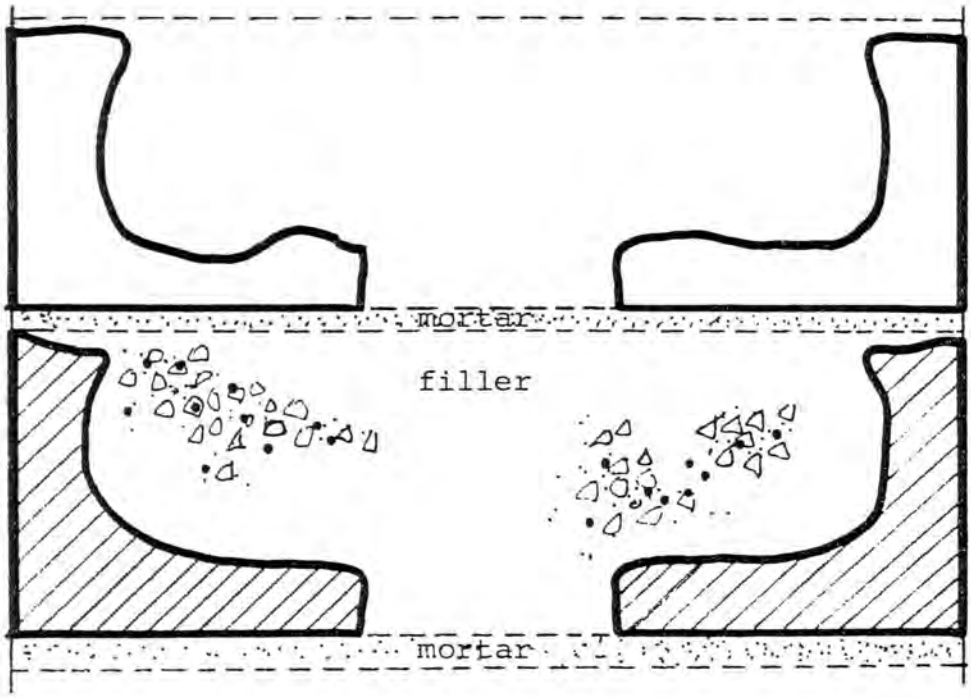
Dates are, at present, uncertain. Documentary evidence that the buildings were established by 1867 has come to light: local tradition suggests 1830-1840. Further evidence should be available, but is proving elusive.

Two major questions seem to arise:-

1. Has any reader encountered this method of building?

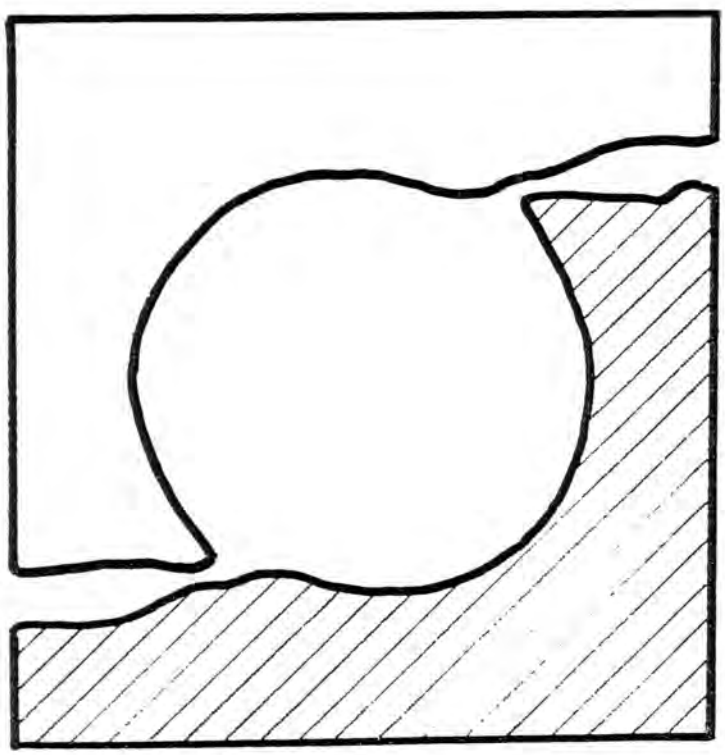
2. Is it possible that the use of material which might have passed as agricultural drain-tiles was a deliberate attempt to evade the Brick Tax?

Replies please to Brig. A.P. Trevor, Anglesey.
(Now deceased - Ed)



A

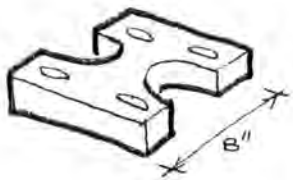
A SECTION THROUGH THE WALL HALF SIZE



B

A SECTION THROUGH THE TILE:ACTUAL SIZE

2. DOUBLE BRICK



A recently demolished house revealed an unusual brick illustrated left. It is finely made with small indentations on both the top and the bottom faces. Where in Hampshire was this type of brick made? When was this type of brick made?

Replies please to A. Wright, 1 Longmead, Fleet, Hampshire, GU13 9TR.

MAY 1981

THE BRICK TAX AND LARGE BRICKS

When in December 1783 William Pitt the Younger, became Chancellor of the Exchequer (for the second time at the age of 24) and Prime Minister, he was probably aware of the parlous state of the country's finances in consequence of the American War of Independence. So in his first budget the following June he found it necessary to increase some taxes and introduce new ones on such things as felt hats, ribbons, saddle horses and ..... bricks and tiles.

The Act introducing an excise duty of bricks and tiles (24 George III c24) came into force on 1st September 1784, and the duty on bricks was not repealed until 17th May 1850 (13 and 14 Victoria c9). In the intervening period the legislation on the tax was changed no less than 14 times. Many of these changes were concerned with the definition of the type of tile to be used for field drainage, which were exempted from 1794 onwards, if used for that purpose, but that is another story. For Students of Bricks, the important Acts are:-

1784	24 George III c24	Introduces duty on bricks at 2s 6d per 1000
1794	34 George III c15	Increases duty on bricks to 4s per 1000

1797	37 George III c14	Increases duty on bricks to 5s per 1000
1803	43 George III c69	Introduces size bar: bricks over 10" x 5" x 3" charged double duty
1805	45 George III c30	Increases duty on normal bricks to 5s 10d per 1000
1839	2&3 Victoria c24	Size bar changed to 150 cubic inches
1850	13 and 14 Victoria c9	Repeals all duties on bricks.

Since the duty was levied per 1000 bricks, irrespective of size it soon led to increases in brick size. Ironically Parliament had found it necessary only 7 years earlier to legislate against small bricks by laying down the minimum size of bricks (and pantiles) in "An Act preventing abuses in the making and vending of bricks and tiles" (17 George III c42, 1777 - The "Chronological table of Statutes" gives the year as 1776, but the version of the Act in "Statutes at Large" gives the date of coming into force as 1st July 1777). This Act laid down minimum sizes of burnt bricks as 8½" long, 2½" thick and 4" wide. (This is the only Act I know of for controlling the size of bricks applicable to the whole of England; there are earlier Acts which control the size in the London area).

In May 1794 the Commissioners of Excise (who were responsible for the collection of the duty) warned the Treasury about brick makers in Nottingham who " .... in order as much as possible to evade the duty are preparing to make their bricks of an extraordinary size .... whereby the revenue might be considerably diminished".

The Treasury is reminded of the matter three times, but not until July 1803 is the law changed so that bricks not exceeding "ten inches long, three inches thick and five inches wide" pay the normal duty of 5s per 1000, but bricks "exceeding any one of these dimensions" are charged at 10s per 1000, So a brick say 10½" x 4" x 2½" (105 cubic inches) would pay the higher duty. Bricks were assessed for the tax between the moulding stage and the removal to the kiln for burning so since shrinkage by drying (after having been assessed) and burning may be 10% or more, the final brick may be less than 10" x 3" x 5" and yet have paid double duty.

Nathaniel Lloyd's "English Brickwork" incorrectly states the 1803 size bar as 150 cubic inches, an error followed by several authors after him. The size bar was not changed to this format until 1839, three years after the Commission of Excise Inquiry had argued about the inconvenience of the then current size bar.

Several authors have erroneously assumed that the 1803 Act meant the end of the large brick, and that any large brick can thus be dated to the period 1784-1803. But it is not as simple as that. The duty on bricks above the size bar was never more than double the standard rate. Bricks 18" x 6" x 9" to be seen near Kidderminster (are these Wilke's Gobs?) each take the place of eight conventional bricks, but a thousand of these paid a duty of 10 shillings whilst the 8000 conventional bricks needed for the same volume of brickwork paid 40 shillings. So considerable tax savings continued after 1803 by using these large bricks. The "great bricks" referred to by Neve in his "City and County Purchaser" in 1723, as used for garden walls, measured 12" x 3" x 6" and were still apparently made to the same size for the same purpose in 1819 according to Peter Nicholson's "Dictionary of Architecture". Tax wise these were still an economic proposition after 1803.

We have statistics for the four years 1833-1836 when 4561 million common bricks paid tax and in addition nearly 12 million large bricks or 0.26%. So 30 years after the introduction of the size bar, manufacture of large bricks continued. What we need is more information on datable large bricks before we can draw conclusions on the effect of the various phases of brick tax on the size of bricks.

Maurice Exwood MAY 1981

The author would welcome any information on large bricks used in any part of the country, where possible with the date of structure. All replies please to BBS member, M. Exwood.

DULLAS BAY BRICKWORKS (ANGLESEY - GWYNEDD).

The map of "Industries" on page 88 of Melville Richards' "An Atlas of Anglesey" marks five brickworks, including Porthwen which was described under "Brickworks on the Beach"* (Aug 78 and Nov 78). Now I have found a sixth, simply because a new Tourist Map of the island has repaired Richards' omission.

The site is on the SW shore of Dullas Bay in the parish of Llanwenllnyfo. One arrives by way of the A5025 Amlwch-Benliech road turning NE at the crossroads in Llaneuddog, about 4 miles from Amlwch. Half a mile of narrow lane terminates in a neglected stone causeway which also forms a quay, one relic of the old brickworks. The other is a large rectangular pool on the left of the lane as you approach the causeway. This was once the claypit. Everything points to a pocket of alluvial clay created by the Afon Goch where it enters the bay.

The last cottage before this pool is 'Ty Brick'. The owner, Miss Abson, was out when I called but it looks as if any remains of the site would be on her property - shown on the new (metric) OS map of Anglesey NGR 474881. The works are said to have closed 'over fifty years ago' and bricks found in their neighbourhood are 'badly made with inclusions of over 2" pebbles' - this from another resident.

The far (SE) side of the bay rises to over 100 feet in a steep, wooded hillside produced by Anglesey's sole slither of Old Red Sandstone. Few folk appear to have found it. Like Porthwen it is an enchanting place where Common Tern and Blackheaded Gull fish the water while Oystercatchers and Ringed Plover prod the sand.

I hope to revisit it in 1982. Meanwhile, if other members can forestall me and search the site I hope that their findings may appear here.

G C Hines NOV 1981

(* see pages 25 and 26 of this compilation - Ed.)

STANLEY BROTHERS, NUNEATON

According to Jewitts Ceramic Art of Great Britain 1878 reprinted 1971 the works were established about 1830 by P.W. Williams upon the site of a very old pot works, but of which no record exists. At first there were two distinct works - one worked by the eldest son, John Williams, who sold it to his three brothers Peter, Charles and James, by whom it was carried on under the style of "Caroline Williams". It afterwards passed by purchase into the hands of J. Rawlins, and was taken over by Messrs. Broadbent and Stanley Brothers, by whom it was considerably extended. The other works was carried on by Walter Handley at whose death it passed to his son-in-law, David Wheway, at whose death it was incorporated with the first works and carried on jointly by Broadbent and Stanley Brothers. In 1871 Mr. Broadbent retired from the concern.

The goods included terra-cotta vases, chimney pots, coloured paving tiles for geometric designs, garden edging, ornamental ridging, ornamental and plain building bricks and sanitary pipes. The marls from which the various goods were made on the ground worked by the firm, comprise about 20 different measures of diverse colours and qualities. The works occupy nearly 10 acres of ground. (G. Godden revised version has added that Stanley Brothers continue to the present day, ie 1972).

J M Howell NOV 1981

BRICKWORKS VISIT WANLIN - ARDENNES - MEUSE - BELGIUM.

This works is now owned by the Nouvelle Société d'Hennuyéres et Wanlin, a subsidiary of Ibstock Building Products, formed in 1977. It produces very hard solid wire cut facings from Devonian shale.

A contractor digs the clay by tractor-mounted shovel and builds a stockpile, adding clay from different seams in thin layers. Clay is dug vertically from the stockpile to ensure a fair mix of these layers, and fed onto a conveyor belt which supplies the pan mill. The clay fires naturally a deep red, but for brown bricks small quantities of manganese dioxide are added at this stage.

From the pan mill, where a small amount of water is added the ground clay passes through a de-airing pug mill and extruder. The top and sides of the clay column are "rusticated" with wires as it emerges, and the bricks are chopped off individually by a single wire and set ten at a time on a pair of laths and pushed sideways onto a hoist which takes them to the dryers. These are of the chamber type, on the upper floors of a large building with the two Hoffmann kilns on the ground floor. The bricks are set and drawn from opposite ends of the dryers by finger-cars which can lift 6 laths (ie 60 bricks) at a time. The finger-cars are electrically driven from overhead wires and are mounted on transfer cars in order to negotiate the right-angled turn into the dryers. A heat-exchanger and fan, supplied with steam from an oil-fired Lancashire Boiler provide most of the heat for drying though a certain amount comes from the kilns below.

When dry, the bricks, still on the laths, are taken and placed on another hoist which takes them to the ground level. They are wheeled on a large trolley into the kilns, where setting and drawing is done by hand. The kilns are identical - each has 26 chambers - the arch is 11' 6" wide and 8' high. There are rows of four feed-holes at 3' 4" centres. Firing is with coal by automatic stokers. Slack coal from the Limbourg region, 1" dust is first crushed and sifted to remove the larger lumps, - ¾" is an ideal size - then spread over the top of the cooling chambers to dry out before being shovelled up into the hoppers of the stokers. These are portable and fit over individual feed-holes, and worked by stout wires hooked to long rods moved back and forth by a small electric motor. Shrinkage is tested by a graduated rod thrust through small spy-holes on the arch. As the stack of bricks shrinks, so the reading changes, and is compared with a reading taken at the start of the firing - the total is 4 to 6 inches.

After the firing the bricks are drawn from the kiln by hand, sorted and stacked on pallets for despatch.

The present works date from 1922. In 1920 it was taken over by the Tuileries du Progres, of Hennuyéres, then one of the largest brick and tile manufacturers in Belgium. It is hoped to publish a full report on that firm later. Suffice it to say that it is the home of the Belgian continuous kiln, and four of the original kilns still exist, though somewhat altered inside; two are still used for firing bricks.

M D P Hammond NOV 1981

CHARFIELD BLOCK TILE AND BRICK WORKS. PART ONE.

The following article was sent for use in Information. Permission was given by Owen Ward and Will Harris, the authors of the article, and by the BIAS who published it in their Journal 13, 1980 and our thanks go to all concerned.

The Companies and the Setting

In its heyday the Charfield works was proud of its modern 'mass production' system of a cavity block which, because of its relative lightness and large size, was a cheaper alternative to conventional brick. It was appreciated by large public organisations anxious to build quickly and cheaply and was often used in situations demanding considerable load-bearing strength. Had there been a supply of more reliable raw material the works might now be meeting a renewed demand for blocks to complete the walls of concrete and steel framed structures where their insulating and sound-proofing qualities are advantageous.

The Phormium Cavity Block Company began work on the construction of the site at Charfield (ST 722926) in 1928 and the first kiln was fired in September 1939. We are not aware of clay being dug from the site of the pit prior to this but bricks and tiles for the vernacular buildings of the area must presumably have been burnt in clamps or temporary kilns, using locally dug clay. The existence of works making conventional bricks at Wotton-under-Edge, two or three miles to the north-east, is recorded, and hand-made brick is still referred to locally as "Wotton brick". The brickfield (ST 927758) lies on the south bank of the stream 200m below Hack Hill. Cursory observation of local vernacular buildings suggests that building with hand-made brick ceased in the third quarter of the 19th century. Moreover, buildings where manufactured brick was used appear to date from this time. Brunel in the construction of the Bristol and Gloucester Railway (1844) used local materials in the many bridges on the line, including pennant sandstone at Mangotsfield and carboniferous limestone at Wickwar. Charfield Bridge is in hand-made brick as are most of the station buildings. Conversely, the bridges on either side at Wickwar and Huntingford are in carboniferous limestone.

In 1932 the Phormium plant at Charfield was purchased by the Great Western Brick and Tile Company (of whom nothing else is at present known) who in turn sold to G.H.Downing and Company in 1933-34. We understand that George Downing had been engaged in the manufacture of clay tiles before the First World War, but after 1918 became progressively more involved in the manufacture of tiles, and it is said that he was the instigator of the mass production of tiles to counter the heavy imports of tiles from Belgium and France in the early twenties. Initially he had several individual companies either solely owned or in partnership with other people until, in 1933, all were put together on the open market to form G.H. Downing and Co. (1933) Ltd. In the next few years he bought two or three other companies to make Downings by far the largest clay-tile manufacturer in the country, if not the world, at that time. Charfield works was acquired by Downing because it was at that time probably the most efficient and cost effective clay tile works in the country. Mr Downing died in 1937 at the age of 70 and the management of the company passed at the beginning of 1938 to Mr A. Hartley who had been manager at Charfield when Downings originally bought it and had left the plant shortly after its acquisition by Downing.

The works were sited on the eastern side of the Bristol-to-Gloucester Railway some 500m north of Charfield Station. A siding was laid, from the down-road refuge siding, to deliver coal for the boiler and the kilns and also to despatch products. The clay pit lies on the other side of the track some 600m to the west, set in the bank of Underhill Wood. Of a red marl, similar to Keuper Marl, the pit is some 3-4 acres in extent, with a pool in one corner. Although at a higher level than the works, the pit was connected to it by an overhead ropeway rather than a tramway, presumably because of the railway. One of the bases for the trestles or standards remains as does the terminal bay at the pit.

Bryant Homes Ltd who purchased the site from G.H. Downing and Co. after 1973 subsequently obtained planning permission, following an appeal to the Department of the Environment, to erect 79 houses. The site was cleared during March/May 1979 and the shed over the kiln was sold. It has recently been re-erected at Hill House Farm, Charfield. One other shed was also sold and all that now remains is the approach road to the siding.

The Products

The first company on the site was the Phormium Cavity Block Co. which was established on open fields in 1928. A 'puff' of 1932 (in the 'Industrial World') describes their products as lightweight hollow blocks for walls and floors. The works had a capacity of at least 6,000 blocks per day. together with a few 'Cotswold-grey hand-made sand-faced tiles and machine-made Red Broseley Pattern Roofing Tiles, a certain proportion being finished by hand to meet architects' special requirements'. Photographs published in 1932 show a block about 10 inches square and 4 inches thick with two hollows and walls about an inch or more thick but the standard sizes of cavity block 'ranges from 12 ins x 9 ins x 2 ins to 12 ins x 9 ins x 9 ins, while a series of gabled blocks, stop ends and other decorative forms are available. The finish can be rough or smooth, while a combination of smooth on one side and rough on the other is manufactured. In addition to these standard walling types, flooring blocks are made, and of these there are two kinds.

TO BE CONTINUED IN INFORMATION 26 (Jan 1982)

NOV 1981

ITALIAN PERFORATED BRICK

This was found on an airfield in Sardinia, adopted by No.41 Squadron, Coltishall, and given the name "Luigi". In Germany in 1979 it was made a Pilot Officer and married to a local German brick called "Eva". It has flown in 29 different aircraft, including Concorde, and now awaiting a flight in a hot air balloon.

(From Eastern Daily Press spotted by member M.G. Reeder).

NOV 1981

ENQUIRIES

Perforated Tiles

Can anyone tell me the dates when perforated tiles for kiln floors with "Stanley Bros Nuneaton Patent" impressed on the side were made?

There are a lot of these stacked in an out-house at Preston Mill, East Linton, East Lothian. Identical ones have turned up in the garden of a house in Bodenham, Herefordshire where a malthouse existed in 1808. The malthouse was pulled down in 1830. Replies please to Mrs A.D. Brian, Bodenham Hall East, Bodenham, Herefordshire.

NOV 1981

Layer Marney

Edward Gripper was a farmer from Layer Marney who moved to Nottingham in 1854 and took over Mapperley Top Yard. With his partner William Burgass, a Nottingham coal merchant, he founded the Nottingham Patent Brick Company (now known as the Nottingham Brick Company) in 1866, and obtained the sole rights to build Hoffmann Kilns - the first went into production on 12th May 1868. He subsequently became Lord Mayor of Nottingham. Can any local members supply any further details re the connections in Layer Marney for the AGM?

M D P Hammond NOV 1981

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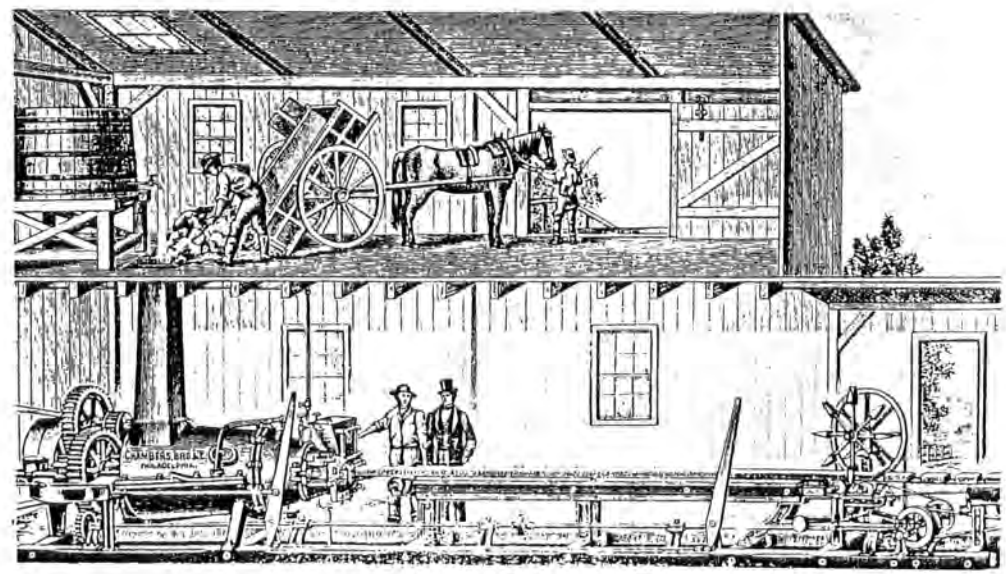


APPENDIX A

BOOKS LISTED AND REVIEWED IN BBS INFORMATION NOS 1 - 24

NOTE :

Items and comments in this Appendix are not indexed in the foregoing Index of the Compilation Volume I

BOOKS LISTED AND REVIEWED IN BBS INFORMATION NOS 1 - 24.

Note: Unless otherwise stated, price and availability is as originally published. No enquiry has been made about current availability when making this compilation in 1987.

J. CERAMIC HIST 1. "Some examples of sources in the history of 17th Century Ceramics"

A.R. Mountford and F. Celoria

* U.K. 30p Outside U.K. 50p

5. "REPRINT of 'A rudimentary treatise on the manufacture of bricks and tiles' (1850) Edward Dobson, Edited with introduction on the history of brickmaking and life of Dobson by Frances Celoria.

* U.K. 80p Outside U.K. 100p

Both from George St. Press, Fancy Walk, Stafford, ST16 3BA *

* Editor's Note: Originally from above Press, but now (1988) available from:-
The City Museum & Art Gallery, Bethesda St., Hanley, Stoke-on-Trent, ST1 3DW , Staffs.
Priced £2.50 and £3.00 respectively plus 50p post and packing for either or both books.

REVIEW

J.C. Hist. 1

These 26 excerpts from rare C.xvii sources should prove a good remedy for any who may suffer from "that happy ignorance of the true facts which makes experts of us all". They also make a companionable bedside booklet for amateurs of brick. Even if you are familiar with a 'thorondell', or the price of brick at Michaelmas, 1693, you may find that Francke's patent kiln, or the exceptional strength of bricks made at Nettlebed (Oxon), or size of those from Caversham -- the Lath-bricks -- to be something new. Excerpt 26 comprises six pages describing brickmaking in 1693 and is a treasury of the technical terms of that day.

J.C. Hist. 5

Hitherto Dobson's 'Treatise' has been as rare as it is reputable. Dr. Celoria's facsimile edition (slightly reduced in reproduction) puts this right in good measure. Not only do we have Dobson's text and 58 finely-drawn steel engravings of brickyard layout and appliances, but also an editorial to put Dobson's work and life into context and to compare his terminology with that used in Searle's (1956) 'Modern Brickmaking'. There is also a 4-page bibliography. The Treatise is in two parts. Part I contrasts practice in Holland, Nottingham and Staffordshire, described by a symposium of authors. Part II details plant, process, costs and materials with two other chapters: VI, on the London Tileries, and VII, on making encaustic tiles. We shall all discover points of personal interest. For me, App.I of Pt.II: 'Brickmaking in Suffolk' gave a valuable 'control' to a tape taken of the reminiscences of a brick-maker's granddaughter. In particular, the sentence: "There is no hollow found in the bottom of the brick for the mortar joint", penned as it was in 1850, would appear to deserve further enquiry.

FEB 1974

BIBLIOGRAPHY

A nine-page list of publications has been compiled as a beginning of a continuing project. This will comprise a card index to be deposited where it shall be easily available to members. Meanwhile, as promised, major works (and this implies their own considerable bibliographies) and some references to special papers - to indicate the scope - are listed below.

BRIGGS, M.S. 'A Short History of the Building Crafts' 1925, Chap. 5, 36-71.

BRUNSKILL, R.W. 'Illustrated Handbook of Vernac. Archit.' 1971.

CLIFTON-TAYLOR, A. 'The Pattern of English Building' (rev. edn.) 1972, Chap. 9 Brick.

DAVEY, N. 'A History of Building Materials' 1961, Chaps. 8, 9 & 10 (Terracotta).

DITCHFIELD, P.H. 'The Manor Houses of England' 1910, Chap. 4, Sec. on Brick.

DOBSON, E. (Ed. F. Celoria) 'A Rudimentary Treatise on the manufacture of Bricks and Tiles, etc.' reprinted 1973 (1st Edn. 1890).

FIRMAN, R.J. & P.E. 'A Geological approach to the Study of Medvl. Bricks' Mercian Geologist, 2, 3, 1967, 299-318.

FLETCHER, V. 'Chimney Pots and Stacks' (Centaur Press - limited stocks)-

GARDNER, J.S. 'Coggeshall Abbey and its Early Brickwork' J.BAA, 3rd series, 18, 195.

HUDSON, K. 'Building Materials' 1972, Chap. 3, 'Bricks & Tiles', pp. 28-42.

INNOCENT, C.F. 'The Development of Eng. Building Construction' 1916 (reprinted with introduction by R. de Z. Hall, 1971, Chap. 10, pp. 125-156).

LLOYD, N. 'A History of English Brickwork ... from Medvl. times to end of Georgian Period' 1935.

SALZMAN, L.F. 'Building in England down to 1540: a documentary history' 1952, Chap.

WIGHT, J.A. 'Brick Building in England from the Midd. Ages to 1550' 1972.

WOODFORDE, J. 'Bricks to Build a House - a history of the brick' (forthcoming 1975) R & K.P.

AUG 1974

HARLEY, L.S. 'A Typology of Brick'
Details as announced in Information 7 but the price is now 58p from Miss I.B. McClure, 6- Old Park Ridings, Winchmore Hill, London N21 2ET. Payments: 'The British Archaeological Association'.

JANET HOWELL " 'Colliers' Primrose Facings - the traditional Essex hand-made brick". 'Havering Historical Review No.7' (May 1975) 34p from Mr D.B. Attrill, 5 Newbury Gardens, Upminster, Essex. Payments: 'Hornchurch and District Historical Society'.

MURLESS, B.J. 'The Bath Brick Industry of Bridgewater' 22p from the author at 15 Gordon Road, Taunton, TA1 3AU.

Also, sets of 6 Christmas cards with envelopes for 32p. These white, single fold, glossy cards bear a beautiful pen-and-ink drawing of the Hoffmann kiln at the Poole brickworks, Wellington. Payments for both: 'Somerset Industrial Archaeological Society'.

WOODFORDE, J. 'Bricks - to build a house' R & K.P. Jan 1976 £3.50, 240 pp. and 100 illustrations with 16 pp. in colour. This first-ever illustrated history of brick from 9000 BC to the present incorporates both photographs and facts from BBS members. John Woodforde travelled to Jericho and other Middle East sites when researching the beginnings. He then follows the story forward to the most recent technological twist: a return to experiments with mud brick, where it all began. The section about early English brick-making is a masterpiece of accurate simplification, and that about European brick will mark a new departure in social history. Readers of this author's 'The Truth about Cottages' will not be surprised by fresh evidence of his insight on the human and social aspects. His manner of telling the tale is as captivating as ever.

NOV 1985

*** see Review on page 7 - Ed.

Periodicals

NOAH, DR. ING. ROBERT 'Zur Rekonstruktion des Klosters Ihlow' Ostfriesland - Zeitschrift fur Kultur Wirtschaft und Verkehr 1973/1 7-9.

NOV 1985

FIRMAN, R.J. & FIRMAN, P.E. 'A Geological approach to the study of Medieval Bricks' Mercian Geologist 2, 1967. 299-318.

(Note: Xerox copies of this paper, without the illustrations may be had for 50p post free from the Department of Geology, The University of Nottingham, University Park, Nottingham, NG7 2RD.)

DAVEY, Dr. N. 'A History of Building Materials' Dent 1961.

STIGLER, Robt. et.al. 'The Old World - Early Man to the Development of Agriculture' Thames and Hudson 1974.

KENYON, Dr. K.M. 'Digging up Jericho' 1957 and 'Archaeology in The Holy Land' 1960, Benn.

CHILDE, V.G. 'New Light on the Ancient East' R. & K.P. 1954.

FAIRSERVIS, W.A.Jnr. 'The Roots of Ancient India' G.A. & U. 1971.

NEEDHAM, Dr. JOSEPH 'Science & Civilisation in China' IV.3.28 CUP 1971.

SUMMERSON, SIR JOHN 'Georgian London' Pelican, Revised Edition 1962.

NOV 1985

'The Story of Somerleyton Brickfields' revised & enlarged. 2nd edition by Audrey Butler, M.A. 40P at Somerleyton Church or 50p post-free from: The Rev. E.C. Brooks, D.D., Somerleyton Rectory, Lowestoft NR52 5PT.

AUG 1976

*** see Review on page 12 - Ed.

REVIEW - 'Bricks to Build a House' John Woodforde. R & KP 1976. (Now out of print, but Hon. Sec. has details of availability in 1987 - Ed).

The author declares himself immediately. To begin a history of brickmaking by telling us that "Several English churches near brickfields include in their harvest display a heap of unfired bricks", and to add a footnote - "At Biddenham, Bedfordshire, fired ones are annually displayed in the church -- on Rogation Sunday" is an unusual gambit. But not an unexpected one to any reader acquainted with Woodforde's 'The Truth about Cottages'.

John Woodforde is a latter day Humanist. It is as an Humanist which is something more than an Historian, that we should judge him.

So: he rebels against that scholastic narrowness which turns its back upon the customary behaviour of ordinary people; he makes room for a 'lay culture' and asserts the claims of everyday life. That footnote and countless other carefully researched details remind us that none of this has been done at the cost of definition. There is something more. We learn that an early Humanist, Buchanan (Fl.1546) "could tell a story with unexcelled clarity and vigour"; so could Erasmus and Moore, and so can Woodforde.

The carefully researched illustrations reveal this Humanism as well as anything. There are 112 of them, peopled if you care to count, by 238 men, women and children mostly working at their craft.

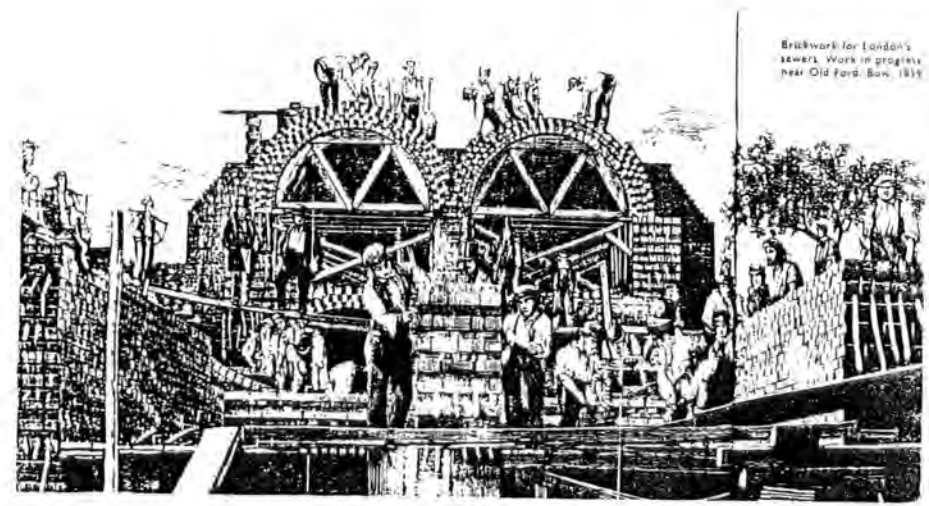
In so wide a field of study where research constantly overtakes anything put to print, anyone with the zest to present a 'total' history within the compass of 200 pages, and with the courage to date buildings and events, must expose himself to ommission and error. The omissions are, alas, shared by much 'brick history'. We leap from Ur to the Indus without mention of Baluchistan; China, pace Dr. Needham, is slighted; we pass from Babylon to Britain without any mention of those quiet bearers of vernacular brick tradition; the Greeks and the Etruscans. It is misleading to cite S. Vitale (AD 547) as the link between Roman and early mediaeval brickwork without mentioning the mid 5th century Mausoleum of Galla Placida, nor the early 6th century basilicae of S. Appollinare Nuevo and S. Apollinare in Classe.

In 1392 they produced 6 - 7000 bricks a day in Utrecht: and yet Houghton's letter of 1683 is cited to imply that, then "an extraordinary man could make 3000 bricks in a day" as if this were unusual! The author has himself apologised to this Journal for the wrong caption to Plate 39 (lower picture). This is of Sutton not 'Penhurst' Place. A glance at Plate 68 confirms this slip by reference to that embossed tun, the rebus of the Weston family whose seat was at Sutton.

Given all this, let one of our keenest and most informed critics have the last word: "John has taken on a large subject - and we all have a long way to go. That is all against it, but there is much for: his book is enjoyable and full of good things, including a number which are unusual and new to me". Many professionals have echoed this.

But why only £3.50? Is there a 'catch'? No. Author and publisher permit us to mention that Jeremy Rowe (Cf.Pl.76) had the idea and backed it by persuading his Board to commission sufficient copies to bring down the cost. This sponsorship is never allowed to bias the book. Chapter 14 is the story of LBC. Any why not? No company is more representative of the industry. Redland and others receive fair mention and, most gracious touch of all, the late Geoffrey Laurence, Sales Director of Redland, contributed eight of his own perfect colour photographs to this readable and beautiful book.

AUG 1976



"THE STORY OF BRICK"

The closing date for the special one copy per member issue direct from publisher is 30 November 1976. Merely send 75p to Dr. A.C. Bull, Harrison-Mayer Ltd., Meir, Stoke-on-Trent, ST3 7PX with, preferably, a self-addressed adhesive label. The demands are already flowing in.

For new readers: eight members of the Society collaborated to write this history, each upon the period in which they are specialists and on which they have, in most instances, published. Much of the material is, however, new. There are about 1000 words and two photographs in each part and the presentation (glossy card 295 x 210mm single fold) is good.

Contents:

Geology: use of brickearths (1) Romans to Tudors
(2) Elizabeth I to II. Earliest brick from 9th Millenium BC pise and adobe to late Chow China. Brickmaking and bricks in ancient Greece, Rome, and Roman Britain. The European renewal from 5th century AD to 14th and 15th century monastic brick. Mediaeval English brickwork: (1) Up to 1400
(2) 1400 - 1480 AD.
East Anglian brickwork from 1480 to 1660.
Bricks for the masses: 1630 to 1730.
Handicraft to factory: industrialisation followed through to the present.
Five ways of observing and recording brick -- a vade mecum for the field.

NOV 1976

MEMBERS PUBLICATIONS

'Ostfriesische Kirchen' - Robert Noah.

Dr. Noah describes 120 churches within 41 pages of this paperback. His text is liberally illustrated with carefully drawn line blocks and 36 splendid photographs. The first 23 plates depict much early Friesian brickwork. Those who know this flat, watery country or who are devotees of 'The Riddle of the Sands', will find many familiar names among the entries.

Last year Aurich honoured Dr. Noah with their equivalent of our 'Freedom of the City'. We congratulate him. The informative introduction to his book describes the early settlement of Friesland in the eighth century and its subsequent conversion to Christianity under various overlords. The Glossary of German architectural terms is a valuable necessity for a full understanding of the German text.

The book weighs just under 100 gr. and so 13p should be allowed for postage plus the current equivalent to 6 Marks 80 pfennigs which is the cost in Germany. You are advised to consult a Bank. Orders accompanied by the remittance for cost and postage to: Dr. Ing. R. Noah, 296 Aurich/Oster, Graf-Edzard Str., 11 W. Germany.

NOV 1976

PETER ARMSTRONG ET. AL. Kingston-upon-Hull Museum Bulletins

The following details are of Bulletins relating to brick:

Nos. 3 & 4 1969/70 together. 'The Mediaeval Walls of Hull'
J. Bartlett. UK 19p. Overseas 34p.

No.6 March 1971 'Hull Castle Excavations' (Castle dated 1541).
Alan Coole. UK 13½p. Overseas 31p.

No.7 December 1971 'Mediaeval Hull: excavations in High Street'
J. Bartlett. UK 19p. Overseas 34p.

Unfortunately, Peter Armstrong's own work on Grimsby Lane (No.10 July 1973) has sold out. A sufficient demand could effect a reprinting so we hope that members will make their requests. The text describes, inter alia, five phases at 'Property IV' which extend from the 12th century to the 19th century. As these include the respective brick sizes for each phase this Bulletin, read in conjunction with the others, fills out the story of Hull brick.

All from: The City Museum, 23/24 High Street, Kingston-upon-Hull, HU1 3RA. Cheques payable to 'City of Kingston-upon-Hull'.

DR. RONALD BRUNSKILL ET. AL. 'Timber Iron Clay'

Space permits comment only on two of the six papers in this beautiful bargain - 78pp. with five full-page 'positive' prints, 39 photographs and three delicate pencil sketches by Sir Hugh Casson; each illustration evokes the essence of the material it celebrates.

Alec Clifton-Taylor fairly apportions his account of 'Timber and Brick in the West Midlands'. Major brickwork begins there at Compton Wynates (c.1520) but "nearly all the finest brickwork in the West Midlands belongs to the eighteenth century." There are some interesting notes on nogging.

Dr. Brunskill, a founder-member of the BBS adopts the title 'Architectural Ceramics' to include tiles and terra cotta along with brick. He is particularly informative about the 19th century. His architect's feel for form, sensibility to change in taste and detailed knowledge combine to make this paper a perfect postscript to our own 'Story of Brick'.

The West Midland Arts Council and Department of Graphic Design and Printing: N. Staffs. Polytechnic, have achieved typography worthy of the text.

UK £1.64. Overseas £1.98 from West Midland Arts Council, Lloyds Bank Chambers, Market Street, Stafford ST16 2AP. Cheques payable to 'West Midland Arts'.

NOV 1976

L.S. HARLEY, B.SC., F.S.A. 'Bricks of Eastern England to the end of the Middle Ages' in 'The Essex J.' Vol. X 1975/76.

Laurence Harley had long purposed a revision of his earlier (1950) paper 'Essex Brick'. Here it is, both revised and much extended. Having discussed possibilities of Celtic and Saxon brick and described Roman brickwork and brickmaking in Britain, he initiates what he terms: "an exciting quest" for "the time and place (of the) renewal of brickmaking" after the Roman exodus. Without revealing the 'plot' of this academic 'whodunnit' we can promise readers a seminal discussion, likely to stimulate, we hope, yet more investigation into questions which our founder President, with his unfailing insight, has now raised.

UK 65p. Overseas 98p. From Phillimore & Co. Ltd., Shopwyke Hall, Chichester PO20 6BQ.

NOV 1976

'CANAL ARCHITECTURE IN BRITAIN'

The development of brickwork from simple C.XVIII forms such as the semicircular arched brick bridge to more sophisticated 'Victoriana' features in this 40pp British Waterways Board publication. 10" x 12" paperback with 60 colour illustrations. £1.50 if collected from the RIBA Bookshop, 66 Portland Place, W1, or BWB shops. Otherwise, £1.80 post free from BWB Melbury House, Melbury Terrace, London NW1 6JX.

JAN 1977

'HISTORY OF BRICKFIELDS AT SOMERLEYTON'

(2nd Edn. 1976) A & A BUTLER

Possession of either the 1st edition (1974) or its reprint (1975) should not inhibit purchase of this much enlarged and enhanced 2nd edition (18 pp duplicated A4) of this lovingly researched history. At 50p post free it remains a bargain. Proceeds continue to go to the funds of St. Mary's Church and it is from the Rector: the Rev. Dr. E.C. Brooks, Somerleyton Rectory, Lowestoft NR32 5PT that this work may be obtained.

The cover map has been redrawn and, within, a full-page plan of the workings added to illustrate the detailed account of the brickmaking process. The introductory epitome of brick history has been expanded from two paragraphs to a page and the sections on the Green and Lucas families expanded. Of especial interest is the new section entitled 'Social Aspects' which includes a vivid 14-line versification by Tom Crawford about his friends and their ploys as well as the story of the ghost of 'Old Lucas'. The former back cover, the family trees of the Greens and Lucas', has been re-set and placed within, and we discover new matter throughout.

JAN 1977

'Suffolk Houses' Eric Sandon FRIBA (Baron Publishing, Woodbridge)

Early in July this, the first work ever to have utilised Harley's 'Typology' to cite current research by BBS members, comes to mark yet another advance of our purpose.

Bibliographies, section by section, numerous footnotes and five detailed appendices expose a wealth of first sources. For example: a list of all moated sites in Suffolk, and texts of two newly found 15th century contracts for supply of bricks for domestic building. Seven years' painstaking work following forty years distinguished architectural practice account for such an acceptable organisation of impressive detail. 'Suffolk Houses' should satisfy a readership far beyond this County because its informative text remains delightfully readable and of wider application.

From geology to landscape Sandon derives the materials and siting of house, village and township. His account of the development of the house carries a clearly illustrated typology of house-plans. Brick shares equal place with the other materials of a stoneless region: timber, flint and plaster. The technique of using brick with flint is precisely described. We observe the beginnings of brick in timber-frame houses -- "the idea behind herringbone brick-work was sound because brick tended to lock into the frame by natural gravity." --; next, its use in chimney-stacks and wings; its integration with flint and, finally, the wholly brick house. Some hundred Suffolk houses are discussed and illustrated -- Helmingham, Hengrave and Crowe's Halls among other glories -- in a final, splended 'Exemplar' section.

There are 300 pp; 16 colour plates; 300 b&w photographs and 100 drawings and sketches. The publisher has already won repute with his books on antiques and, at about £15.00, the price is fair. It could represent an investment; for this potential classic, while grounded in Suffolk, is witness to the way of architecture everywhere.

MAY 1977

'A Geological Approach to the Study of Medieval Bricks' R.J. & P.E. Firman.

Article in 'The Mercian Geologist' (II.3 DEC 1967).

'Wall Handbook'

Suzanne Beedall (Macdonald and James £3.95). This is a practical do-it-yourself guide to all aspects of interior wall repair, maintenance and decoration, 176 pp. 60 b&w photographs and 80 illustrations.

MAY 1977

The Conservation of Brick Buildings by T G Bidwell

28pp, ill, A4 published by the Brick Development Association, Woodside House, Winkfield, Windsor, Berkshire, SL4 2DP. (Now known to be out of print: Ed.)

This booklet is primarily intended for architects, engineers and builders involved in the repair, alteration or restoration of old brickwork; but it will also appeal to BBS members interested in the practical side of brick conservation. The Introductory and Survey sections emphasise the need to identify the potential problems first. They are covered in detail in the succeeding chapters on Structural Failures in Brickwork, Failure of Bricks, Water Penetration, and Fungus and other Growths. Symptoms, causes and remedial treatment are clearly described. Further sections on Alterations and Surface Appearance rightly emphasise the need for a sympathetic approach to the treatment of existing brickwork. A short but valuable list of references for further guidance completes the text, which is enhanced by some excellent illustrations. The booklet has been attractively produced for the BDA by Ronald Adams Associates and should come to be accepted as a standard approach to the subject, which will grow in importance as more attention is given to the re-use rather than the replacement of our heritage of brick buildings.

NOV 1977

English Brickwork by Alec Clifton-Taylor and Ronald Brunskill

Ill. Published by Ward Lock Ltd at £6.95. Overseas, International money order to Ward Lock Telex 262364.

The glossary, recording guide and citation of many lesser-known buildings combine to make this a refreshing, practical and handy work.

The approach has been architectural and, deliberately, not archaeological. This fact may explain, though it certainly does not excuse, some sad chronology, in which both the 13th and 14th centuries are almost entirely overlooked - although Clifton-Taylor's 'The Pattern of English Building' (reprinted in paperback by Faber this year) fills some of the gaps in a rather summary fashion.

Is it a Midland bias that leads the authors to date brick chimneys, flues and stacks to the 17th century at the earliest? Sandon, in his "Suffolk Houses" on page 128 writes "in Suffolk, halls were being floored over after the middle of the fifteenth century and it seems probable that brick chimneys were being built into timber-framed houses at the same time."

Wight, Woodforde, and now this new book offer a complementary trilogy of general accounts of the archaeology, manufacturing processes and architecture associated with brick. We now require detailed investigation before further publication, so that the Society's impressive corpus of collective knowledge may be fully exploited.

NOV 1977

HOLKHAM ESTATE DOCUMENTS

Mr W O Hassall has advised us that there is now available on microfilm a large part of the Earl of Leicester's manuscript collection at Holkham Hall, Norfolk. Of particular interest are the Estate Papers, including accounts and letter-books, which contain many references to the making, sale and use of bricks in the 18th and early 19th centuries.

A brochure on the available material can be obtained from EP Microfilm Ltd., Bradford Road, East Ardsley, Wakefield, West Yorkshire WF3 2JN.

NOV 1977

"Handmoulding Bricks for History" by Margaret Turner with illustrations by Alex Starkey and Richard Turner including the yard, the old clay moulds, stacks of ornate specials and a girl hand moulding a brick.

Article in Country Life Magazine OCT 1978.

BRICKMAKING: A LOCAL INDUSTRY

The Bracknell and District Historical Society has set an excellent example for other local groups, by publishing their booklet 'Brickmaking: a local industry'. Written by Michael Dumbleton, it outlines the historical background to the use of bricks before dealing with local brickmakers and their works. No less than thirty four sites are considered in the area centred on Bracknell, and bounded by Bagshot, Crowthorne, Wokingham and Winkfield - the latter, appropriately the present home of the Brick Development Association.

Today, only one firm - Thomas Lawrence and Sons - operates in the area, producing hand-made facing bricks that have found recent use at 10 Downing Street, Hampton Court and elsewhere.

The booklet is illustrated with a map, site plans and makers marks. In its twenty four pages, it does not pretend to deal in detail with every brickyard: its publication should stimulate more detailed enquiry into each site.

JAN 1979

ROMANO-BRITISH KILN FIRINGS

Mr Geoffrey F Bryant, Tutor Organiser Workers' Educational Association, in Lincolnshire, has produced a book about his building and firing of Romano-British kilns. The kilns were built and fired as part of a WEA seven week course held at Barton-on-Humber in Lincolnshire during April and May 1970. The kilns were built at the Hoe Hill Tile Works, of William Blyth with help and advice from Mr E Coulham, the present manager of the works.

The book contains plans and sections of kiln 4 and kiln 5 - two tables of kiln firing times and temperatures - four photographs of the kilns - and a tabulated summary of results. In all, twenty pages of well presented details in a yellow soft back for 35p post free from Mr G F Bryant, Providence House, Barton-on-Humber. The book is 8" by 10" and is published by the WEA, Barton-on-Humber, Occasional Papers Number 1.

JAN 1979

'P & P BRICKS'

Those of our members who have a "Pope and Pearson" brick in their collection or a "P and P" will be interested to hear of a book by John Goodchild, published by the Architectural Heritage - Wakefield District Group in 1977. It is a glossy soft back, 6" by 8½", entitled "Pope and Pearson and Silkstone Buildings the origins of a West Riding Colliery and Colliery Community" thus emphasising the close connections between the collieries and the brickworks in the North. Little mention and no details of the brickworks are given as the book shows how the firm developed through various rises and falls and their contribution to the community round them. It is very well illustrated with a map, fourteen photographs, copies of old documents and tables of information. The book leaves no doubt at all of the effect of these coal companies on their neighbourhood, and the industries incorporated with them ie brickmaking, tile making, coke ovens, fireclay works, stoneware manufacturing, and the chemical works.

Copies may be obtained from Richard Knowles, 30 Newland Court, Wakefield, West Riding.

JAN 1979

Soil Marks of Late Medieval Brick Clamps at Wijk bij Duurstede - J Hollestelle.

MAY 1979

The 1978/79 Annual Report of the Lowestoft Archaeological and Local History Society contains an article on brick. Entitled 'The Size of a Brick'. It is an attempt by a member of the BBS to trace the path of development of English brick manufacture, and give reasons why this path was followed. Some aspects are controversial and conflict with other published works. A full list of references is included and the manuscript was scrutinised by Mr Geoffrey Hines.

Copies are obtainable from Mrs B. Turner, 11 Cotmer Road, Oulton Broad, Lowestoft, Suffolk.

NOV 1979

BRICKMAKING IN DEVELOPING COUNTRIES

This book is by J.P.M. Parry, Building Research Establishment, Garston, Watford, WD2 7JR, and costs £6.35 plus 29p post and packing.

This is a review prepared for the overseas division of the BRE. The economics of traditional and high technology brickmaking are discussed first, followed by an analysis of defects in bricks and their causes; and at the end of the book some suggestions for improvements in technology and subjects for research to overcome them. Nearly three-quarters of the book, or 62 pages is taken up with notes and photographs of current brickmaking practice in 33 nations in Africa, Asia and the Carribean and South America. Most are using hand dug clay, slop moulded, dried in hacks and fired in clamps or Scotch or Suffolk kilns, often fired with wood. The text makes interesting reading, giving an insight into our own brickmaking history, but the photographs are rather poorly reproduced. It is interesting to note that in Egypt the clay is still mixed with straw, and that in places where mechanisation has been introduced, problems with breakdowns and insufficient or fluctuating demand have arisen.

M.D.P. HAMMOND JAN 1980

FLOOR TILES

Medieval Floor Tiles of Keynsham Abbey by Barbara J. Lowe. This book has been privately printed by the author and is obtainable from the author at 37 Manor Road, Keynsham, Bristol. A full review of this book may be found in the latest BAA Journal volume CXXXIIa and I mention it here for those members who do not join our ranks via the BAA.

(The Humberside Archaeological Group are at the moment undertaking a dig by the side of the famous Minster in Beverley and have already found items of clay both tile and brick. Editor).

JAN 1980

ROMAN BRICK AND TILE

The papers from the Leicester Polytechnic Conference on Roman Brick and Tile are now available. They have been edited by Alan McWhirr; the volume has 400 pages including 100 illustrations. The papers are organised:-

(a) Tile and brick making
(b) Stamps and Graffiti
(c) The use of tile and brick
(d) Analytical technique

Chapters of particular interest to BBS members:-

(i) An ethroanlacological approach to the study of Roman brick and tile
(ii) Brick and tile production in Sicily
(iii) Italian kilns - Roman
(iv) Tiles as structural component in building
(v) Complete survey of Roman brick/tile kilns found in Britain including a plan where there is sufficient evidence.

Mr McWhirr ends his details of this publication, "All in all I think your members will find it a very useful volume."

Copies from B.A.R., 122 Banbury Road, OXFORD OX2 7BP. £11 inc. postage.

NOV 1980

THE BUILDINGS OF OXFORD

This book is by Anthony Kiersting and John Ashdown; it is published by Batsford, Holmes and Meir at a cost of £10. It is a photographic record of Oxford's historic buildings.

NOV 1980

A CURRENT BIBLIOGRAPHY OF VERNACULAR ARCHITECTURE

This book was published by the Vernacular Architecture Group 1970-1976 and is edited by D.J.H. Michelmore. It can be obtained from the V.A.G., 22 Clifton Green, York, YO3 6LN, at a cost of £2.25 post free.

NOV 1980

BRICKMAKING: A HISTORY AND GAZETEER

This very good book is by Alan Cox, and can be obtained from the County Planning Officer, County Hall, Bedford, MK42 9AP, at a cost of £2 plus 40p for post and packing. I am very grateful to G.C. Hines for the full review of the book which follows:

"Do not dismiss this book as of 'local interest only'. It bears out Gilbert White's dictum: 'Men that undertake only one district are much more likely to advance natural knowledge than those that grasp at more than they can possibly be acquainted with. Every Kingdom, every province, should have its own monographer.' For bricks, one could add: 'Every County' -- lestways, those blessed with brickearths. Other C.Cs please copy. Everyone can learn from this book and enjoy it, because its application is universal.

Foremost comes the teamwork. Geoffrey Cowley (C.P.O.) has recruited and inspired photographers, cartographers, typologists, artists and, not least, archivists to produce as pleasing a 110 pages of Quarto as one can meet.

Alan Cox has researched thoroughly and, if this sounds dull, we add that his prose is happy, his thought succinct while the photographs and drawings are always apposite and frequently exciting; but who is that old gentleman in Figs. 11 and 27? His dignity and the Pug-mill minder's stance suggest The Boss!

There are 60 pp. of text, and 40 of Gazeteer which last I pass for nit-pickery to Bedfordshire boffins. The 172 references and five page Index betoken thoroughness; the brief Bibliography is au point.

Turning to the text it is fair to remember that its target is Bedfordshire and so it were wrong to complain of three rather painful pages of generalised 'Brick History', two of which concern tiles! Cox moves to firmer ground when his lens zooms down to County level and so to Someries Castle where, with due acknowedgement (Cf. N.13) the pundits who, I believe, have reservations concerning these.

Thereafter, 'Commercial', 'Estate' and 'Parish' brickyards are described by close reference to specific sites. This is splendid. The six-page account of 'Traditional Brick-making methods' reads well but shows gaps. Tempering must have occurred but ain't mentioned. That tricky question: "What is a 'stock-brick?" is glossed over; nor is there mention of 'Place'. Otherwise, the stages follow with more reference to local site, date and circumstance which bring the book alive. That wind-driven pug-mill was 'a new one on me'.

The machine-age, which Cox dates to c.1820 onwards is equally closely tied to firm instances both as regards to fabrication and to firing.

The famous 'Fletton' has, almost, the last word - 4½ pages about it. Here, Woodforde's work is enriched from unpublished sources in the C.C. Mineral Reviews which should make this book, itself, an authoritative point of departure for any future investigation.

We wrote 'almost' because Cox concludes, brilliantly, with a page about 'The Future'. Here he touches on environmental problems, changes in taste towards variety in Facings, competition from concrete blocks and the new advantage which Flettons' "self-combusting properties" offer as fuel;costs rise.

These properties, however, concern the geology of brick-earth. Here comes my one 'grouse'. Of course Cox mentions the geology of the Fletton but only incidentally, whereas, I suggest, every local study of brickmaking should begin by describing the local brickearths. True: Map 2 (Geological) is set opposite Map 3 (Sites); but how much better, had these Sites been plotted on transparent paper, and superimposed."

G.C. HINES NOV 1980

GEOLOGY OF LATE BRONZE AGE MUD BRICK FROM TEL LUCHISH

This is an article by Paul Goldberg from the Journal of the Tel Aviv University Institute of Archaeology, Volume 7 Number 2 1979. It has been printed in booklet form and contains 8 pages of text, 3 diagrams and 8 photographs. It is most detailed and interesting.

JAN 1981

A JOURNAL OF BRICK HISTORY

Notice is hereby given that the first issue of this journal will be a Bibliography of Brick History. Anyone requiring further information or anyone wishing to contribute to this work should contact E.F. Heite, 21 S. Main Street, Camden, Delaware 119934, U.S.A.

JAN 1981

GISLEHAM BRICK AND PIPE WORKS

The 1979-1980 Annual Report of the Lowestoft Archaeological and Local History Society Volume 12 contains an excellent report of the survey of the above works. The report has 3 pages of text, 4 photographs which have not reproduced very well and 11 pages of plans, diagrams and sketches. This well-worth bargain is only 65p including postage from Mrs B. Turner, 11 Cotmer Road, Oulton Broad, Lowestoft, Suffolk.

JAN 1981

SOMERLEYTON BRICKFIELDS

This new fuller edition is again the result of the hard work of Audrey and Arnold Butler and once again all the proceeds are for the Parish Churches of Ashby, Herringfleet and Somerleyton. The cost of £1.00, £1.50 by post and 3 dollars 50 cents by post to the U.S.A., from Mrs E. Robbens, Home Farm, Somerleyton, Suffolk, NR32 4PR. (Tel: Lowestoft 730509). Members who have the original copy of Somerleyton Brickfields will not recognise this new professional book on the subject. Their hours and hours of hard work have resulted in a book that is not only a credit to them but a fine memorial to Tom Crawford, a local brickmaker who did not live to see the excellent work finished. The new book is of 24 pages, 10" x 7½". It contains 15 pages of text, 17 photographs, a map of 1889, an excellent kiln drawing by M.D.P. Hammond surveyed by himself and Tom Crawford and the family tree of the Green family of brickmakers and the Oldham family of brickmakers.

The book gives a complete picture of the workings of a brickfield, its workers, their lives and families, its position in the community, its growth and its decline. The work is a fine example for those who are thinking or wishing or hoping to do the same for their own area. I unhesitatingly recommend the purchase of "SOMERLEYTON BRICKFIELDS".

JAN 1981

GAZETEER OF BUCKINGHAMSHIRE BRICKYARDS 1800-1980

This is in the nature of an interim publication compiled to coincide with the summer exhibition in the Buckinghamshire County Museum. Work is in progress on the pre-1800 data and it is hoped to produce something more substantial later. The present version is of 40 duplicated pages stapled together with the works listed in alphabetical order in the village or town of their location. Copies are available from Buckinghamshire County Museum, Church Street, Aylesbury, Buckinghamshire HP20 2QP, price 30p plus postage about 20p.

JAN 1981

BRICKS AND BRICKMAKING

A booklet of 20 pages A4 size containing a little bit of everything making it very readable and a good introduction to bricks. It has a flow chart for making Flettons by the semi-dry process, 14 diagrams/drawings, 3 illustrations on bonding, and a two-page glossary of terms used in the brick making industry. The quality of the production is excellent with a superb illustration on the cover of a variety of decorative brickware and an old hand moulder working at his bench. The book costs 75p. but only 70p to BBS members plus 20p postage from Avoncroft Museum of Buildings, Stoke Prior, Bromsgrove, Worcestershire.

JAN 1981

ARTICLE ON HAND MOULDED BRICKS

"THE PERIOD HOME" magazine Volume 1 number 5, pages 33, 34 and 35 contains an article by Richard Filmer entitled "The Craftsman - Hand Moulded Bricks." The text is excellent and eight photographs are included of making bricks, drying bricks, moulds and specials. The yard featured in the article is the Bulmer Brick and Tile Company near Sudbury, Suffolk, owned by BBS member Peter Minter.

For those wanting a copy, their address - Period Homes, Caxton House, High Street, Kent, TN30 6DB.

OBITUARY

It was only recently that I heard that Donald Young, of Broadmayne, near Dorchester, died last year after a serious illness.

He was the author of several papers on brick making published in "Industrial Archaeology" and the proceedings of the Dorset Natural History and Archaeology Society, including "Brickmaking at Broadmayne", "Brickmaking at Sandleheath, Hampshire", "Brickmaking at Weymouth" and a county gazetteer "Brickmaking in Dorset". He was Chairman of the Industrial Archaeology section of the Dorset Natural History and Archaeology Society.

It was through Donald Young that I came to know about brickmaking in Dorset when I moved from Nottingham. Although we corresponded for about nine years, we never met.

M.D.P. HAMMOND MAY 1981

SUSSEX POTTERY by John Mainwaring Baines published by Fisher Publications, 130 Hollingbury Park Avenue, Brighton Sussex, £9.75 including postage. Although primarily concerned with the country potteries in Sussex and their products it also outlines the history of a few brickworks including Redland Bricks Chaily Works, and the Keymer Brick and Tile Company, the last manufacturers of mathematical tiles. Pottery, brick and tile manufacture were closely associated in these establishments as they would often supply the community's entire clayware needs. This book goes some way towards fulfilling the need for a county gazetteer. The publisher admits that it is by no means exhaustive and would like to hear from anyone who has further information to contribute to editions. Brickmaking still flourishes and the Sussex Weald has one of the densest concentrations in the country.

M.D.P. HAMMOND MAY 1981

BRICKS AND BRICK MAKING

Martin Hammond, known to many BBS members for his studies of brickworks and brick kilns, has produced what is likely to become the authoritative history of brickmaking for many years.

Shire Album No. 72, 'Bricks and Brickmaking' (1981) costs 95p ex-shop, and for 30p extra direct from Shire Publications Ltd., Cromwell House, Church Street, Princes Risborough, Bucks, HP13 9AJ

It is a comprehensive and compact account of the whole craft. The 32 pages contain 40 photographs, splendidly selected to evoke the essence of the action. Some of the 22 line drawings have been drawn by the author who is a professional architect. The text derives from careful research. It leads us, stage by stage, through the making of bricks and delineates the history of each stage to include the latest innovations. There are passages on Calcium Silicate brickmaking; transport; 'The Brick Itself', and 'Geology of Brickearths' - in tabulated form. This last has a - mainly typographical - error. The Cenzoic Era is not named but its Tertiary and Quaternary Periods are printed as if, also, they were 'Eras'. Again, within them, the respective Eocene, Pleistocene and Holocene Divisions are misprinted as if they were 'Periods' in their own right. Howsoever, geologists dispute these terms among themselves!

Kilns and firing, Hammond's speciality, occupy a quarter of the book. He has chosen the technical term for process or tool most commonly in use. There has been, alas, no space for the rich local variations of these words, an omission which points to the need for someone to undertake the Johnsonian job of compiling an authoritative glossary of brick. Vb. sap.!

Personally speaking, I found that the book 'glowed like a Fletton' when I took it with me on a visit to a site. It opened my eyes to much.

G.C. HINES NOV 1981

OXFORDSHIRE BRICKMAKERS

Eight investigators collected the material of whom three wrote the book. This method has enabled each one to research archive material and study the brickyards and brick buildings of the county without becoming defeated by the wealth of detail. The book owes its vividness to this reliance upon first sources, fitting selection and arrangement and, finally, a readable style. When the authors assess information they are critical without being pedantic. In that perilous part in any such book when we are given a 'generalised' account of mediaeval brickwork, most of the snags are avoided. Nevertheless, it may be incautious to date the nave arches of St. Mary's Polstead (Suffolk) to "about 1160". Their bricks may be so but the arches, while retaining a romanesque form, make more sense - in terms of brick-work, setting, mortar-widths and so on - as part of a major reconstruction which happened in the 14th century and probably a little before the Black Death (1348-9 : first occurrence). It is good to see the revised date for Little Wenham Hall, namely, 1275.

The ten pages which follow present the county's more notable brick buildings. The archives first witness an early 14th century use of tiles. There follows Shirburn Castle (cren. lic. 1377) and Stonor House (lic. cren. 1416-17) and so onwards to 1825.

When reviewing the comparable 'Oxfordshire History and Gazetteer' (Review Nov. 1980), I had occasion to deplore the absence of any geological description to precede the section on brickmaking. Here we are given a geological map and some 600 words of text. This is how every book on localised brickmaking should open. This precedes pages about processes from digging to firing. It is a pity that more emphasis had not been given to the collo-quial terms used to name the operators, what they did and the tools they used; there is such a rich variety, for example - Hack, Hacke and Hale

The main portion of the book falls between these sections about buildings and processes. This consists of ten pages on Brickmakers and Brickworks. It has not been intended to include a Gazetteer. It is here that readers will appreciate the painstaking use of archive material drawn from the Bodlean Library; the County Library and Archive; the Record Offices of Oxfordshire and Berkshire and records of such great estates as Queens College and Stonor. Dusty work! But the dust does not show.

32 photographs, 3 maps and 23 line drawings fit the text to take us easily to the reality of whatever is being portrayed. There is a comprehensive index and brief bibliography. At £1.20 plus 15p pack/post (from: Oxfordshire County Museum, Woodstock, OX7 1SN) this 34pp work is a bargain which, like its Bedfordshire precursor, indicates the whole story of brick through the window of one county. Members from Hull and Suffolk will, for example, be fascinated when they read of the Oxfordshire de la Pole connection - that family deserves an indepen-dant monograph.

G.C. HINES NOV 1981

SOMERSET BRICK

Included in the third issue of the Somerset Industrial Archaeological Society's journal are four items of interest to BBS members. There are articles on Taunton brickyards, a Somerset brickmaker's contract of 1680 and a further list of Bath bricks. In addition there is an account of an 18th century glasshouse which was later converted to fire brickyard goods.

Printed offset-litho; 29 illus.; price £2.50, post free; cheques "SIAS" from B.J. Murless, 46 Holway Avenue, Taunton, Somerset, TA1 3AR.

NOV 1981

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An Index of subjects mentioned in the main text of the Compilation appears on pages 94 to 97.

Appendix A, which follows page 97, consists of the titles of books listed and reviewed in the original newsletters, but these are not included in the Index.

'INFORMATION' is the newsletter of the BRITISH BRICK SOCIETY and is published three times a year. The Society welcomes to membership anyone interested in the archaeology and history of bricks, brickmaking and brickwork.

For further details contact the Hon. Secretary, British Brick Society,c/o The Brick Development Association, Woodside House, Winkfield, Windsor, Berkshire, SL4 2DX

May 1988

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